Online assessment becomes more and more important. The TeSLA system combines different technologies in one system (TeSLA system) and can be used in any LMS. Through TeSLA educational institutions are able to implement e-assessment in an accredited and certified way.

Comparable examples
There are several instruments on the market for authentication and authorship such as Safe Exam browser, ProctorU or Kryterion but these are either more intrusive, lack scalability or are solely based on final examination.

References


e-Assessment is playing an increasingly important role in the transformation of higher education (Romeu-Fontanillas, Romero-Carbonell, & Guitert-Catasus, 2016; Whitelock, 2009). It has the potential to offer new ways of assessment with immediate feedback to students (Whitelock, 2009). However, e-assessment also creates many challenges for higher education (Al-Smadi & Gütl, 2008; Olt, 2002; Romeu-Fontanillas, Romero-Carbonell & Guitert-Catasus, 2016; Rowe, 2004; Whitelock, 2009). Most confronted issues in e-assessment are cheating, authenticity of users, security, and privacy (Al-Smadi & Gütl, 2008; Olt, 2002; Rowe, 2004). In order to overcome the disadvantages of e-assessment, innovative practices are needed.

The TeSLA project is one of the world-wide initiatives that is working on an innovative solution for e-assessment in online and blended educational settings. The TeSLA project is funded by the European Commission in the context of H2020 and coordinated by Anna Elena Guerrero, lecturer at the Open University of Catalonia (UOC) whereas the complete consortium comprises 18 expert organizations from twelve countries, including eight universities, both on-site and online, three quality assurance agencies, four research centres and three technology companies. The participating universities are the UOC (Spain), the Open Universiteit Nederland, Welten Institute (Netherlands), Sofia University and the Technical University of Sofia (Bulgaria), the Open University: Institute of Educational Technology (United Kingdom), IIR Telecom Bretagne (France), the Anadolu University (Turkey), and the University of Jyväskylä, Open University (Finland). The quality assurance agencies are the Catalan University Quality Assurance Agency (Spain), the European Association for Quality Assurance in Higher Education AISBL (Belgium), and the European Quality Assurance Network for Informatics Education EV (Germany), while the research centers are the University of Namur (Belgium), the Instituto Nacional de Astrofisica Óptica y Electrónica (Mexico), the Fondation de l’Institut de Recherche IDIAP (Switzerland), and Imperial College London (United Kingdom). Finally, the technology companies are Protos Sistemas de Información (Spain), LPLUS GmbH Company (Germany) and Watchful (Portugal).

The TeSLA project strives to develop a trust-based system for authentication and authorship of e-assessment in online and
blended learning environments. It combines different innovative technologies to authenticate and ensure authorship of students such as facial recognition, voice recognition, typing patterns or anti-plagiarism. The system will support diagnostic, formative, summative and continuous assessment models. During the project, ethical, technological and legal aspects, such as data protection are taken in serious consideration and get much attention. Moreover, the TeSLA system is being designed with attention for students with special educational needs and disabilities.

The project began in January 2016 and will last three years. During those three years, the TeSLA system is being tested by more than 10,000 students across Europe in three different project phases. The first phase - which ran from October 2016 till December 2016 - involved small educational pilots with 600 students from 7 universities. During those pilots no technology but the coordination between all the partners and the defined protocols and data flows (learners, teachers, auditory, etc.) were tested. Valuable experiences from the first pilot have been gathered through focus group interviews and online questionnaires. From an educational perspective the process of inviting teachers for the first pilot and discussing the TeSLA aims and instruments provided valuable insights as well. In the second phase - which runs from March 2017 till June 2017 - medium test-bed pilots are conducted involving about 3,500 students. During those pilots the different technologies such as biometry, security and integrity, and document analysis instruments will be tested. The third and final phase consists of large scale pilots involving more than 16,000 students. During that phase the TeSLA system will be refined and the integration, reliability and scalability of the system will be tested.

The TeSLA system will be designed in such a way that educational institutions can choose to connect or integrate TeSLA within their existing learning environments. There will be both LMS plug-ins and standard LTI connectors available. As such, the teacher can import or create an assessment and choose him/herself what level of assurance and security (which instruments) (s)he wants to include for this specific assessment. The students complete the assessment as they would normally do. Afterwards, faculty members can access a full report of work authenticity and authorship together with the assessment responses.

The innovative impact of the TeSLA Project is to take advantage of the benefits of different technologies in one system (TeSLA system), through its integration and its application for e-assessment processes in any LMS. This will allow educational institutions to obtain evidence for e-assessing their learners during their learning process in an accredited and certified way.