

DOCIMO : an Online Platform Dedicated to the Construction and Quality Management of Learning and Impact Assessments in the Digital Age

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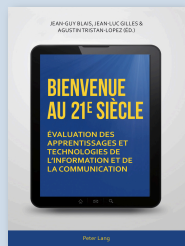
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With the advent of the digital age, evaluation tools using information and communication technologies are increasingly used to meet the needs of learners and trainers. DOCIMO is an Open Source online platform dedicated to the construction and the quality management of training assessments and impact evaluations. Such tools are known as Assessment Management Systems. DOCIMO is based on a 8-steps quality cycle: Analysis of the objectives of the evaluation; Design of the assessment; Development of questions databases; Information of the assessed persons; Completion of the evaluation; Analysis of results; Production of feedbacks and Macro-regulation to improve future assessments.

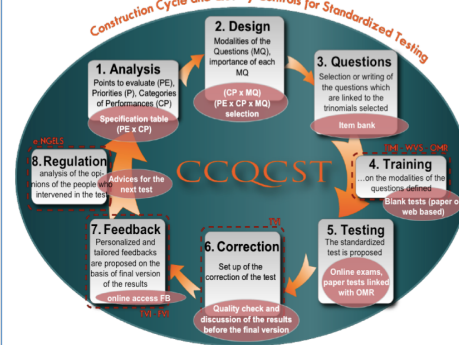
The advent of the digital civilization (Cazeaux, 2014) and the digitization of pedagogical practices provide a favorable context for the deployment of R&D in assessment engineering. Assessment methods and tools adapted to new educational environments appear today (Blais & Gilles, 2011, 2012, Davis, 2015, Fadel, Honey, & Pasnik, 2007). ICTs for evaluations provide responses to the needs of learners, trainers and stakeholders in innovative training systems at local, national and international levels.

Blais, Gilles & Tristan Lopez (2015) with a group of experts address this theme in four parts: the complexity of new assessment approaches; on-line digital devices; tools for the analysis of film sequences and finally data modeling for assessment.



Concomitantly, quality management penetrates all spheres of human activity. Indeed, more and more players who are attentive to the quality of certification processes want guarantees of seriousness in training assessments and certifications.

Gilles (2002, 2010) proposes a procedural model for the implementation of quality standardized assessments called the **CCQCST** (Construction Cycle and Quality Controls for Standardized Testing).

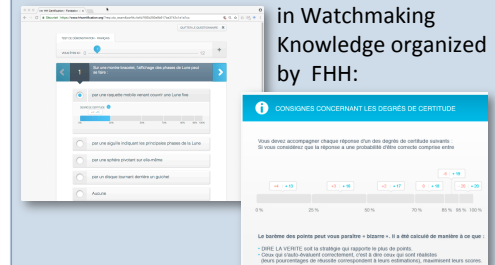


The CCQCST model includes 8 steps: (1) Analysis of the objectives to be evaluated; (2) Design / test plan; (3) Questions / items elaboration; (4) Training / Information of the trainees to be evaluated; (5) Testing / assessment; (6) correction and analysis of results; (7) feedbacks and (8) cycle regulation for continuous improvement of subsequent evaluations. The CCQCST cycle, as shown above, provides quality control procedures to ensure quality assessments.

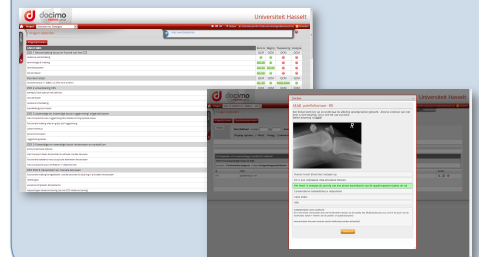
In 2003, with the help of funds granted by the Walloon Region of Belgium, computer developments linked to an online platform integrating the CCQCST 8 steps began with a team of the University of Liège. Originally, the platform was called e-CQCST (electronic Construction & Quality Control for Standardized Testing) and proposed to implement the level 2 "learning evaluations" part of the meta-model of Kirkpatrick (1959, 1998). The e-CQCST prototype was then redesigned in a second less research oriented and more user-friendly version called EXAMS (2nd generation platform) used by the spin off Assess Group Ltd. created in 2006 from the SMART center of the University of Liège. After 8 years, the Assess Group spin off has developed on its own (internal R&D) a new version (3rd generation) today called "**DOCIMO**" Open Source programmed under GPL3 license. DOCIMO addresses complex assessment issues from public administrations, industrial sectors and academic organizations and integrates opportunities to evaluate Level 2 and Level 1 "Evaluation of participant satisfaction" of Kirkpatrick as well as new functionalities such as issuing Certificates. In 2016, the spin off Assess Group takes the opportunity of a merging and acquisition from a Swiss company to become "HR-ITinera".

DOCIMO is used in a variety of contexts, notably by the Fondation de la Haute Horlogerie (FHH) in Geneva and the Faculty of Medicine of the University of Hasselt (UHasselt) in Belgium.

- The use of confidence degrees within the framework of the International Certification in Watchmaking Knowledge organized by FHH:



- Management of an item bank using a table of specifications for the anatomy course at UHasselt Faculty of Medicine:



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