

## **Negative Effects of Integrating ChatGPT in the Higher Education System Concerning Achieving Resilience through Digitalization, Sustainability, and Sectoral Transformation**

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### **Abstract**

The integration of ChatGPT (Generative Pre-trained Transformer) in higher education has gained significant attention due to its potential for advancing digitization, sustainability, and sectoral transformation. However, it is essential to consider the potential drawbacks associated with this integration to ensure educational resilience. This research aims to identify and evaluate the negative effects of integrating ChatGPT in the higher education system, focusing on academic quality, customization, ethical concerns, and technology dependency. The study adopts a mixed-method approach, utilizing qualitative methods such as interviews and focus groups with educators, students, and stakeholders, as well as quantitative data gathered through surveys administered to a sample of higher education institutions. Preliminary research suggests that over-reliance on Artificial Intelligence (AI)-generated information may hinder the development of critical thinking and problem-solving skills among students. Concerns also arise regarding the quality and accuracy of AI-generated content, which can compromise the acquisition of reliable knowledge. The lack of personalized and human interaction during learning may impede student engagement and social participation. Ethical issues related to biases within ChatGPT models have been raised, as they can perpetuate biased behaviours and hinder inclusion efforts. Furthermore, the integration of ChatGPT requires robust technological infrastructure, posing challenges for resource-constrained institutions and exacerbating existing digital disparities. The findings of this research can inform decision-making in higher education, enabling policymakers, educators, and stakeholders to develop strategies and guidelines that mitigate potential drawbacks while maximizing the benefits of integrating ChatGPT in the pursuit of resilience, digitalization, sustainability, and sectoral transformation.

**Keywords:** *ChatGPT, Higher education system, Negative effects*