

## In this new time: reflections and actions for and about basic education

Ivanise Maria Rizzatti<sup>1</sup>   
Giselle Rôças<sup>2</sup> 

“In the new time  
Despite the punishments  
we are grown  
we are attentive  
We are more alive”  
*Ivan Lins e Elba Ramalho*

When the current issue of the Revista de Estudos e Pesquisas sobre Ensino Tecnológico (EDUCITEC) was proposed, we were experiencing the physical and emotional exhaustion caused by the Covid-19 pandemic, accompanied by an invasion of the school in our homes. The school community has been pushed towards remote teaching and virtual learning environments. Once again, teachers without technical support, and technological and financial resources, accepted the challenge of maintaining the students' teaching and learning processes. This way, digital technologies entered the list of didactic resources, and assessments gained gamified contours, expanding school possibilities and boundaries. Pedagogical asynchronies reinforce the already recognized anachronous training of teachers.

Notwithstanding the described scenario, our movement as editors of this call was to reveal the good practices arising from the difficulties. In this way, the current issue results from a particular call made in the first half of 2022, taking science teaching and basic education as its central theme. The challenge was not only that of a simple correlation between the two topics but the stimulus to reflection and sharing of new contexts of discussion about the school reality and its teaching and learning processes.

The current issue contains nine articles, developed mainly during the abovementioned pandemic scenario. There are surveys, reports, and sharing of actions that weave a narrative of thinking about basic education from the school floor, its actors, and scientific dissemination.

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<sup>1</sup> Doctor, Federal University of Roraima, Boa Vista, Roraima, Brazil. ORCID: <https://orcid.org/0000-0002-0982-2698>. Email: [niserizzatti@gmail.com](mailto:niserizzatti@gmail.com).

<sup>2</sup> Doctor, Federal Institute of Rio de Janeiro, Rio de Janeiro, Rio de Janeiro, Brazil. ORCID: <https://orcid.org/0000-0002-1669-7725>. E-mail: [giselle.rocas@ifrj.edu.br](mailto:giselle.rocas@ifrj.edu.br)

In the section **on teaching and its technologies**, there is a need to understand the different moments, policies, and methodologies of teacher training in the country, with the analysis of cases and the development of more practical actions.

*The teaching of physics evaluated by Richard Feynman in 1952 and the present day: the issue of contextualization* “it became evident the need for teachers to review their practices for the application of contextualization, the use of experiments and to avoid the use of memorization activities, reaffirming the importance of building contextualized practices as the basis for a teaching of Physics that enables the student to understand the application of concepts, as well as phenomena within everyday life and expand scientific thinking.”

*A story about the short degree in science in the municipality of Ariquemes (RO) (1990-2000)* recovers the necessary demands and challenges for training science teachers in regions far from the big cities. They highlight common criticisms at the time (and why not today?), which described the Short Degree in Science as a broader, superficial training capable of training many science teachers in a shorter time. In the wake, teachers always feel outdated and keep looking for new and constant movement.

*The didactic workshop: a teaching training process of re-signifying microbiology teaching* is anchored in teaching narratives that focus on microorganisms, identifying their realities, individual demands, reflections, learning, and discoveries.

*In Video classes on educational robotics: articulation of science content for elementary school* was analyzed that of the 22 video classes on educational robotics recorded in 2021 by the Municipal Department of Education of Curitiba/Paraná, only seven dynamic contents from the curricular component of Sciences of the 4th and 5th years. They state that “the video classes present interdisciplinary possibilities of working with educational robotics, especially involving STEM in their practices.”

The article *An experience of solving problems using the photomath application in a collaborative perspective presents an intervention using the application for smartphones to promote the learning of polynomial functions of the 2nd degree* to place the student as an “active participant in all the teaching-learning process.”

**The non-formal spaces and scientific communication** section discusses the processes of teaching and learning science in non-formal educational areas and in different media to promote scientific communication and points to the need for more research on this topic.

In this sense, the article *Analysis of dissertations on the use of school gardens to promote environmental education at primary and secondary levels* presents a systematic review of

dissertations defended between 2015 and 2021 that address the themes “school vegetable garden” and “environmental education.” The authors analyzed the different methodologies adopted for the implantation and implementation of school gardens, the context in which they carried out the research, and the evaluation of the action, demonstrating that it is possible to integrate and adapt the school garden in the student's teaching and learning process.

*Scientific dissemination with literature in the early elementary school years: a literature review* presents the contributions of literary texts to teaching natural sciences when used as a means of scientific dissemination. In times of denialism and anti-science movements, scientific dissemination can contribute to the development of scientific thinking in students and the appreciation of science by society.

The third section presents **educational products for basic education**. *Constructing and validating an educational product for teaching science using project-based learning combined with Freire's assumptions offers a didactic guide with practical activities in teaching science* with the theme of water quality. The construction and validation of the educational product resulted from collaborative work between researchers, science teachers, and students in the 9th grade of an elementary school in the final years.

*Superharvest: a proposal for gamification in the study of fruits, vegetables, and derivatives in a technical course in food*, presents the importance of combining learning games and gamification in the student's learning process, promoting their autonomy, motivation, and engagement.

To provoke the reader's reflection, the articles in the current dossier discuss theoretical and interventionist research, whose actions and thoughts, remote and face-to-face classes, synchronous and asynchronous, documental, or practical. These possibilities emerge of a NEW TIME forged by the pandemic and the return of the new airs' democracy reestablished in our country.

"Why does our hope  
Be more than revenge  
always be a path  
What is left as an inheritance..."

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Ivanise Rizzatti: Writing (original draft) and writing (proofreading and editing).

Giselle Rôças: Writing (original draft) and writing (proofreading and editing).

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