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EXPERIENCE REPORT

Educational technologies for raising awareness about blood donation: an extension experience report

Tecnologías educativas para la sensibilización sobre la donación de sangre: relato de experiencia extensionista

Tecnologias educativas para sensibilização à doação de sangue: relato de experiência extensionista

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Abstract

The aim was to report on the experience of faculty and students in developing educational technologies aimed at raising awareness about blood donation within the context of an extension project at a public university in the city of Rio de Janeiro. This is an account of the experience of faculty and students in developing successful practices within an extension project at a public university in the city of Rio de Janeiro. The activities highlighted the potential of educational technologies in demystifying fears and beliefs related to blood donation, contributing to the expansion of knowledge, and encouraging the participation of new donors. Furthermore, they emphasized the relevance of university extension in academic training, promoting the integration of teaching, research, and the community. Thus, educational technologies constitute important care strategies in promoting blood donation, with potential application in different contexts.

Descriptors: Blood Donation; Community Participation; Educational Technology; Health Education; Nursing.

Resumén

El objetivo fue documentar la experiencia de docentes y estudiantes en el desarrollo de tecnologías educativas para sensibilizar sobre la donación de sangre, en el marco de un proyecto de extensión universitaria en Río de Janeiro. Este informe describe la experiencia de docentes y estudiantes en el desarrollo de prácticas exitosas dentro de un proyecto de extensión universitaria en Río de Janeiro. Las actividades destacaron el potencial de las tecnologías educativas para desmitificar temores y creencias relacionados con la donación de sangre, contribuyendo a la expansión del conocimiento y fomentando la participación de nuevos donantes. Asimismo, enfatizaron la relevancia de la extensión universitaria en la formación académica, promoviendo la integración de la docencia, la investigación y la comunidad. Por lo tanto, las tecnologías educativas constituyen estrategias de atención importantes para promover la donación de sangre, con potencial aplicación en diversos contextos.

Descriptores: Donación de Sangre; Participación de la Comunidad; Tecnología Educativa; Educación en Salud; Enfermería.

Resumo

Objetivou-se relatar a experiência de docentes e discentes no desenvolvimento de tecnologias educativas voltadas à sensibilização para a doação de sangue no contexto de um projeto de extensão de uma universidade pública do município do Rio de Janeiro. Trata-se de um relato de experiência de docentes e discentes sobre o desenvolvimento de práticas exitosas no projeto de extensão de uma universidade pública do município do Rio de Janeiro. As atividades evidenciaram o potencial das tecnologias educativas na desmistificação de medos e crenças relacionados à doação de sangue, contribuindo para ampliar o conhecimento e incentivar a adesão de novos doadores. Além disso, destacaram a relevância da extensão universitária na formação acadêmica, ao promover a integração entre ensino, pesquisa e comunidade. Desta forma, as tecnologias educativas constituem importantes estratégias de cuidado na promoção da doação de sangue, com potencial de aplicação em diferentes contextos.

Descritores: Doação de Sangue; Participação da Comunidade; Tecnologia Educacional; Educação em Saúde; Enfermagem.

Introduction

The outreach project "Blood: overcoming fear, guaranteeing life" was a pioneering initiative at the educational institution to which it is linked. Created in 1988, it arose from the need, at the time, to broaden discussions about the high incidence of post-transfusion transmission of infections such as HIV and hepatitis. In this context, outreach activities began to be directed towards educational and awareness-raising actions aimed at encouraging voluntary blood donation.

Blood donation is characterized as an act of altruism and citizenship, playing an essential role in public health. Performed voluntarily, it enables the fulfillment of different healthcare needs, benefiting anyone who requires a blood transfusion. Blood and its components are fundamental in situations of acute bleeding in urgent and emergency care, in major surgeries, and in the treatment of various chronic diseases that frequently require transfusions. Furthermore, the collected plasma is used in the production of essential blood-derived medications[1]. In Brazil, actions related to hemotherapy are regulated by the National Policy on Blood, Components and Blood Products, established by Law No. 10,205, of March 21, 2001. This policy aims to guarantee the country's self-sufficiency in this sector and harmonize the actions of public authorities at all levels of government, being implemented, within the scope of the SUS, by the National System of Blood, Components and Blood Products[2].

In recent years, there has been a slight increase in the number of blood bags collected in the country. Data from the Ministry of Health indicate that 3,248,737 bags were collected in 2023 and 3,310,025 in 2024, representing a growth of 1.9%. During the same period, the number of transfusions also increased, rising from 3,088,332 to 3,178,138, a growth of 2.9%. By May 2025, 831,518 bags had already been collected. Although the number of donations made in Brazil is within the parameters recommended by the World Health Organization (WHO), the Ministry of Health promotes annual campaigns with the aim of increasing the number of donors and ensuring the adequate maintenance of blood and blood product stocks. In 2024, approximately 1.6% of the Brazilian population donated blood[3,4].

In this context, educational technologies emerge as important strategies for promoting health, enabling dynamic and interactive learning experiences. These tools contribute to mobilizing society, demystifying the act of donating blood, and increasing the number of voluntary donors. Furthermore, they promote the dissemination of information about the sanitary importance of voluntary donation and about blood quality, contributing to the strengthening of blood bank stocks[5].

Thus, the present study aims to report on the experience of teachers and students in the development of educational technologies aimed at raising awareness for blood donation in the context of an extension project at a public university in the city of Rio de Janeiro.

Methodology

This is a descriptive study, in the form of an experience report, which presents the systematization of successful educational practices developed in a university extension project in the health field, linked to a public university in the city of Rio de Janeiro in 2025.

The project involves faculty and students from the undergraduate Nursing program. The target audience for the activities includes the academic community, elementary and high school students, family members, and users of a university hospital affiliated with the institution, as well as social media followers and the public. The premise that "without donation there is no transfusion" guides the development of educational actions aimed at raising awareness and encouraging voluntary blood donation, an essential practice for maintaining blood supplies and for the treatment of patients requiring blood transfusions.

The activities are carried out in different spaces for interaction with the community, such as university environments, educational institutions, health units, public circulation areas, and digital platforms. Among the strategies used, the following stand out: educational lectures, discussion groups, awareness campaigns, distribution of informational materials, and dissemination of content on social media. These actions are planned and executed collaboratively between faculty and students, fostering integration between teaching, research, and outreach. This planning was systematically carried out through periodic meetings between faculty and students, in which objectives, content, methodologies, and approach strategies were defined, considering the specificities of each target audience. The execution of the activities was based on the use of active and participatory methodologies, prioritizing dialogue, the exchange of knowledge, and encouraging the protagonism of participants in the educational process.

During the extension activities, data were collected for the preparation of project reports and for the development of this study, which were subsequently analyzed and presented descriptively. The experiences were recorded through institutional reports, photographic records, produced materials, and notes taken by project participants throughout the activities.

The data analysis was conducted through a process of organizing and reading the materials produced, including reports, photographic records, and participant notes, allowing for the identification of patterns and recurrences in the practices developed. Based on this process, a thematic categorization of the experiences was carried out, defined a posteriori, based on the different educational strategies employed throughout the project, namely: dialogical, playful, digital, and social mobilization educational technologies.

Since this is an experience report, without the collection or analysis of data from human beings, without identification of participants, and without description of data from interventions, the study did not require review by a Research Ethics Committee with Human Beings and is in accordance with the ethical principles of health research.

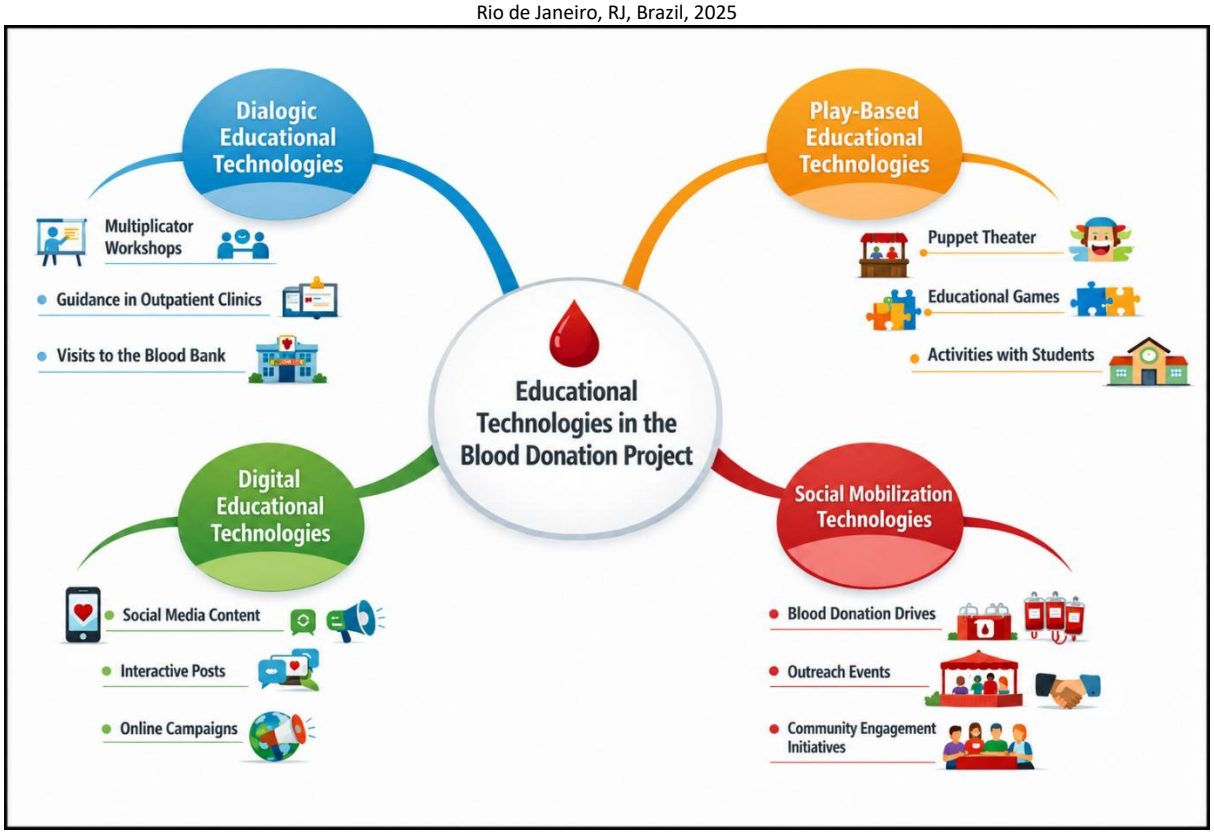
Experience Report

The experience was developed within the scope of a university extension project linked to the health field,

involving nursing faculty and students in different practice settings, including outpatient clinics, surgical wards, academic spaces, and virtual environments. The actions encompassed the university community, users and companions of the university hospital, as well as the public, configuring a proposal for integration between teaching, service, and community.

With the aim of systematizing the strategies adopted, the educational technologies developed were organized into four axes: dialogical, playful, digital, and social mobilization educational technologies, which proved to be complementary and interdependent in the process of raising awareness for blood donation and are described in Figure 1.

Figure 1. Conceptual map of educational technologies developed to raise awareness about blood donation in an extension project. Rio de Janeiro, RJ, Brazil, 2025



Note: Developed with the aid of an artificial intelligence tool (ChatGPT, OpenAI), subject to review and validation by the authors.

Dialogic educational technologies

Dialogic educational technologies[6] were developed through strategies based on direct communication and interaction between project members and society. These actions involved the transmission of information about blood donation, clarification of doubts, and the exchange of experiences, carried out in different healthcare and academic settings. In healthcare settings, the focus was on providing guidance in outpatient waiting rooms and approaching patient companions in surgical wards, always with an emphasis on recruiting potential donors. The project also included guided tours of the blood bank, allowing students direct contact with the donation process and its operational aspects, as well as multiplier workshops with nursing students. Within the university setting, one of these actions stands out in the welcoming of new students. New students participate in interactive "myths and truths" activities about the conditions for donation and are involved in practical blood compatibility simulations. In this experience, they use red liquid to represent compatible transfusions and red balls to simulate the clotted blood in incompatible ones. The project volunteers explain the results with scientific backing and accessible language, distribute gifts, and present the project's Instagram page, aiming to engage students as donors and disseminators of reliable information.

Playful educational technologies

The educational technologies[7] used in play were primarily aimed at school children and involved the use of interactive and recreational strategies to address the topic of blood donation. Among the activities developed were puppet shows, educational games, cartoon screenings, and slogan contests. These actions were structured to encourage the active participation of those involved, using accessible language and resources that stimulate the interest and interaction of the participants.

Digital educational technologies

Digital educational technologies[8] were implemented through the use of the project's social networks as a communication and health education tool. Interactive educational content was developed and disseminated with the aim of informing, raising awareness, and clarifying doubts about blood donation. Digital media was also used to publicize campaigns and connect with

potential donors, serving as a channel for continuous access to information related to the topic.

Social mobilization technologies

Social mobilization technologies[9] were developed through the organization and participation in campaigns and events aimed at promoting blood donation. Campaigns carried out in partnership with the Blood Bank stood out, including Blood Donation Weeks, with outreach and leaflet distribution activities. In addition, the project participated in institutional events such as health fairs, extension fairs, and community actions, where educational and interactive activities were conducted, including blood typing and distribution of informational materials. It was observed that the activities presented to first-year nursing students aroused significant interest and engagement. This positive impact is evidenced by the continuous recruitment of new volunteers willing to share the cause on social networks, schools, and universities, as well as by the recruitment of new donors. Consequently, these actions have effectively contributed to increasing the stocks of the partner blood bank, directly impacting the care and recovery of patients who depend on transfusion therapy.

Discussion

The National Curriculum Guidelines (DCN) for health courses present, as one of their pillars, the integration between teaching, service, and community, thus enabling the strengthening of the articulation between theory and practice, the development of dialogue with society, and the intellectual autonomy of the student, as well as critical and reflective thinking[10].

In this way, educational technologies are teaching tools planned and developed based on scientific evidence, structured to facilitate the teaching-learning process of individuals[11,12]. By promoting greater participation, protagonism, and dynamism in the construction of knowledge, these technologies enable a break from the verticalized education model[13]. In this way, they strengthen the dialogue between educator and learner in various care and educational settings, culminating in the formation of individuals who are more critical and autonomous in relation to their learning and care[13,14].

In this sense, the use of educational technologies in outreach activities is a strategy consistent with these guidelines, as it promotes interaction with the community and fosters more participatory teaching and learning processes. In the present study, these tools were essential to demystify prejudices and promote the participation of new donors. This finding aligns with research conducted in Rio Grande do Norte, which found that 80% of the study participants considered all types of educational content relevant to blood donation campaigns, highlighting the importance of these approaches[15].

The results obtained in this project demonstrate that raising awareness about blood donation goes beyond simply providing information. It was observed that by using interdependent and complementary digital, playful, dialogical, and social mobilization educational technologies, it is possible to attract, engage, deepen knowledge, and convert intention into donation[16]. In other words, one strategy fills the gap left by the other, making it possible to generate a behavior change, essential for consolidating a culture of voluntary and regular blood donation[17].

The experience gained in the project demonstrated that engaging with diverse audiences in multiple settings requires the continuous adaptation of educational strategies, considering sociocultural specificities, the level of prior knowledge, and the demands presented by the participants. In this context, flexibility in conducting the actions proved essential to ensure greater effectiveness of the interventions, allowing the content to be adjusted to the reality of each group. This aspect reinforces the importance of contextualized educational practices that value the territory and the knowledge of the individuals involved, as discussed in contemporary literature on popular health education[18].

Within the context of academic training, participation in this extension project allows students to experience firsthand the inseparable link between teaching, research, and extension, enabling their insertion into diverse scenarios. This activity demands the improvement of skills that go beyond technical-scientific knowledge, such as the development of communication with accessible language and qualified listening, thereby forging a critical and capable professional to meet the complex demands of the Unified Health System (SUS)[19,20].

Regarding the impact on society, the strategies used reverse the logic of the Brazilian blood transfusion scenario, which is sustained by replacement donations, motivated by the urgency of family members or acquaintances[21]. By raising public awareness, a proactive attitude is encouraged, since individuals are empowered with reliable information. Once their fears are heard and their doubts are resolved, transfusion safety and the preservation of the lives of those who depend on a donation are guaranteed.

It should be noted that the present study has limitations regarding the design of an experience report, lacking systematic and comparative processes, thus making it impossible to make causal inferences or generalize the findings, since it results from a specific context. Finally, the lack of longitudinal follow-up prevents the evaluation of the long-term impact of the actions.

Final Considerations

The activities developed within the scope of the extension project highlighted the potential of educational technologies as care strategies in health promotion, especially regarding awareness of blood donation. The actions carried out contributed to demystifying fears and beliefs, favoring the expansion of knowledge and encouraging adherence to the practice of voluntary donation.

The experience also reinforces the role of university extension as a privileged space for the integration of teaching, research, and the community, promoting the training of students who are more critical, reflective, and committed to social demands. In this context, the use of

dialogical educational approaches proved fundamental for strengthening the bond with the population and for building more humanized health practices.

Furthermore, the incorporation of educational technologies, including in-person and digital strategies, is highlighted as a key tool for expanding the reach of actions and maximizing their impact. These initiatives represent viable and replicable alternatives in different contexts, contributing to the strengthening of public policies focused on blood donation. The importance of continuing outreach projects of this nature is highlighted, as well as the need for further studies that deepen the evaluation of their impacts to support the improvement of strategies for promoting voluntary blood donation and enhancing healthcare.

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