



Educational technology, teaching and teacher training in geography

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We are living in the globalization phase in which the Digital Information and Communication Technology (ICT) are gradually expanding into everyday life, reaching more and more people through a worldwide interaction network, the Internet, connecting different points in different territories at a speed and instantaneity never seen before.

In this scenario, ICT is entering the field of education and slowly redesigning it to the virtual world, especially gradually adding "new technology" to teaching, such as creating virtual learning environments (classrooms), using the software as educational and evaluative tools, multimedia resources, and other infinite interactive resources. The incorporation of such elements has raised new patterns for the process of teaching and learning along with new mindsets.

And in this universe of cyberculture where the convergences of information technology and telecommunication are integrated into society,

in which relationships, ideas, and human actions are increasingly articulated in a virtual space through interconnected computer networks, thus influencing models of education that use digital virtuality.

The research aimed to analyze the use of educational technology in geography teaching in schools of the municipal public network of Sobral, Ceará.

As specific objectives, the research sought to investigate the use of technology in teaching practices throughout the construction of Brazilian geographic education and its regulations through legal documents guiding primary education; understand how the use of technology is present in the designing of the curriculum of primary education in Sobral based on state guidelines; understand the training and insertion of teachers in training courses in the area of digital technology and how this has contributed to the formation of digital culture; examine the development of teaching practices of geography in schools that

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have Google labs; investigate the use of digital technology in the final years of elementary education in teaching situations and how it has contributed to the formation of geographic concepts.

The choice of schools in Sobral is because of their acknowledgment as hubs for Google's educational experiences in Brazil and Ceará.

The research was carried out in stages and moments as follows: bibliographic research (hunt of materials about the proposed concepts and topics); documental research (analysis of legal documents, photographs, and newspapers); fieldwork (visits to schools to observe and describe the planning and teaching proposals with the use of educational technology, collecting data and information from managers and teachers through interviews and forms).

The research analyses and reflections have contributed to the unveiling of the multiple relations that involve the formation of teachers and the teaching of geography in this century. Moreover, studies may raise a reflection on using educational technology, its limits, and the development potential of geographic reasoning in the final years of elementary school from a problematized and critical perspective. Also, the research may generate quantitative and qualitative analyses to guide the construction/revision of the geography curriculum in the municipal network of Sobral, contributing to the connection of reality and multiple social, political, and cultural relationships present in the experience of teachers and students.

Figure 1. Francisco das Chagas Full-Time School – Rafael Arruda District, Sobral, CE.



Source: Carvalho, 2021

At Francisco das Chagas School, a full-time one in Rafael Arruda, the experiences with educational technology are recent. The project for implementing a Google lab and a geography lab required that teachers undergo a certified course to use educational technology with interactive digital media, active methodologies with digital technology, and digital platforms with information.

Figura 2. Edgar Linhares Full-Time School – Caiçara neighborhood, Sobral, CE.



Source: Silva, 2020

The Edgar Linhares School, located in the Caiçara neighborhood, is in a residential area with the same name in northwestern Sobral. It was the first school in Sobral to receive a Google Lab, even before the pandemic, which required teachers to undergo a course to deal

with the digital media diversity offered by Google, starting to use it during the pandemic.

Figura 3. Maria Dias Ibiapina Full-Time School – Pedro Mendes City neighborhood, Sobral, CE.



Source: Martins, 2022

The Maria Dias Ibiapina School, also a full-time one, was the second school to receive the Google Lab in Sobral. It is pioneeringly using a material with proposals for activities focused on training in programming and activities with digital technology. The teachers have been working in an interdisciplinary way with projects and activities that combine themes related to the environment and society.

SUPPORT: CAPES

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