



Framework for quality assurance of e-assessment

Esther Huertas, AQU Catalunya

Maria Kelo (ENQA); Roger Roca (AQU Catalunya); Paula Ranne (ENQA);
Anaïs Gourdin (ENQA); Martin Foerster (EQANIE)

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INTRODUCTION



<https://edition.cnn.com/2013/05/29/opinion/mystreet-digital-anthropology/index.html>



DIGITAL AGE

Main reasons

- Globalisation
- Worldwide internet



Incheon Declaration and Framework for Action for the implementation of SDG 4 (2015)



<http://unesdoc.unesco.org/images/0024/002456/245656e.pdf>

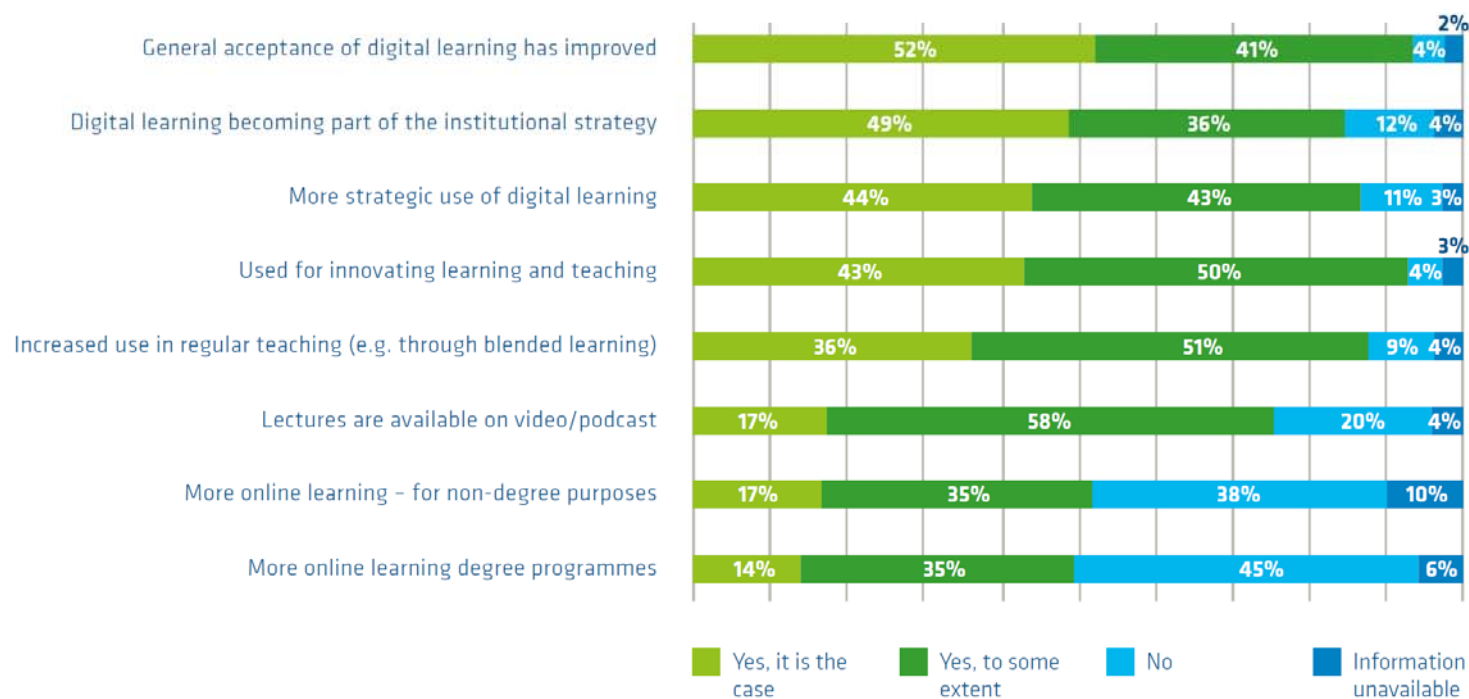
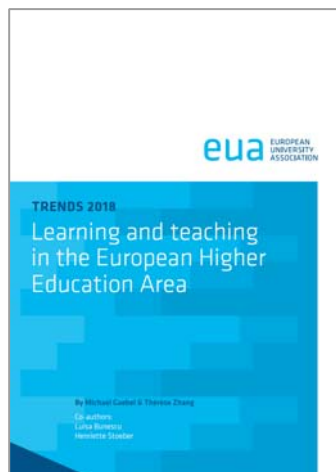


Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all

E-LEARNING IN EUROPE

Fig. 25 Main institutional trends in digital learning during the last three years

What are the main trends at your institution regarding digital learning in the last three years? (Q. 25; N = 293)



<https://eua.eu/downloads/publications/trends-2018-learning-and-teaching-in-the-european-higher-education-area.pdf>



E-LEARNING IN EUROPE



EMPOWERING
EHEA Paris 2018
EUROPE'S YOUTH

Conférence ministérielle européenne
pour l'enseignement supérieur



Digitalisation plays a role in all areas of society and we recognise its potential to transform how higher education is delivered and how people learn at different stages of their lives. We call on our higher education institutions to prepare their students and support their teachers to act creatively in a digitalised environment. We will enable our education systems to make better use of digital and blended education, with appropriate quality assurance, in order to enhance lifelong and flexible learning, foster digital skills and competences, improve data analysis, educational research and foresight, and remove regulatory obstacles to the provision of open and digital education. We call on the BFUG to take the issue of digitalisation forward in the next working period.



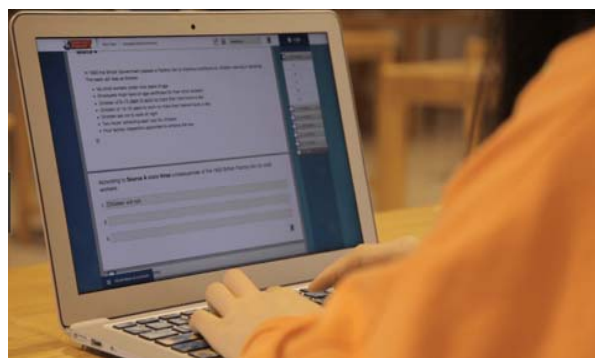
http://www.ehea.info/media.ehea.info/file/2018_Paris/77/1/EHEAParis2018_Communique_final_952771.pdf

WHAT'S FIRST?



Learning

1st



Technology

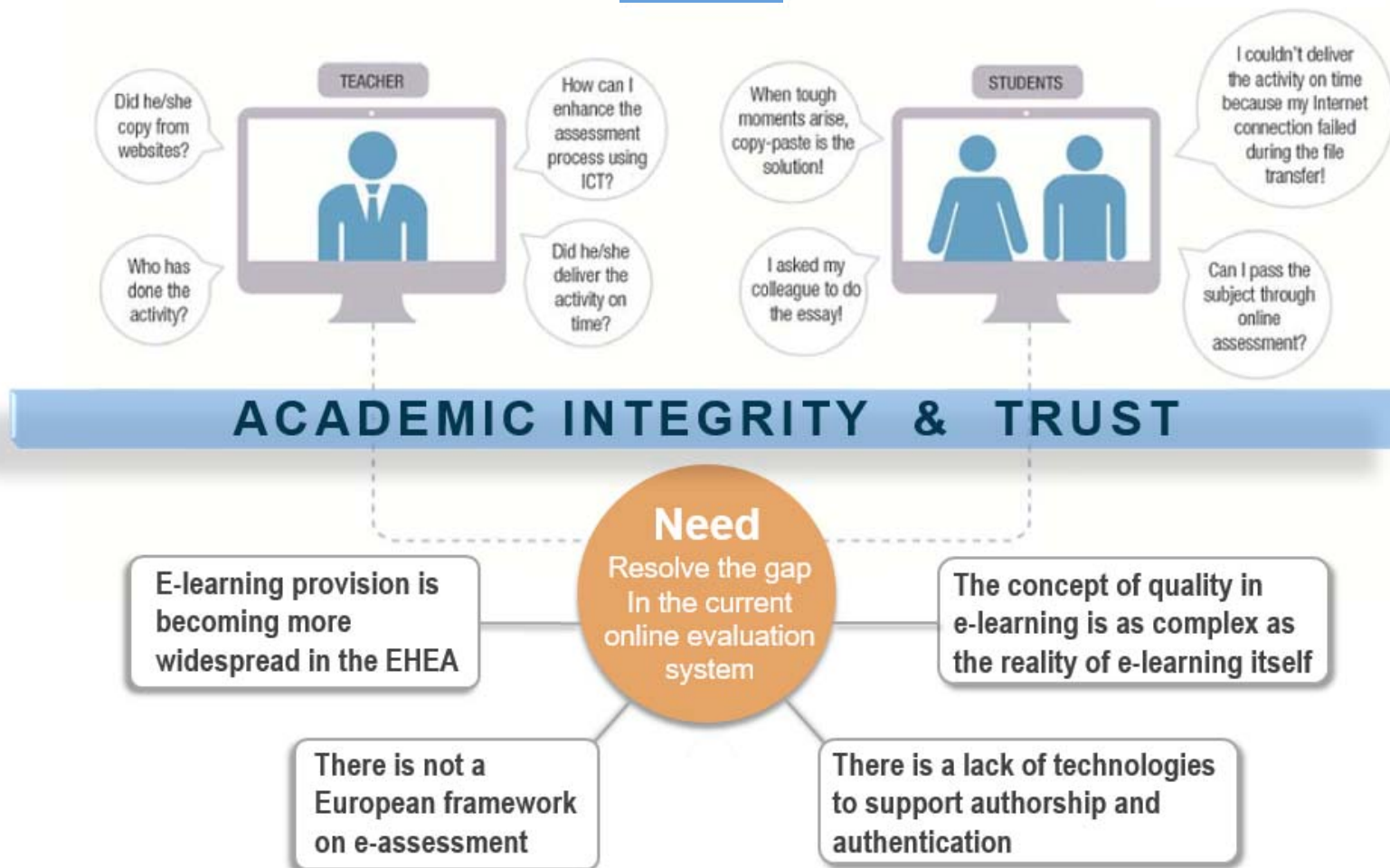
2nd





Methods and practices that utilise digital technologies in order to measure, evaluate and support learners' learning.





TeSLA PROJECT GOALS



Define and develop an **e-assessment system**, which ensures learners **authentication and authorship** in online and blended learning environments while avoiding the time and physical space limitations imposed by face-to-face examination.



Support any e-assessment model (formative, summative and continuous) **covering teaching and learning processes as well as QA aspects, privacy and ethical issues, and technological requirements.**



<http://tesla-project.eu/>



CONSORTIUM



18 Partners

8 Universities

3 QA bodies

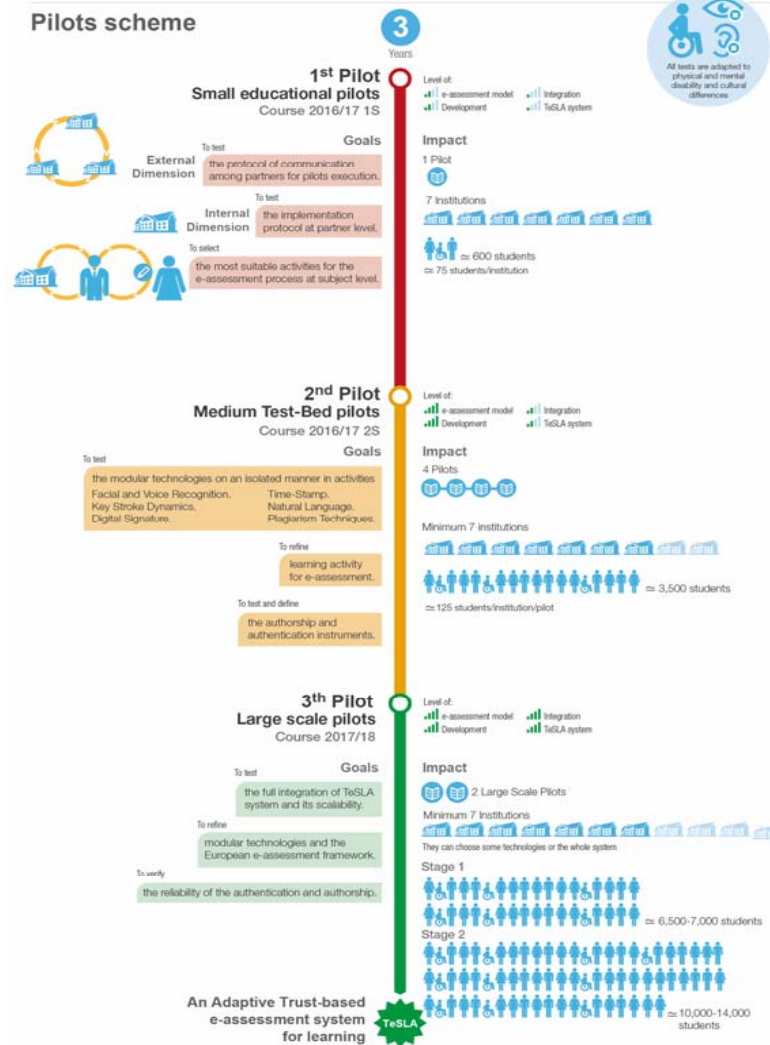
4 Research Centers

3 Enterprises



METHODOLOGY

Pilots scheme



TeSLA INSTRUMENTS

AUTHORSHIP

DOCUMENT ANALYSIS

Involves the analysis of written material using a qualitative analysis package that describes discourse and its interpretation

Plagiarism tools



Analyses written material and detects similarities among various written documents



Forensic analysis

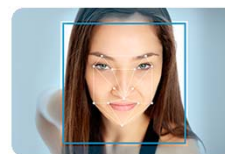
Determines the authorship verification and authorship attribution of written documents based on the comparison of current documents with stored data

AUTHENTICATION

BIOMETRICS

Allow the clear identification of humans based on some specific physical characteristics or special behaviour

Facial recognition



Analyses facial expressions in two stages: facial detection and recognition



Voice recognition

State-of-the-art audio description method. Speaker segmentation and cluster grouping

Keystroke dynamics



Measures how the user writes in regards to pressure and time-based measuring

CONFIDENCE

SECURITY TECHNIQUES

Deploy a security service provided by a layer of communicating systems

Timestamp



Generates a sequence of encoded information identifying when an event is recorded

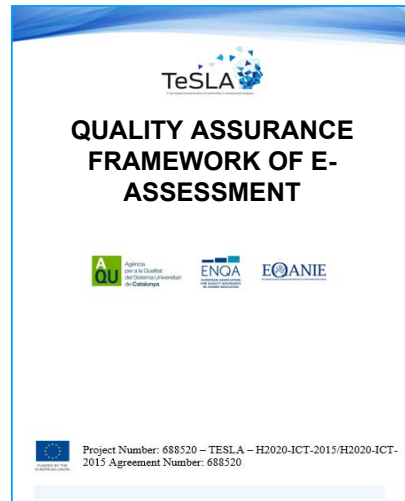


Digital signature

Guarantees the authenticity of a digital message or document by a mathematical scheme



QA FRAMEWORK OF E-ASSESSMENT





STANDARDS

1. Policies, structures, processes for QA of e-assessment
2. Assessment of learning
3. Authenticity and authorship
4. Infrastructure and resources*
5. Learner support
6. Teaching staff
7. Learning analytics*
8. Public information*

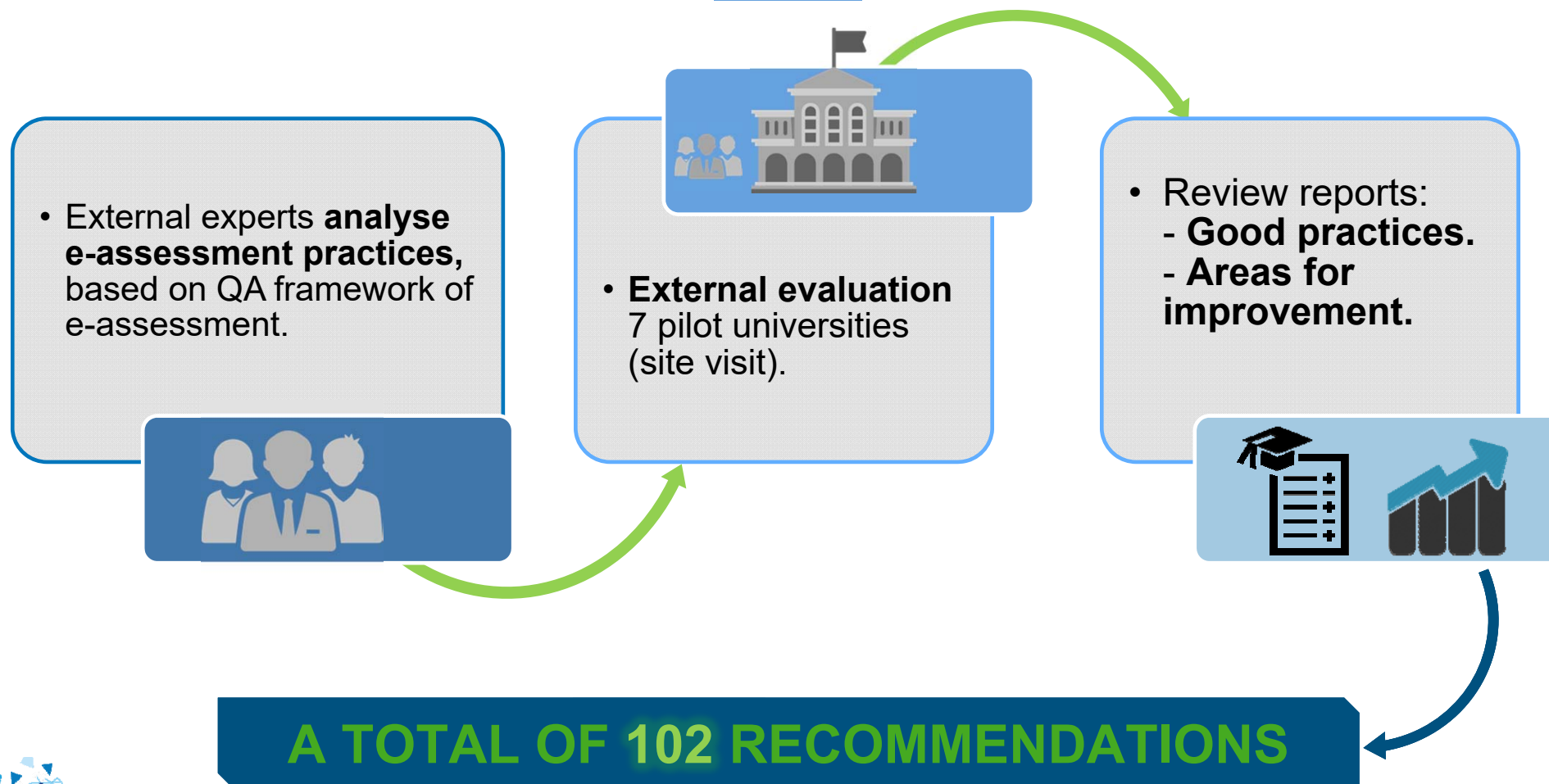


INDICATORS

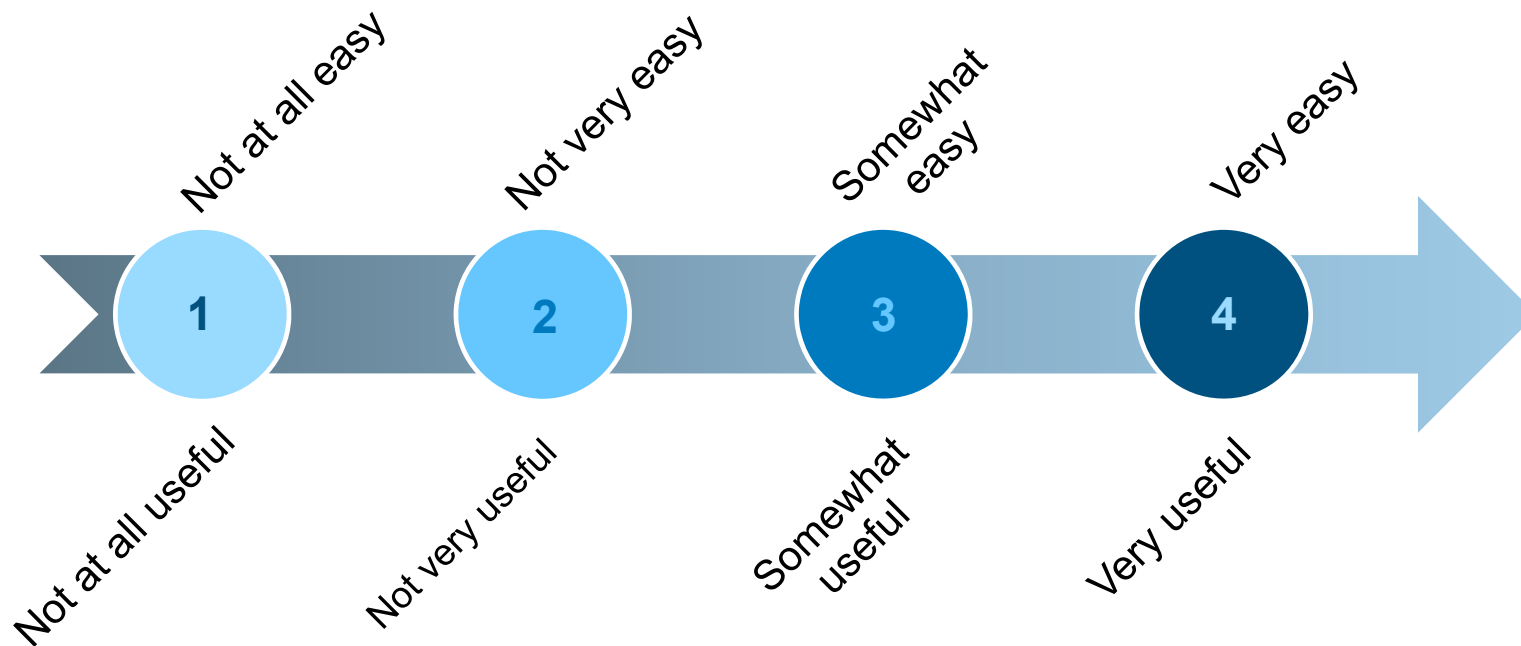


EVIDENCE

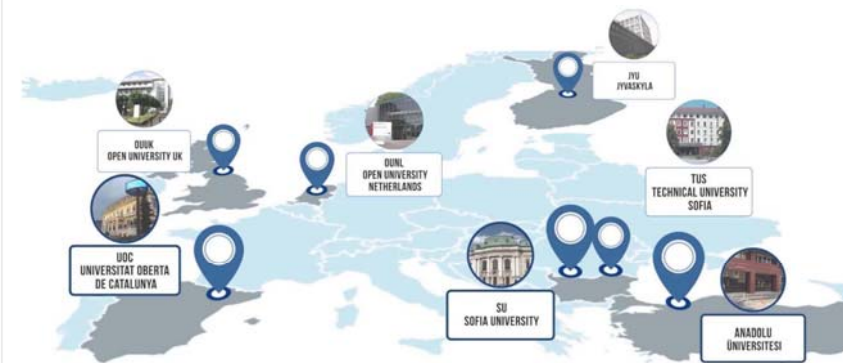
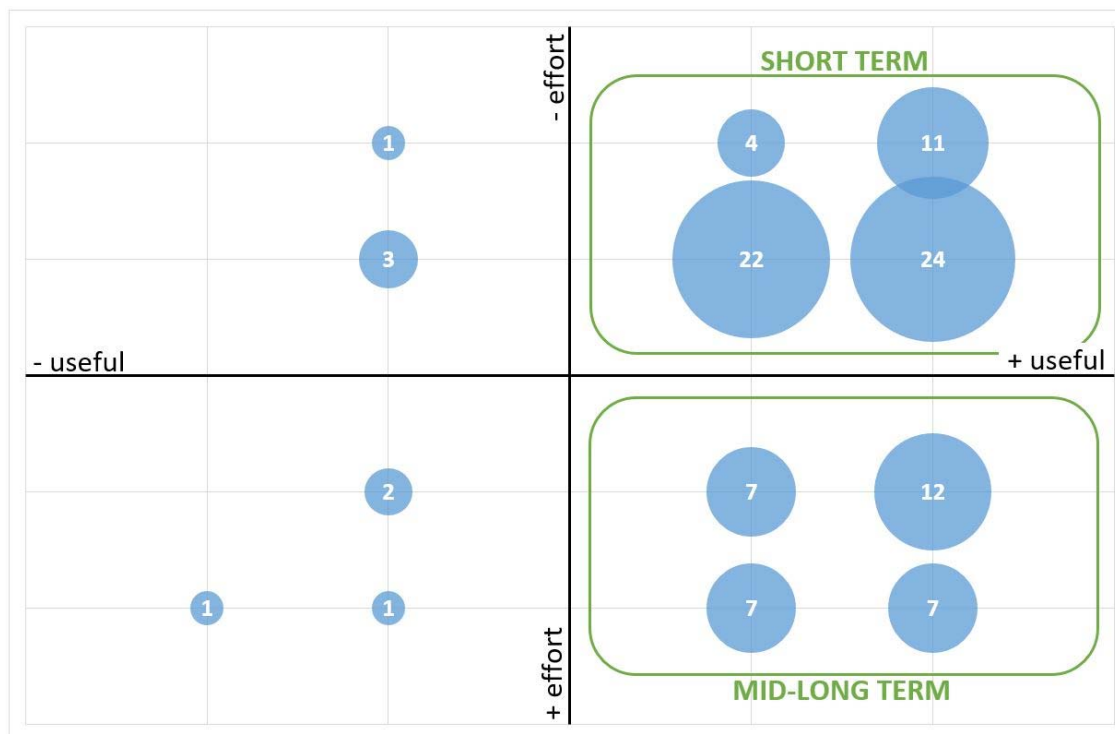
QA FRAMEWORK APPLICATION



RATING OF RECOMMENDATIONS



CLASSIFICATION OF RECOMMENDATIONS

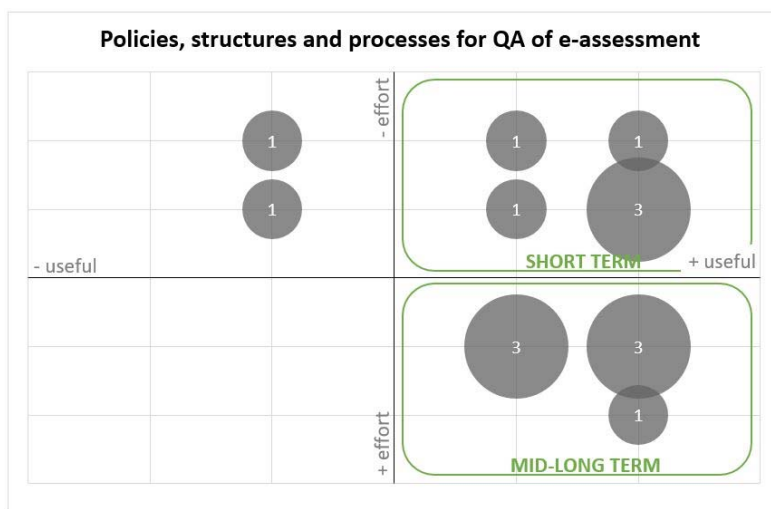


TOTAL RECOMMENDATIONS: 102

Short-term application: 61
 Mid-long-term application: 33
 Not applicable: 8

1. POLICIES, STRUCTURES, PROCESSES AND RESOURCES FOR QA OF E-ASSESSMENT

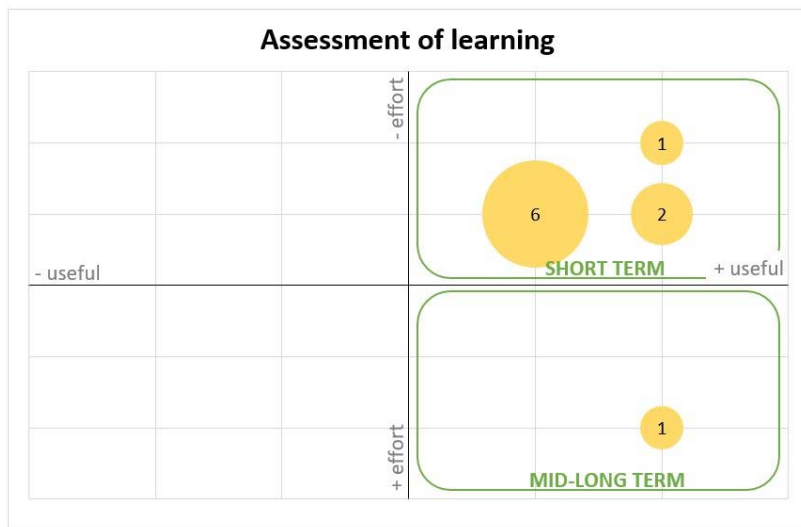
The institution has appropriate policies, structures, processes and resources **to ensure that e-assessment conforms with ethical and legal considerations**. Besides, the proposal for the e-assessment is aligned with the **pedagogical model** of the institution and ensures the constant achievement of its objectives.



1. **Two different scenarios** in regard to e-assessment policies:
 - ✓ e-assessment is **permitted**.
 - ✓ e-assessment is **not permitted**.
2. All HEIs have **well defined policies and processes for QA procedures** in place (general purposes).
3. **Traditional universities** that have recently included blended and online provisions should **develop specific policies on e-learning and e-assessment**.
4. New **ethical and legal issues**, national and European regulations, need to be revised and updated.

2. ASSESSMENT OF LEARNING

*E-assessment methods are varied, facilitate pedagogical innovation and determine rigorously the level of achievement of learning outcomes. They are designed to assure a **timely and fair** assessment of learning. As such, they are consistent with learning activities and resources. Digital assessment should also promote the participation of learners and adapt to their diversity as well as of educational models.*



1. Diversity of assessment methods is applied in all HEIs (SCL).
2. HEIs offer diversified methodology for assessing SEND learner (SCL).
3. Chosen assessment methods are aligned with learning outcomes.

3. AUTHENTICITY AND AUTHORSHIP

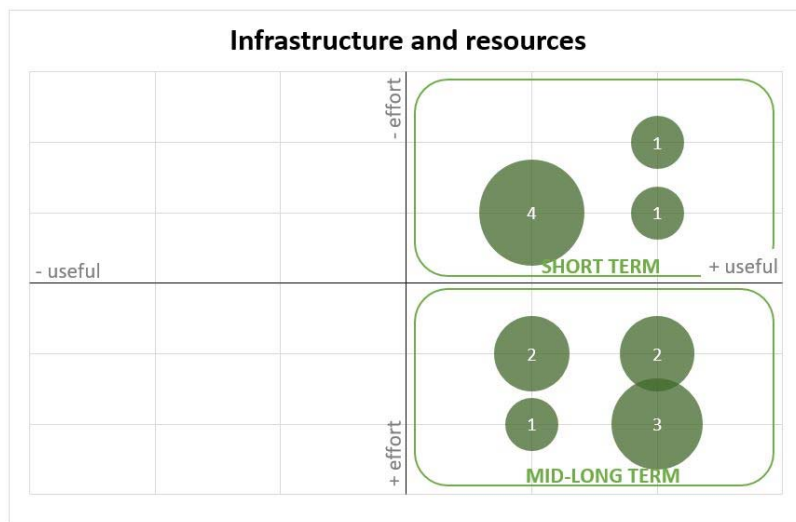
The development and implementation of the e-assessment include **protective measures** that **guarantee learner authentication and work authorship**. The e-assessment system is secure and fit for purpose.



1. All HEIs address academic integrity issues (plagiarism). However, they need to **define the threshold level** of normal behaviour vs. suspicious behaviour.
2. Learners need to be provided with enough information to be confident enough to share **personal data**.
3. Implementation of a full **register of external attacks** and technical problems needs.

4. INFRASTRUCTURE AND RESOURCES

The institution utilises the *appropriate technologies* that the learning expectations, and enhance and expand learning opportunities.



1. Different VLE are used by HEIs.
2. HEIs should have **centralized technical support in place** (ticketing system, guidance and procedures for technical staff...).
3. HEIs should **collect feedback from all key stakeholders on the use of the VLE.**

5. LEARNER SUPPORT

*Learners are aware, have access to and use effective and well-resourced **support services** for counselling, orientation, tutoring and facilitation in order to increase retention and success. Learner support **covers pedagogical, technological and administrative related needs** and is **part of established institutional policies and strategies**.*

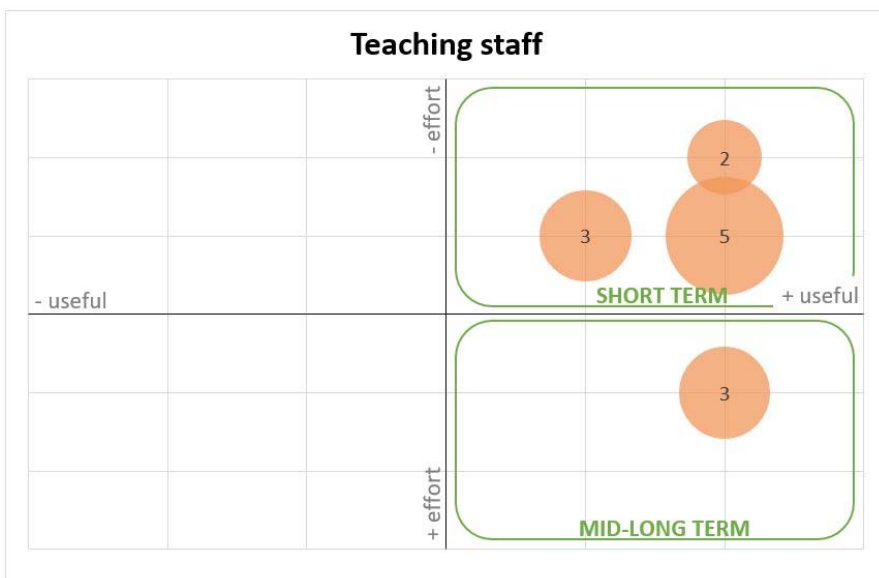


RESULTS

1. All HEIs have **well-established support mechanisms** to meet all learners needs (administrative, technical and pedagogical).
2. **SEND learner receive an appropriate and wider range of support.**
3. **Learners should be provided with technical guidance.**
4. Learner's feedback need to be revised and redesigned (when necessary) in order to improve support services.

6. TEACHING STAFF

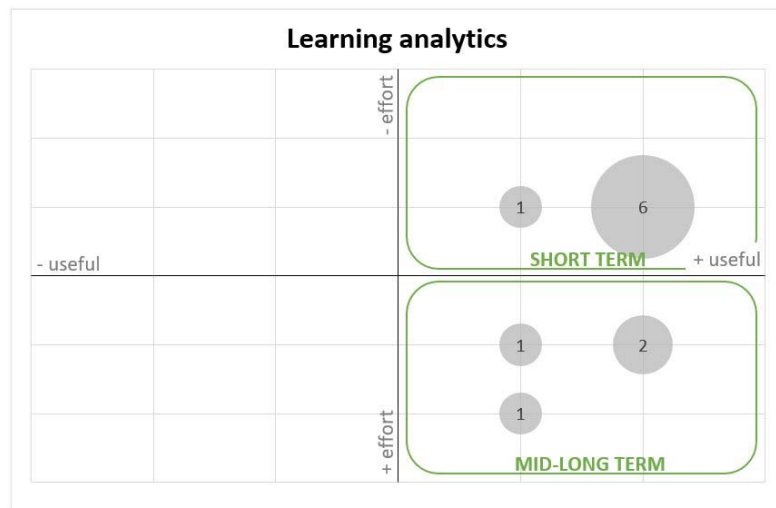
Teaching staff are *skilled and well-supported* in relation to *technological and pedagogical requirements and e-assessment methods*.



1. Teaching staff should be **trained on the innovation of the pedagogical practices** (including e-assessment) and should **receive technical training**.
2. Teaching staff should be **provided with updated information, guidelines and well-defined procedures** to deal with the **academic integrity** and the implementation of a **new assessment system**.
3. Procedures for the evaluation of teaching staff **feedback** should be in place.

7. LEARNING ANALYTICS

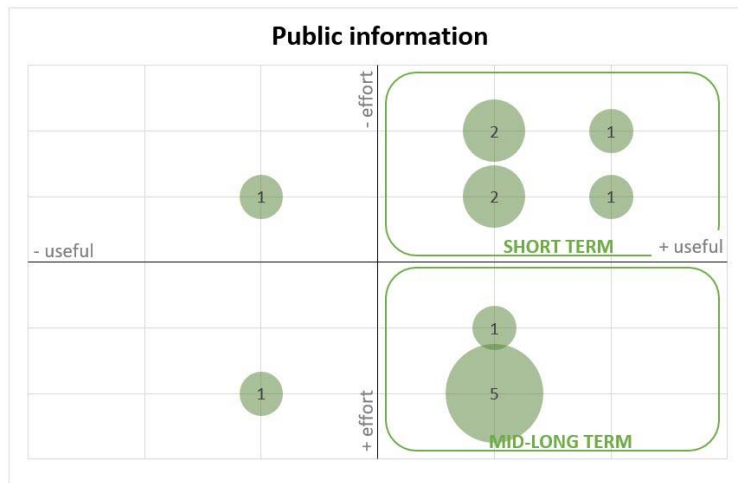
The institution has an **information management system (IMS)** that enables agile, complete and representative collection of data and indicators derived from all aspects related to e-assessment methodology and authenticity and authorship technologies.



1. All HEIs agree on the **potentiality and value of having an IMS in place** for the improvement of the learning process.
2. HEIs need to enhance an IMS for the **systematic collection of data related to the QA of e-assessment.**
3. HEIs should clearly **define the process around the use and analysis of personal data** (build trust).

8. PUBLIC INFORMATION

The institution appropriately **informs** all stakeholders of **e-assessment methods and resource requirements**. Learners should be made aware of the hardware requirements and learning resources technology and technical support provision.



1. All HEIs have **well-established systems and accurate information available**.
2. HEI websites are:
 - student-oriented;**
 - easy to navigate;**
 - structured based on the needs and requirements of users.**
 and provide transparent information on:
 - how new technologies for assessment ensure fair and correct results;**
 - software and hardware requirements.**

CONCLUSIONS

- **The framework has been proven to be useful** for the enhancement of QA in HEIs that implement e-assessment.
- **E-assessment should be perceived from a holistic approach.** Review procedures should **analyse how each HEI integrates e-assessment** within its teaching and learning process and organizational culture.
- **Fully online universities comply with most of the elements** included in the framework, while **traditional universities** offering distance education **should take into consideration the elements included in the framework.**
- **Further development is needed** from HEIs towards the implementation of e-assessment.



THANK YOU FOR YOUR ATTENTION

Esther Huertas (AQU Catalunya): ehuertashidalgo@aqu.cat
Maria Kelo (ENQA); Roger Roca (AQU Catalunya); Paula Ranne (ENQA);
Anaïs Gourdin (ENQA); Martin Foerster (EQANIE)



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