European Education Area Strategic Framework

Working Group on Digital Education: Learning, Teaching and Assessment

Plenary, 28-29 June 2023, Brussels

Input paper: Exploring a European Digital Education Content Framework

Action 3 of the **Digital Education Action Plan (DEAP) 2021 – 2027** focuses on the development of a **European Digital Education Content Framework**. The aim of such a framework would be to develop recommendations, guidelines and indicators to facilitate the production, distribution and use of high quality, inclusive and future-proof digital education content. Such framework has been identified as a key need by stakeholders during the consultations in preparation of the Digital Education Action Plan and by a previous DELTA PLA dedicated to digital resources, which was held in Paris in March 2018.

<u>What is the challenge and why is there a study on Digital Education Content?</u>
- A lack of high-quality, inclusive, multilingual and relevant digital education content, shared criteria and requirements became an issue during the COVID19 pandemic;
- A lack of data and analysis about the ongoing situation and the (potential) changes that will result from it.
- The digital transition is bringing about many changes and (new) challenges. There is an exponential increase in the production of digital education content. Also, digital education content is becoming more creative, engaging, interactive, modular and embodied in diverse formats. New technological developments, such as immersive reality and artificial intelligence (AI), are helping to deliver new types of education content.
- Digital platforms and their algorithms could act as 'gatekeepers' of digital education content, potentially impacting access to these resources in different ways.
- It is more difficult for users to verify the quality and trustworthiness of digital education resources than traditional content.
- The long-term preservation of these educational resources.
- Challenges concerning cybersecurity, data protection and e-privacy risks.

There is currently no in-depth data on digital education content at the EU27 level to understand the results, bottlenecks and possible solutions to improve the production, distribution and use of DEC.

1 – Objectives and scope of the study

The preparatory study (July 2022-November 2023) is currently under way to map national initiatives and understand what are MS doing with DEC, and to consult with stakeholders on high quality and accessible content that adheres to EU legal and ethical guidelines.

To this end, DG EAC has commissioned Ecorys Europe to guide the forthcoming development of a possible EU Digital Education Content Framework.

It aims to define **key definitions and guiding principles** and to understand the **factors influencing supply and demand** (the market and the players) in order to identify solutions where the EU, within its competence, has an added value in overcoming bottlenecks and boosting the quality and consistency of DEC.

By identifying the pedagogical, technological, legal and contextual bottlenecks that hinder digital transformation in the field of DEC, as well as possible solutions, the preparatory study can provide a solid basis of knowledge and analysis on DEC in the EU. It aims to provide evidence and prepare the development of a possible EU Digital Education Content Framework, as foreseen within the Digital Education Action Plan 2021-27[1].

It covers Early Childhood Education and Care (ECEC), Primary and Secondary, including Vocational Education and Training (VET), and Higher Education (HE). It focuses on digital education content systems and practices that are designed with formal education objectives in mind. The geographical scope is the EU27, although the study will refer to international examples, insofar as these are relevant to the EU context.

2 – Methodology and timeline

The preparatory study relies on **three successive phases** (see figure below) and a **Stakeholder Consultation Group (SCG)** to share views and expertise and review on the emerging data and draft reports in each part of the process.

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[1] https://education.ec.europa.eu/focus-topics/digital-education/action-plan/action-3
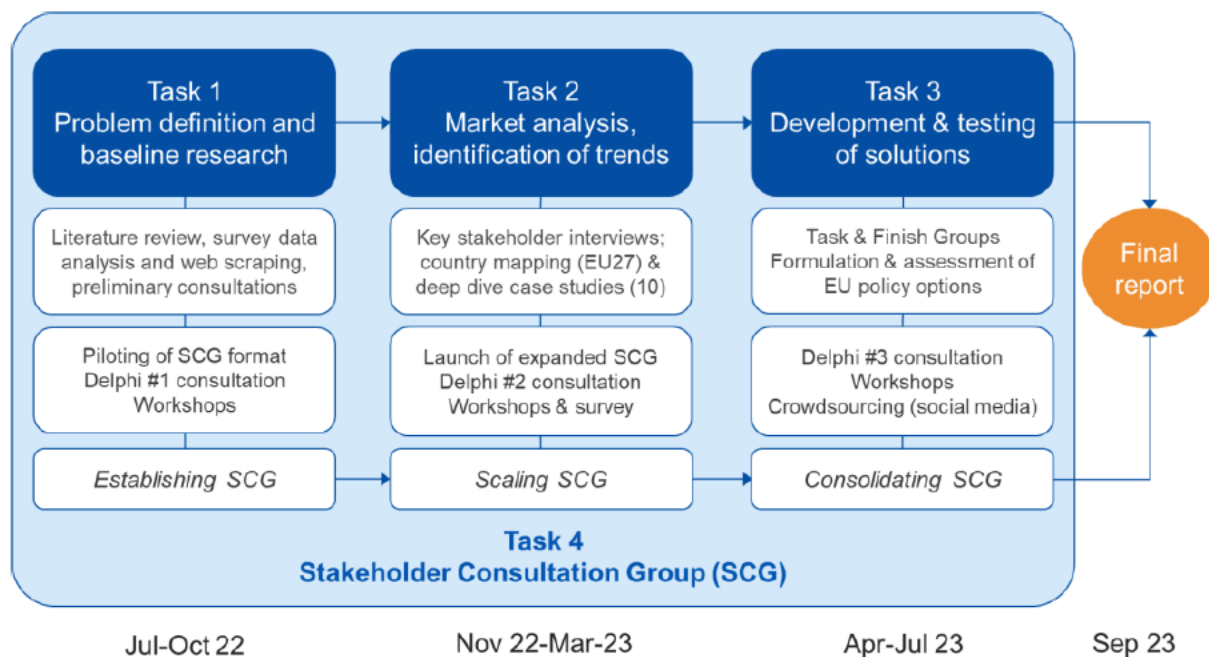
Various **professionals** involved in the production, dissemination, acquisition, distribution, training and use of digital education content for teaching and learning in the K12 and Higher Education sectors are part of the SCG (more than 300 registrants, a hundred of whom regularly took part in the work (February-May 2023). Their contribution allows us to question multiple angles and layers from pedagogical and institutional to technical, legal and ethical, economic and financial perspectives (360° approach). It is expected to produce an in-depth analysis of the **supply and demand of digital educational content** with the lessons learnt from the COVID period (1), from the ongoing digital transformation (covering in particular technology drivers such as AI, VR/AR, etc.) (2), as well as new trends of creation, adoption and use of digital education content (3). It raises many questions to identify and contextualise bottlenecks and possible solutions that hinder digital transformation in the field of digital educational content and propose interventions in several key areas at EU level.

The **final report of this preparatory study** (October 2023) should detail the main results, some options and recommendations for developing a European framework for digital education content.

3 – State of play, emerging findings and questions to discuss

What we mean by DEC?

As part of this study, we are trying to propose a common and updated definition of DEC, as well as quality criteria or requirements that could help all the stakeholders to produce, distribute, use and evaluate high quality DEC. A myriad of terminology and buzzwords are currently associated with digital education content, with many of these terms being used inconsistently and interchangeably in education.

The current working definition, which is still to be fine-tuned by the SCG members, is: *"Digital education content is data/material that is produced, organised, categorised, structured, distributed and presented in a way that aims to meet an educational objective, made available in a certain format and style by digital tools*"*

* Dedicated to teach, learn and assess, or adapted or used by the teacher / student or trainer into a learning scenario, it means software, programs, applications, platforms, and (online or offline) resources that can be used with computers, mobile phones or other electronic devices, e.g. a website, app, Learning Management System, or Virtual Reality world.

•   A first challenge is therefore to agree on **a clear definition and scope** that takes into account three dimensions: **digital content itself, tools and services to work with the content, ways to use it with students**. We can stress the modular nature of DEC vs traditional textbook (i.e. elementary unit / component of a digital textbook or autonomous element), which provides many pedagogical possibilities for teachers and students to modify / adapt / mash-up / remix this content to their context and objectives, or create new digital contents. It also means that we should be able to use clear separate "core DEC" and auxiliary / supportive DEC in many cases in order to propose and frame quality criteria that respond to the multidimensional views of the three main categories of actors (content creators and providers, purchasers and assigners, content users and evaluators). **Preliminary findings on key areas and ways to rethink the role of DEC in teaching, learning and assessing.**

•   Collecting data and analysing DEC policies on *marketplace, governance, quality assurance and trend changes*: there is a consensus to accelerate efforts in digital education to prepare students and support educators to develop their digital skills and actively participate to the ongoing digital transformation, as well as to improve / enrich their learning and teaching.

• **There is no single framework for evaluating DEC resources.** There are frameworks for providers and analytics frameworks for the use and effectiveness of education content. But the point is that there is no shared solution. A systemic and multi-dimensional approach needs to be developed to take into account convergences and divergences, gaps, and the right methods to involve all stakeholders and implement policies.

The study is exploring key emerging challenges in **6 areas where proposals could be developed**: fragmentation of the marketplace, fitness of procurement models, ensuring quality and monitoring educational value, data governance and ethics, fostering educators and learners' agency, integrating new technologies.

- **Fragmentation of the marketplace** due to the variety of governance approaches across education systems Europe and complexity for providers, and increases complexity related to the multidisciplinary nature of digital education content, the wide range of materials and tools for each education level, and a lack of information on dedicated DEC expenditure.

- **Fitness of procurement models** due to different procurement models (advantage and disadvantage), as well as complex and overly-bureaucratic procedures, and request for a possible shift in public budgeting - from investing in infrastructure to earmarking resources for content/DEC. Here, there is a possible dichotomy where, on the one hand, DEC advancements require faster and more effective procurement processes; while, on the other hand, the education system might benefit from longer contracts and partnerships to ensure systems and methodologies can be fully integrated into teaching, learning and assessment.

- **Ensuring quality and monitoring educational value**: differing opinions with regards to the very meaning of ''quality'' of DEC, stakeholders' purposes and contexts; systematic and coordinated efforts to monitor and measure the pedagogical value, the educational effectiveness and the impact of DEC; questions relating to the appropriateness and necessity of assessing the quality of DEC, as an excessively prescriptive approach or, on the contrary, as a beneficial aid for educators and learners.

- **Data governance and ethics:** need for a concrete guidance on how to use DEC that can collect extensive datasets, including personal information on educators, learners and their habits and behaviours, and improve the quality of digital education. Need for stronger Exploring a European action on data governance at EU level to promote transparency on which, how and by whom data is to be collected and used throughout the DEC lifecycle, as well as on the purposes of its use, and relevant roles and responsibilities of all stakeholders involved.

- **Fostering educators and learners' agency:** structural challenges to allow educators and learners direct influence on the production, selection, qualification and use of DEC, to promote their agency within DEC ecosystem or to facilitate cooperation with EdTech as well as peer-to-peer and public options.

- **Integrating new technologies**: Increasingly complex DEC offers the possibility to enrich or improve new ways to teach, learn and assess. It requires all stakeholder groups – from the private sector to policy makers, as well as educators and learners – to think critically together and provide guidance or framework to explore and appreciate the relevance and the impact of these new tools in their contexts.

Over to you:

We invite you to reflect and discuss **main challenges/issues focusing on DEC** from your own experiences and needs, and to think about what kind of support you are seeking and how might the potential framework/frameworks provide on.

- Why and how do we need to define Digital Education Content (DEC) and quality criteria, in light of the ongoing digital transformation in education, the lessons from the pandemic, and the priority given to digital skills?

- What public interventions are/can be taken to facilitate the production, distribution and effective use of (high quality) digital education content for and by educators and learners?
We would address in this slot two difficult aspects to analyse:
    1) Should teachers be provided with "ready-made" solutions to facilitate the use and/or to produce and share their own productions, i.e. content and platforms, which are funded and maintained by public operators, or rather with funds and autonomy to acquire such solutions provided by EdPub and EdTech?
    2) Which actions and strategies are/can be implemented to facilitate the effective use and promote high standards of quality of digital education content (challenges involved & success factors)?

- How to leverage on national initiatives, address gaps and develop a common approach at EU level (advantages, main areas and elements to be taken into account from the Member States' perspective)? How can DELTA WG help the Commission in taking the results of the study forward?

Associated documents:
- Survey report - Europe's DEC providers Apr 23
- 2nd Delphi consultation - analysis of responses (March 2023)