

1 Introduction

This chapter describes the context, scope and methodology of the project, and outlines the structure of the remainder of the report. It also provides definitions for two of the key concepts used in the project activities – digital readiness and digital maturity.

Context

The Croatian higher education system is facing several challenges linked to the country's demographic decline and changes in the labour market. Enrolment rates in higher education are decreasing, while dropout levels of higher education students are higher than the EU average. At the same time, the country's higher education offer has been assessed as not fully responding to the demands of the labour market or the needs of learners. Unemployment rates for higher education graduates are amongst the highest in the EU and the share of Croatian adults participating in lifelong learning is below the EU average.

To increase the attractiveness and relevance of higher education, the Croatian government has proposed a comprehensive modernisation agenda. This agenda builds on the 2020 National Reform Plan and is supported by Croatia's National Recovery and Resilience Plan 2021-2026. A key part of the modernisation agenda involves a shift towards digitalisation – an agenda which was accelerated by the COVID-19 pandemic.

Digitalisation is a potential way to overcome key obstacles to higher education enrolment and increase the attractiveness and adaptability of Croatia's higher education offer. The National Plan for Enhancing the Social Dimension of Higher Education 2019-2021 aims to provide wider, more equitable access to higher education, to tackle the digital divide between students in urban and rural areas, and to enhance digitalisation as a means of supporting students with disabilities. However, there are several challenges to the successful implementation of the current policy agenda. Digital infrastructure in Croatia is frequently inadequate, and it is difficult to ensure widespread access to high-quality online learning.

The outputs of this project are intended to support Croatian authorities and higher education institutions in their efforts to successfully integrate digital technologies throughout the higher education system. More specifically, the outputs can support investment decisions related to expenditure on digital infrastructure and provide a basis for review of the standards, supports and practices that currently underpin the provision of digital higher education in Croatia.

Project scope and methodology

Operational period and implementation plan

The operational period of the project was 19 months, from October 2021 to April 2023. Apart from inception-related activities and this final report, four main outputs were produced, each with associated activities:

1. **A diagnostic report** on the digital maturity of higher education institutions in Croatia with both internal (self-assessment survey) and external (OECD fact-finding) evaluation components.
2. **A technical report on high-quality digital education**, reviewing international best practice and supporting the development of guidelines for institutions to deliver high-quality digital education.
3. **A technical report on smart investment in digital infrastructure** for the Croatian higher education system, evaluating the respective merits of different investment models and providing principles to assist with prioritising funding for digital infrastructure.
4. **Guidance for higher education institutions** to develop strategic plans, based on the technical advice developed during the project.

Digital readiness and digital maturity evaluation

The starting point for supporting Croatia's aims for improved digitalisation in its higher education system was understanding Croatia's general level of digital readiness and assessing the digital maturity of its

higher education institutions. The OECD's assessment of digital readiness and digital maturity in Croatia's higher education system, presented in this report, is based on three main sources of evidence:

- Desk research on digital readiness of the higher education system, comprising review and synthesis of evidence available to assess Croatia's level of digital readiness.
- A survey of digital maturity in higher education institutions in Croatia, jointly fielded by the OECD and the Croatian Academic and Research Network (CARNET).
- An OECD fact-finding mission to Croatia in May 2022 to carry out a deeper exploration of the digital maturity of higher education institutions. Fact-finding activities included site visits to higher education institution campuses, interviews, and roundtables with institution management, staff, students and other key stakeholders.

The objective of the site visits was to establish:

- the extent to which higher education institutions and their staff are empowered to deliver digital education;
- the extent to which students can access high-quality digital learning; and
- the availability and adequacy of digital infrastructure necessary for effective delivery of digital education.

The OECD team visited a diverse set of institutions and faculties in Croatia, considering variations in institution category, legal status, size, governance structure, field of education and geographic location.

In addition, the OECD team conducted a series of stakeholder interviews with staff from relevant bodies and organisations. These interviews were designed to complement learning derived from institution site visits. Their purpose was:

- to clarify the OECD team's understanding of the role of the stakeholder organisation regarding the issues covered by the project;
- to elicit views on the current state of play of digitalisation in the higher education sector from the perspective of the stakeholder; and
- to probe perceptions of the challenges and opportunities presented by greater penetration of digitalisation within the higher education system.

The evaluation of digital maturity was carried out according to an analytical framework developed for the project, based on desk research and literature review. The framework presents the concept of digital maturity as comprising three equally important elements – digital leadership, digital infrastructure and digital competence and culture.

Technical reports to support high-quality online learning and investment in digital infrastructure

Two technical reports were developed as part of this project. The reports were aimed at supporting Croatian authorities to prioritise investments in digital infrastructure, and to assimilate international best practices into future policies related to the provision of high-quality digital education. The reports were informed by diagnostic activities, desk research, and input from international experts.

The OECD team held international seminars in Zagreb (in hybrid format), presenting preliminary research findings to Croatian stakeholders and officials. Expert discussions, feedback from Croatian authorities, and the project's Advisory Group contributed to the final drafts of both reports. Standalone versions of the draft reports were provided to the Croatian authorities, while abridged versions appear as chapters in this publication.

Guidelines for institutions

The OECD team created two sets of guidelines for Croatian higher education institutions, drawing from Croatian and international experts' advice. The first set offers a structured process for institutions to

improve digital education through a whole-of-institution approach, inspired by the successful Irish example of the National Forum for the Enhancement of Teaching and Learning in Higher Education. The second set provides targeted advice on digital infrastructure investments.

These guidelines were tested during a workshop in Zagreb in January 2023 and revised based on the feedback received. They serve as a starting point for institutions seeking to enhance their digital education strategy and make wise digital infrastructure investments. The guidelines could be further refined and tested as part of a national deliberative process.

Key concepts and definitions

The two key concepts used in this report are “**digital readiness**” and “**digital maturity**”. Both terms have been defined in various ways by different actors and are often used in policy discourse and documents without any definition at all. For the purposes of this project, the terms are defined as follows:

- “Digital readiness” is used to refer to the capacity at the **system level** to support digitalisation effectively.
- “Digital maturity” is used to refer to the extent of development of digitalisation at the **organisation level** (i.e. individual higher education institutions).

Digital readiness is a concept linking policies that impact digitalisation in higher education institutions with the wider extent of digitalisation in Croatia. It can be thought of as the extent to which the Croatian context, policies and practices (for example, national and central digitalisation policies, and the digital skills of the population) are aligned to support the development of digitalisation within the higher education system.

The concept of **digital maturity** of educational organisations is becoming embedded in Croatian national policy discourse. Digital maturity is multi-dimensional, and organisations may be at different levels of development within each dimension. In general, digital maturity exists on a continuum; organisations with greater levels of resources; competences; and strategic leadership necessary to plan and execute effective digital transitions can be considered to have higher levels of digital maturity.

Previous efforts to enhance digital maturity in the Croatian education system have mainly focused on schools. The successful pilot and rollout of the “e-Schools” project has supported many schools in increasing their digital maturity. Its success provides inspiration for a similar initiative at the higher education level.

In this report, the concepts of “online”, “blended”, and “hybrid” education are also defined and explored. However, as higher education programme structures and delivery methods continue to evolve, it becomes increasingly challenging to assign distinct labels to higher education offerings. A more realistic approach is to classify higher education programmes within a two-dimensional framework, considering both the extent of digital tool usage and the proportion of the programme delivered through online channels.

Structure of this report

The chapters of this report present the outputs of each of the project activities described above.

Chapter 2 provides an overview of the Croatian higher education system, including its main features, trends in learner enrolment and outcomes, and policy context. It then provides an assessment of digital readiness as it relates to the higher education system in Croatia.

Chapter 3 proposes a framework for the assessment of digital maturity in Croatia’s higher education institutions. It provides both a quantitative and qualitative assessment of each element, based on data from a survey of Croatian higher education institutions, and interviews with institution leaders, staff and students.

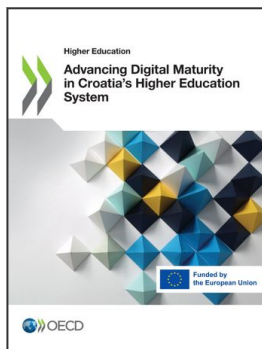
Chapter 4 contains a review of national and transnational standards proposed or adopted across OECD and EU countries to assure the quality of digital education. It analyses the different options available to public authorities to support improvements in the quality of digital higher education. The chapter also offers principles for institutions to consider when creating strategies to improve digital education quality and provides recommendations for Croatian public authorities to consider during future policy discussions.

Chapter 5 proposes general recommendations for maximising the benefits of investments in digital infrastructure within the Croatian higher education system. It categorises digital infrastructure into various types, examining each individually and providing tailored advice for each category.

Annex A contains draft guidelines for Croatian higher education institutions on developing a strategy for digital education.

Annex B contains guidelines for Croatian higher education institutions on developing investments in digital infrastructure.

Annex C contains agendas of the main stakeholder events that took place during the project.



From:
Advancing Digital Maturity in Croatia's Higher Education System

Access the complete publication at:
<https://doi.org/10.1787/c3c8d452-en>

Please cite this chapter as:

OECD (2023), "Introduction", in *Advancing Digital Maturity in Croatia's Higher Education System*, OECD Publishing, Paris.

DOI: <https://doi.org/10.1787/59f3370d-en>

This document, as well as any data and map included herein, are without prejudice to the status of or sovereignty over any territory, to the delimitation of international frontiers and boundaries and to the name of any territory, city or area. Extracts from publications may be subject to additional disclaimers, which are set out in the complete version of the publication, available at the link provided.

The use of this work, whether digital or print, is governed by the Terms and Conditions to be found at <http://www.oecd.org/termsandconditions>.