Title and acronym: *LEAarning analytics and AI for personaliseD lEaRning* [LeaderAI]

Project type: Erasmus+ KA2 Project, Cooperation partnerships in higher education

Ref. no.: 2022-1-CY01-KA220-HED-000086763

Promoter /Coordinator: EDEX - Educational Excellence Corporation Ltd., Cyprus

Duration: 31/12/2022 to 30/12/2024

Total project grant: **250,000.00** EUR

Total expenditure (grant) for the University of Pitești: **33,150.00** EUR

Local coordinator for the University of Pitești: Assoc. Professor Dr. Eng. Dumitru CHIRLEȘAN

Summary:

Research in educational technology has shed light on the problematic nature of the traditional one-size-fits-all approach.

Ignoring individuals' differences may hinder the process of learning (Nabizadeh et al., 2020). For this reason, the European University Association's vision for 2030 directs towards universities *"designed in a holistic way to accommodate the different needs of a diverse university community and allow for flexible and blended approaches"* (EUA, 2021, pp. 5-6).

One of the key pillars of the EUROPEAN STRATEGY FOR UNIVERSITIES (2022), is to develop skills and competences and promote innovation for the digital transition. An important element of this is investment in Artificial Intelligence and big data analytics. Artificial Intelligence (AI) is a timely topic and is currently a key priority for Europe. As indicated in the recently published *"WHITE PAPER ON ARTIFICIAL INTELLIGENCE: A EUROPEAN APPROACH TO EXCELLENCE AND TRUST"* given the global competition, a solid European approach is needed, which will build on the European strategy for AI.

To promote flexibility and openness in students' diverse individualities, teaching and academic staff can implement a personalised instructional approach using Artificial Intelligence and data-driven tools. AI-based applications can automatically respond to students' needs through adaptive and customised teaching and support (Zawacki al., 2019). On the other hand, data visualisation tools can be used by educators for informed decision-making (Siemens & Baker, 2012) to meet their learners' needs. Practitioners can learn how to integrate such advanced technologies into online contexts.

The potential of analytics for empowerment of teachers and improvement of teaching and learning practices is outlined in the EU's frameworks and tools including the DigCompEdu, and SELFIE. Along with that, the proliferation of AI in education and training is put in the forefront by the Digital Education Action Plan (2021-2027). However, the education sector is

characterised by underinvestment in research and development to specifically promote the integration of AI practices (OECD, 2020). Most research available for educators is mostly done from a technical point of view, by computer and data scientists who may lack the expertise in learning pedagogies (Zawacki-Richter et al., 2019). What is needed is an interdisciplinary sustainable approach that will actively involve educators to understand the role of AI-based and data-driven approaches within teaching contexts (Bates et al., 2020).

The LEADERAI consortium will provide practical guidelines to be adapted by HE instructors, academics, and educational technology practitioners for their teaching and learning activities. The consortium will work within the goals of the Commission's European Education Area, to improve the digital capacity of Europes' education system by exploiting the opportunities given

by new technologies such as AI (EC, COM, 2020).

Objectives:

- learning in HE, considering ethical issues
- develop hands-on resources for the adoption of AI-based and data visualization tools for personalized learning in HE
- build the digital and pedagogic competencies of HE faculty and staff in customizing their teaching using AI-based and data visualization tools
- improve the supply of high-quality digital learning opportunities in HE

Work Packages:

WP1: Management

WP2: LEADER AI Toolkit

WP3: Scenario-based training and piloting

WP4: Interactive eLearning platform and digital resources

WP5: Dissemination and Exploitation

Outcomes:

- Improved competencies of HE faculty and staff to integrate data visualization and AI-based tools for personalized teaching, assessment, support
- Toolkit with a collection of guidelines, case studies, and practical checklist
- Scenario-based training with pilots for hands-on skills
- E-learning platform with MOOC, tutorials, and in-action demo of tools
- General awareness raising throughout the EU concerning the role of analytics and AI in education
- Setup of a project dedicated committee

Project partners:

1. 1.EDEX - Educational Excellence Corporation Ltd. (coordinator), Cyprus
2. 2.Panepistimio Aigaiou, Greece
3. 3.Tallinn University, Estonia
4. 4.CARDET - Centre for Advancement of Research and Development in Educational Technology Ltd., Cyprus
5. 5.Universitatea din Pitesti, Romania
6. 6.Virtual Campus Lda, Portugal

Project website: https://leaderai.eu/

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