
DEVELOPING A HIGH PERFORMANCE DIGITAL EDUCATION ECOSYSTEM FOR HE

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Summary

The use of digitally enhanced learning and teaching (DELT) has increased a lot at European higher education institutions since 2020. Different strategies were applied to meet immediate needs of higher education institutions to move online during the pandemic period, while new perspectives were reported by institutions and needs considered to revisit existing models and frameworks of institutional prepared for DELT after gradual coming back to normal life. The European University Associations in partnership with four universities implemented the desk research on existing institutional self-assessment instruments that support institutional preparation to digitally enhanced learning and teaching at higher education institutions. The research has been implemented in the framework of Erasmus+ co-funded project DIGI – HE, with the aim of supporting higher education institutions to engage in self-review to develop and enhance their strategic approaches to digitalization.

The paper presents the main summary of outcomes of this research, following the report published by EUA in 2021 "[Developing a High Performance Digital Education Ecosystem: Institutional Self-assessment Instruments](#)".

To Guide and Lead the Way

Despite of the fact that the use of DELT at European higher education institutions has been increasing, systematic adoption and integration of technologies on institutional level are still on the way. Institutional leadership confirms there are too many challenges to develop and implement institutional strategy for DELT, to use the best of the potential of digital transformation.

Evidently, holistic institutional approaches to digitalisation are required in order to ensure the development of DELT. This is also emphasised at policy level, for example, in the "Digital Education Action Plan" 2021 -2027 (European Commission, 2020) which sets the goal of developing a highperforming digital education ecosystem. Despite these challenges and differences, in view of the increasing strategic focus on DELT, all higher education institutions have to consider many of the same key issues, including: strategy and policy development, investment and maintenance of digital infrastructure, capacity and professional development of staff, along with the provision of learning support services for students. To date, evidence suggests that much provision for digitalisation has occurred through experimental, bottom-up developments, but often in islands of innovation. While there is a trend towards more dedicated strategies and centralised services, the question remains: What does DELT look like from an institution-wide perspective when successfully implemented in a mature way?

To answer this question and tackle at least some of the challenges of digitalisation, DIGI-HE, an Erasmus+ co-funded project, was launched with the goal of stimulating reflection and exchange on the strategic development of DELT among European higher education institutions. For this purpose, the project originally intended to develop a self-assessment tool: Higher education institutions would engage in self-review to enhance their strategic approaches to digitalisation in the context of teaching, learning and assessment. A related intention was to use this tool as a platform for institutional benchmarking and knowledge exchange. The initiative hoped to build on lessons learnt from the European Commission's Selfreflection on Effective Learning by the use of Innovative Education Technologies (SELFIE) tool launched in 2018 for schools which has a strong basis in research and was developed based on the "European Framework for Digitally-Competent Educational Organisations" (Kampylis et al., 2015).

While benchmarking tools for DELT are not new, and the project team was already aware of a number of existing ones, none of them appeared to be widely used in Europe or entirely fit for the intended purpose. A more thorough

review of existing instruments for DELT development was expected to help confirm this assumption and provide a firmer basis anchored in research for the next phase of the project. As an outcome of this review, the project decided to change its approach: desk research found an unexpected wealth of existing instruments, with more instruments likely to emerge due to the emphasis on DELT during the Covid-19 pandemic. Their analysis confirmed that they respond to diverse needs, but also that they tend to present some common challenges, among them the need to address a considerable number of users.

Methodology applied

Initially, between March and April 2020, the project team sought to identify as many relevant selfassessment instruments as possible. This desk research phase drew on the existing knowledge of the project team and a search of both published and grey literature using relevant keywords. Three publications provided a useful synthesis of existing instruments designed specifically to promote quality in online distance learning contexts (Ossiannilsson, et al., 2015; Uvalić-Trumbić & Daniel, 2015; Esfijani, 2018). Several other instruments were located through relevant professional bodies, namely the Australasian Council on Open, Distance and e-Learning (ACODE), and some through government funded agencies, namely the European Association for Quality Assurance (ENQA), the Joint Information Systems Committee (JISC) and Quality and Qualifications Ireland (QQI).

A common template was developed to collect relevant information about each instrument (see Fig. 1):

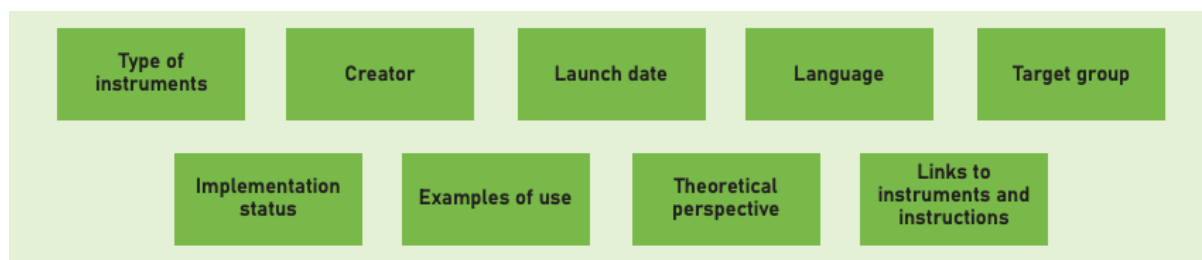


Figure 1. Template for instrument analysis.

The template was initially piloted by the project team based on a smaller sample of instruments chosen to test a variety of different formats, and then revised based on feedback. A Google form designed around the template was created to manage the data collection and analysis of each instrument. Importantly, to enhance the reliability and validity of the review process each instrument was independently reviewed between May and September 2020 by two members of the project team. The desk research for the present report was led by Vytautas Magnus University (VMU) and EUA, with all other partners contributing to the reviews and the analysis. Finally, a further peer review of the analysis and key observations arising from the desk research was undertaken between October and November 2020 by two members of the project team from Dublin City University (DCU) and Duale Hochschule Baden-Wurtemberg (DHBW).

Finally, 20 instruments were selected that directly focused on DELT development for higher education from a critical self-assessment perspective. This included SELFIE for useful comparative purposes. Some were designed as assessment tools (n=3) that can be completed in order to collate a response, obtain a score or measure their institutional performance, whereas others are more like frameworks (n=7), whose main purpose is to define some principles, set standards or benchmarks, and provide guidance. However, there was a certain amount of overlap between the two categories, with several tools (n=10) being based on a concrete framework and several frameworks being accompanied by a tool, sometimes available as a purchasable service. Figure 2 indicates the category that best fits the description of each instrument:

Tool only	Framework only	Combination of tool and framework
SELFIE	DigCompOrg	DigCompEdu
Leibniz Benchmarking Tool	JISC- Digitally Capable Organisation	JISC (tools available on project website as a commercial service)
HEInnovate	QQI Blended Learning Guidelines	UNESCO Blended Learning Assessment Tool

Figure 2. Classification of instruments by type.

The project team, judging from experience in institutional change and transformation, sees this as an essential point: The effective use of such instruments would depend to a large extent on critical reflection, which beyond merely identifying current strengths and shortcomings, would depend on active dialogue and genuine collaboration among institutional stakeholders, including senior leadership, those in middle management roles, administrative staff, faculty instructors, students, and possibly also with external groups. While using a self-assessment instrument can play this role within institutions, obviously it should also facilitate this reflection among them. But actual evidence of frequent use of the instruments or of a supporting community is limited, at least outside a commercial client-customer relationship, which some of the instruments offer.

What is inside and how useful the self-assessment instruments can be?

The instruments cover a wide range of key themes, with the most common being:

- policy and governance, including strategy, leadership, vision and philosophy, digital transformation, organisational digital culture, administration, legal framework;
- financing and funding, including sustainability;
- IT infrastructure including systems, platforms, tools and their application, along with digital resources;
- course, programme and curriculum design, including assessment practices;
- professional development, digital skills and staff support;
- student training, development and support, including digital identity and well-being, digital citizenship, and integrity;
- accessibility and usability of digitally enhanced learning resources and environments;
- collaboration and networking;
- research and innovation;
- quality management;
- measurement of Impact.

These key themes do not feature in every instrument. However, a significant amount of overlap was observed among instruments in terms of the key themes. For example, strategy, governance, infrastructure and resources are addressed in most instruments, while staff and student support, curriculum and assessment are in almost half.

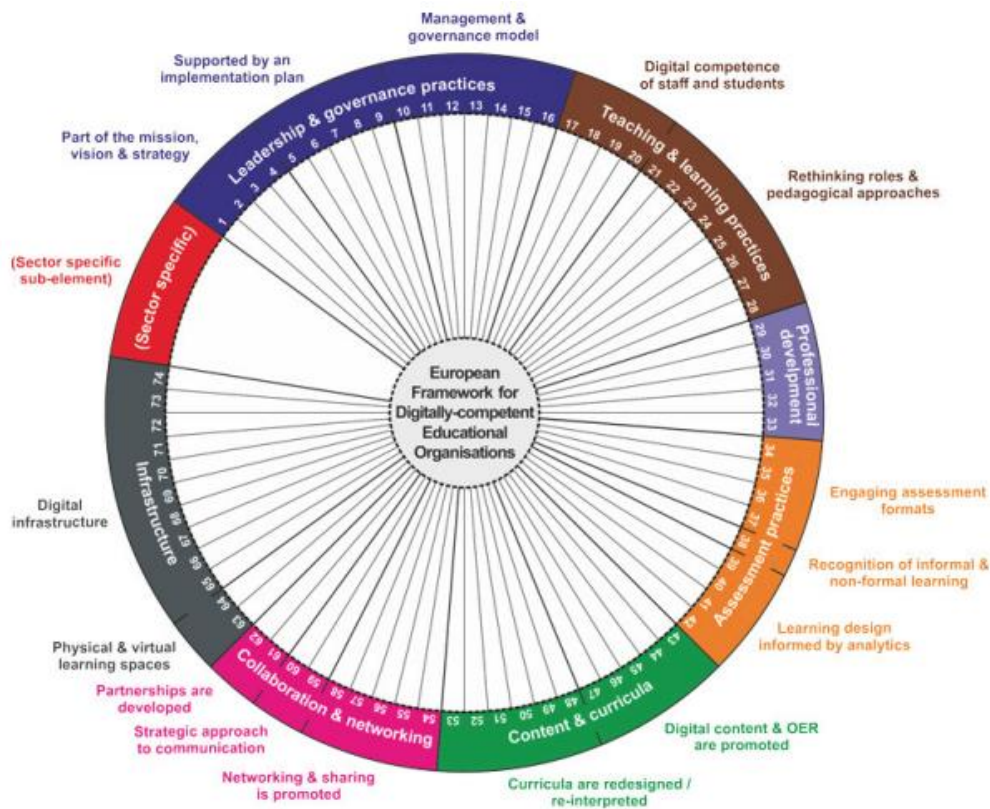


Figure 3. The different elements of DigCompOrg framework.

Leadership and organisational culture as key themes run through many of the instruments, but the Commonwealth of Learning (CoL) Benchmarking Toolkit for Technology Enabled Learning is notable as it provides separate and quite detailed benchmarks to each of them. Organisational culture also permeates through JISC's model of the digitally capable organisation. Leadership is one of the key themes included in SELFIE and DigCompOrg (Figure 2) along with the value of collaboration and networking, with the latter not as obvious in other instruments designed for higher education. With the exception of HEInnovate, few of the instruments have explicit key themes that self-assess the wider research and innovation culture supporting DELT, which could be seen as yet another important gap.

Most instruments are quite recent, with the oldest launched in 2003 and the most recent launched in 2020. However, there is evidence in the literature dating back before this period that a DELT benchmarking project was first underway in the UK as early as 2001. An archive documenting this initiative, including several presentations (Bacsich, 2005a) and a comprehensive literature review on the theory of benchmarking (Bacsich, 2005b) is still available on the project website. At the time there appears to have been a preference towards a "pick and mix" approach.

The instruments can, technically speaking, be exploited by a wide audience, as all of them are online and most of them are free of charge, at least at an initial stage. Furthermore, the vast majority of instruments are available in English. However, whether an educator or higher education institution would want to use an instrument from a different country or continent is another question, as it may not encapsulate local cultural or contextual differences. For example, the National Standards for Quality Online Programs (NSQ), supported by standards for both teaching and courses, have a United States target audience, with some of the language and terminology less appropriate in a European context.

Strength and Limitations

By and large, the reviewers found most of the instruments useful in terms of fostering critical reflection and relatively easy and practical to implement. Indeed, most have instructions, coming in various forms such as user guides, video tutorials, manuals, or a simple explanatory section on their website, that are sufficient for people to get started. For several of the more straightforward or less multi-dimensional instruments, such as the UNESCO Blended

Learning Self-Assessment Tool, detailed instructions with an underlying philosophy are probably not crucial to their high-level implementation by higher education institutions as their strength is their simplicity. Almost a half of the instruments reviewed can be used for both internal and external review and this versatility is considered to be one of the key strengths. Likewise, the fact that certain instruments provide feedback in the form of a report is highly appreciated, especially those that present the results in a visual, and in an easy-to-interpret way, and allow opportunities for comparison with other institutions. This comparative feature is rare in terms of the instrument itself, but where there is a supporting community for wider sharing and reflection, this is considered a particular strength

One of the major criticisms is that some of the instruments are too narrow, in that they focus on a specific area, such as blended learning, entrepreneurship, quality assurance, educators' skills or are only relevant for course-level. Although this is not a weakness per se, it does potentially limit the transferability of the instrument to wider institutional reflections with a diverse range of stakeholders. Likewise, certain instruments are primarily intended for a senior-level audience within and sometimes beyond the institution. Again, although this may not be a weakness, it may limit the potential to engage a wider range of stakeholders in reflective conversations for selfimprovement at the micro- and meso-levels of the institution, including both educators and students, but also external stakeholders.

Concise explanation and examples of strengths and weaknesses, as well as report examples produced by self-assessment instruments available are described in the report of this desk research "Developing a High Performance Digital Education Ecosystem: Institutional Self-assessment Instruments" available at [DIGI – HE project website at EUA](#). Annexes of this report include data about each instrument (model or framework) that was included in this research. It allows institutions to select the instrument or two for their "pick and mix" mode of use to initiate and guide higher education institutions in the journey of self-assessment.

Conclusions

This report began with the question: What does DELT look like from an institution-wide perspective when successfully implemented in a mature way? This question was set in the wider context of the European Commission's new "Digital Education Action Plan" (2021–2027) and the strategic priority of "fostering the development of a high-performing digital education ecosystem" (2020, p. 10). After locating and reviewing a number of self-assessment instruments developed around the globe over the past decade or so, the answer to this question is complex. There are many different dimensions of DELT and many different ways that higher education institutions can choose to harness the potential of digitalisation to achieve their goals. Although at risk of borrowing a cliché, there is no one-size-fits-all model of DELT as institutional context is crucial. Accordingly, the report does not advocate for the use of a particular instrument even if on initial impressions they look good and appear fit for purpose; nor does the review team see much value to be gained from developing yet another instrument for the higher education sector. Indeed, the report comes to the conclusion that a dialogical, "pick and mix" approach may be more productive in terms of future efforts to support and scaffold critical self-assessments that lead to real and transformative change in higher education institutions. Such an approach recognises that the process of continuous development in DELT needs to be infused throughout institutional culture, as well as part of a wider ecosystem that promotes critical self-assessment as a shared ethos and collective responsibility of European educators.

Acknowledgement

The research has been implemented in the framework of Erasmus+ co-funded project DIGI – HE, with the aim of supporting higher education institutions to engage in self-review to develop and enhance their strategic approaches to digitalization. The report "Developing a High Performance Digital Education Ecosystem: Institutional Self-assessment Instruments" has been published and is available at [DIGI – HE project website at EUA](#).

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