# Integration of AI in Communication and Pedagogical Production in Distance Education in Health

## Ana Emilia Figueiredo De Oliveira\*

Open University of SUS - Federal University of Maranhão (UNASUS-UFMA), Brazil

#### **Elza Bernardes Ferreira**

Open University of SUS - Federal University of Maranhão (UNASUS-UFMA), Brazil

## Francisco Vinicius De Lima Menezes

Open University of SUS - Federal University of Maranhão (UNASUS-UFMA), Brazil

## **Deysianne Costa Das Chagas**

Open University of SUS - Federal University of Maranhão (UNASUS-UFMA), Brazil

## Cadidja Dayane Sousa Do Carmo

Open University of SUS - Federal University of Maranhão (UNASUS-UFMA), Brazil

#### Paola Trindade Garcia

Open University of SUS - Federal University of Maranhão (UNASUS-UFMA), Brazil

#### **Abstract**

**Background:** The advancement of Generative Artificial Intelligences (GAIs) in Distance Education has generated opportunities for personalization of materials, increased operational efficiency, and expanded access to educational resources. This study aims to describe the experience of a Brazilian higher education institution in the integration of GAI tools as an improvement of the pedagogical and technological ecosystem of health courses in Distance Education.

**Methods:** Descriptive study of implementing IAGs - ChatGPT, Midjourney, and Photoshop Beta - in the processes of Communication, Design, and Instructional Design in e-courses. GAIs were employed in elaborating communication campaigns, social network data analysis, target audience data collection, refinement of pedagogical planning, and didactic content. The study involved qualitative evaluation of production processes and quantitative indicators, such as the reach and engagement of campaigns in social networks.

**Results:** The images generated and enhanced by GAIs reflected an 18% increase in visual engagement compared to traditional publications. Additionally, the use of AI allowed a reduction of up to 30% in the creation time and adjustments to advertising content. There was a reduction in the time of production of educational content by up to 30%, and a strong association between content personalization and higher engagement and conversion rates for course registrations.

**Conclusions:** The integration of AI tools can promote significant innovations in the teaching-learning process, expanding access to high-quality visual and textual resources. However, the effectiveness of these technologies depends on data quality, prompt formulation, and constant human supervision to ensure relevance, accuracy, and ethics in the application of generated content. This study reinforces the need for a critical and continuous look at the challenges and opportunities that AI offers in the educational context.

## **Keywords**

Distance education, Communication and Instructional Design, E-learning.