

# Chapter 15

## Common Scenario for an Efficient Use of Online Learning: Some Guidelines for Pedagogical Digital Device Development

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### ABSTRACT

*Training efficiency required for Higher Education (quality, accessibility, bigger groups with heterogeneous prior experience, funding, competition...) encourages providers to find new ways to facilitate access to knowledge and enhance skills. In this scope, the use of digital pedagogical devices has increased with innovative solutions; the ones based on an LMS to support a blended course or MOOCs design for self-education. This evolution has impacted teaching practices, learning and organizations leading to a new paradigm for trainers and a new business model to be found for online and distance learning. The innovation mostly relies on the use of learner-centered digital learning solutions in a comprehensive way for the commitment of more active and independent learners and their skills recognition. Based on a 3-year experiment (hybridized course for CVT) and continuous improvement in the WIL, a common scenario is proposed to address the issue for distance training.*

### INTRODUCTION

Efficiency of Higher Education training relies upon many players at different levels in the multi-level organization of Higher Education Institutions (HEIs) (Nuninger et al, 2016) but once in the classroom, the trainer is in charge (referring to the person leading the training; the teacher who will change role depending on the context and group) and, while respecting his personal workload, has to handle new constraints such as: time reduction for face to face learning, groups with large numbers of learners (referring to the students enrolled in Higher Education as trainees in Work Integrated Learning (WIL) and apprentices) with a heterogeneous level (knowledge) and prior experience (skills), and observed low involvement of the digital natives. In addition, the European Standards and Guidelines drawn up by the

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European Network of Quality Assurance (ENQA, 2015) enhance Quality Assurance with an impact on the Pedagogical Team and the HEI's organization to meet new requirements. The aim is to develop a learning organization and Community of Practice (mixing talents) to adapt to the world evolution and citizens' needs through innovative learner-centered pedagogical tools. The HEIs have to imagine a new business model for funding and promotion of their added value in the scope of Lifelong Learning (LLL); high level trainings customizable for all, at any time and from (almost) anywhere (Davies, 2007; Yang et al., 2015). Such a concern is more demanding than the European Accessibility Act in 2015 by the European Community which is part of the challenge of distance learning, and complies with the European framework of "Europe 2020" (EC, 2010). Indeed, among the levers stressed by the European policy, note: innovation and knowledge, high-employment partly based on digital evolution, skill development throughout the life cycle and performance of the education systems. The huge developments of Information and Communications Technology (ICT) with cheaper materials to access the net and greater speed to connect to a large amount of information have given opportunities to HEIs to develop new pedagogical tools, giving access to validated knowledge. Despite the expected results, some discrepancies remain due to social class (Becker, 2000) and to a lack of basic skills and learning autonomy; and especially when digital devices are at play. Beyond such prior knowledge, such as the European Computer Driving License for instance, some learning skills are expected such as the ability to find and select the correct and validated information with respect to personal needs. Therefore, although Learning Management Systems (LMS) such as Moodle are useful tools to support the face-to-face course thanks to many pedagogical activities for huge groups, they are not sufficient for online learning with a concern for autonomy. In the same way, the MOOCs with free access and brief assessment that can motivate autonomous learning and sound like appealing solutions for mass learning, lack factual recognition to prove quality; even if some assessment by peers can be integrated and online examination performed, the business model is still to be found with respect to the necessity to share cost and benefits between parties. But, whatever the business model, once the resources are identified with respect to the expected learning outcomes for the target, the challenge is ultimately for the teachers to drive the behavior change of learners while they re-build the learning autonomously. This is why learner-centered pedagogical digital learning devices should be developed in order to guide learners through the knowledge, going further than just providing knowledge through the net with video-recorded lessons, for instance, with little guidance: the expected ramp up skills require a deep personal development and learning ability. It is important to note that the underlying outcome is also the change in the Project development team (pedagogical team and IT support) while re-building the learning environment in and outside the classroom (Biddix et al., 2014), and building up the pedagogical digital device based on new rules. This development has to be conducted too, and this is the responsibility of the Higher Education provider. As a consequence, some areas of freedom of action should be made possible for the trainer-teachers to innovate in pedagogy with the technical and financial support of the HEI, requiring first, a clear policy from the HEI and second, project good practices for the trainer, such as DMAIC approach (Define, Measure, Analyze, Improve and Control) during the process of development of the innovative pedagogical device, but also of the use of it: the issue is to identify directions of improvement and prove efficiency before dissemination at an institutional level. One result is the autonomous buildup of the parties' Personal Learning Environment (Downes, 2012). Further, a formative and factual assessment should be performed for the recognition of skills in practice; unfortunately, not always carried out completely correctly today. As a consequence, the development of online learning in Higher Education should be rigorously developed based on continuous improvement to comply with efficiency criteria and allowing a personal act of learning. In this

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