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THE EXPERIENCE OF DIGITAL TRANSFORMATION IN HIGHER EDUCATION ACROSS EUROPEAN COUNTRIES

In 2023, the Global University Association Forum (GUAF) decided to focus on the topic of the digital transformation of higher education institutions. Due to the complexity of this topic, GUAF members established a joint working group in 2024. Drawing on regional and national reports prepared by each member association, the group was able to identify key similarities and differences in the global landscape” [1].

The aim of our work was to highlight the experience of digital transformation in higher education across European countries, based on the GUAF regional report “The Digital Transformation and Europe’s Universities”.

1. Eidgenössische Technische Hochschule (ETH) Zurich’s AI Center (Schweiz)

ETH Zurich (Switzerland) boasts a Center for Artificial Intelligence (AI) that brings together researchers working on the foundations, applications, and implications of AI from across departments. The Center fosters research excellence, industry innovation, and entrepreneurship in AI, with the aim of advancing reliable, accessible, and inclusive AI systems. It is impact-oriented, addressing ethical, social, and political implications, engaging the general public in AI-related issues, and supporting AI startups and industry collaborations [2].

2. Université Catholique (UC) Louvain’s Digital Strategy (Belgium)

An example of a strategy focused on expanding learning opportunities for both staff and students can be observed at the University of California, Louvain in Belgium. One of its key components involves promoting the responsible use of digital technologies to support the creation, sharing, and acquisition of knowledge.

This approach aims to reduce the digital divide by ensuring that all participants can effectively use digital tools for educational purposes, while also helping both teachers and students feel confident and comfortable in applying these technologies [3].

3. University of Lille's Digital Credential Project (France)

The Digital Certificates project at the University of Lille in France is designed to develop secure digital versions of all diplomas and certificates. These documents are issued as tamper-resistant, bilingual, and permanently accessible credentials. To achieve this, the university has implemented blockchain technology. The initiative follows a user-centered approach, aiming to enhance the student experience while increasing the efficiency, reliability, and level of automation within academic administrative services [4].

4. Sweden's national student records system "Ladok" (Sweden)

Ladok is an information system designed to support universities in managing educational processes and ensuring compliance with regulations and reporting requirements established by government bodies and central authorities. In particular, it records students' enrolment, academic performance, and awarded degrees across all levels of higher education, including preparatory, undergraduate, advanced, and doctoral studies. The platform is widely used by around 27,000 academic and administrative staff, as well as approximately 350,000 students. Furthermore, it maintains records for more than 3.2 million individuals [5].

5. Ireland's Enhancing Digital Teaching and Learning Project (Ireland)

In Ireland, the Enhancing Digital Teaching and Learning project (2019–2022) focused on embedding digital technologies into teaching and learning practices across universities. A key priority of the initiative was the professional development of individuals involved in teaching and learning support. The project produced a range of outcomes, including webinars covering diverse topics related to the development of digital competencies among staff and students in Irish higher education. It also provided practical guidance for educators seeking to incorporate digital methods into their teaching [6].

6. Dutch Security Programme, "SURFsoc" (Netherlands)

SURFsoc is responsible for monitoring cyber threats and potential attacks targeting higher education infrastructure. It gathers log data from multiple sources within institutional systems and analyzes this information to detect suspicious activities and possible security incidents, enabling timely and targeted responses. By correlating data across different systems, the platform improves the identification of unusual traffic patterns that might otherwise go unnoticed. In addition, SURFsoc functions within a centralized security operations center, which further strengthens its ability to detect and respond to threats effectively [7].

Thus, the use of digital transformation in higher education involves accelerating technological progress, positively impacting university culture, administrative activities, and teaching methods, as well as expanding the knowledge of applicants.

References

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Use of AI

Generative Pre-trained Transformer language model developed by OpenAI was used in this work. The AI tool was employed for the verification of orthography and punctuation without altering the scientific content of the manuscript. The use of the AI tool was limited to selected fragments of the manuscript and did not involve the generation, rewriting, or substantive modification of the scientific content.

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DIGITAL TRANSFORMATION OF EDUCATION IN EUROPE: THE ROLE OF EMIS IN DATA-DRIVEN GOVERNANCE

The digital transformation of education in Europe is accompanied by the increasing role of data as a key resource for the development of effective education policy. In contemporary conditions, data are no longer confined to statistical reporting; rather, they serve as a foundation for strategic planning, monitoring, and the evaluation of educational reforms. In this context, research by international organisations highlights that the existence of well-developed education data systems is essential for improving the quality of education and strengthening policy effectiveness [1].