TiBL

Technical Innovation in Blended Learning

Co-funded by the Erasmus+ Programme of the European Union

BLENDED LEARNING, IN CONTINUOUS VOCATIONAL TRAINING, AND CONTINUOUS PROFESSIONAL DEVELOPMENT: QUALITY CONCERNS, September 2018

SUMMARY

This conceptual report aims to provide an overview of quality considerations for blended learning in continuous vocational training (C-VET), and continuous professional development (CDP), especially for small and medium enterprises (SME). The presented overview is prepared within the project Technical Innovation in Blended Learning (TIBL), a KA202 - Strategic Partnerships for vocational education and training project, 2017-1-ES01-KA202-038256.

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Introduction

This conceptual report aims to provide an overview of quality considerations, and models related to blended learning. The overview is prepared within the project Technical Innovation in Blended Learning (TIBL), a KA202 - Strategic Partnerships for vocational education and training project, 2017-1-ES01-KA202-038256. The project focus on blended learning in continuous vocational training (C-VET), and continuous professional development (CDP), especially for small and medium enterprises (SME). Accordingly, some examples will be given which reflects this especially area.

This report has its foundation from two research studies, both on behalf of the International Council for Open and Distance Education (ICDE). The first one is by Ossiannilsson, Williams, Camilleri, And Brown (2017) on quality models in online and open learning (including blended learning) around the globe: State of the art and recommendations. The second one is by Ossiannilsson (2017) on blended learning state of the nation. Both research reports targeted a broad audience, especially practitioners, policy makers and leaders. They both provided awareness, inspiration, insights, and dialogues of the current discourse debates. The quality report was the first of its kinds, often cited, and used in international quality related contexts. In short, the quality research emphasized that although the global models had different features, dimensions, or categories, they all had some features in common, such as services, products, and management, and they all emphasized the student-centered approach. It was emphasized that whatever quality model is used, purpose, maturity, and stakeholders need to be clarified. In addition, it was emphasized that any model needs to be flexible and agile enough to embrace, and empower the rapid changes in the area, as well as to contextualization (glocalisation, both to be local but also global recognized). The research study on blended learning explained and took the stance that blended learning is based on a pedagogical approach rather than on technology. In addition, blended learning is time, context, and cultural dependent.

In the next section, blended, learning is briefly outlined and explored. For the TIBL project a special report on blended learning has been published by Ossiannilsson (2018). Next follows two other models or frame of references related to blended learning and quality, which are the eight attributes of open pedagogy by Hegarty (2015), and the Substitution, Augmentation, Modification and Redefinition (SAMR) framework developed by Puentedura (2012) to

integrate technology into the curriculum. After that Ossiannilsson et al.'s (2015) study on quality models is shorty explored, followed by ISO and (the International Electrotechnical Commission (IEC), ISO/IEC 19796-1 the basic framework for quality development in organizations within the field of learning, education, and training (LET). After that, the new standard from 2018 by ISO (ISO 21001:2018) on Educational Organizations-Management systems for educational organizations is presented. Then follows a description of ENQAs occasional paper on considerations for quality assurance of e-learning provision (ENQA, 2018). Thereafter, some of the investigated quality models are presented to serve as examples of common comprising benchmarks and or features. Finally, quality considerations related to an initiative by EASME/COSME/2017/001 on Promoting online training opportunities for the workforce in Europe are presented.

Blended learning terminology and definitions

Blended learning designs have headed the list of trends in higher education the most recent five editions of the New Media Consortium (NMC) Horizon Reports, partly because of their role in increasing the flexibility and convenience of students (Adams et al., 2017: Adams et al., 2018). Briefly, blended learning is the fusion of online and face-to-face contact between teachers and students. Blended learning combines online delivery or educational content with the best features of classroom interaction and live instruction to personalize learning, allow thoughtful reflection, and differentiate instruction from learner to learner across a diverse group of learners. Blended learning is considering as learners centered, that offer flexibility, and ownership throughout the learning process. Interpretations of the concept of blended learning have varied over time, and it has been defined variously worldwide. According to Bates (2016) and Ossiannilsson (2017) the concept is even context, and culture dependent.

Friesen (2012) argued that blended learning can be placed between fully online and fully face-to-face courses. Bates (2016), and Ossiannilsson (2017) argued that blended learning can be described in terms of a continuum as along which a series of variations in practice and thinking can be arranged. Hence, one challenge to the definition of blended learning is determining where it fall on such a continuum. A common used model is pictured in Figure 1, with a continuum from brick and mortar (classroom face-to face based learning and education) to online learning and virtual learning environments.
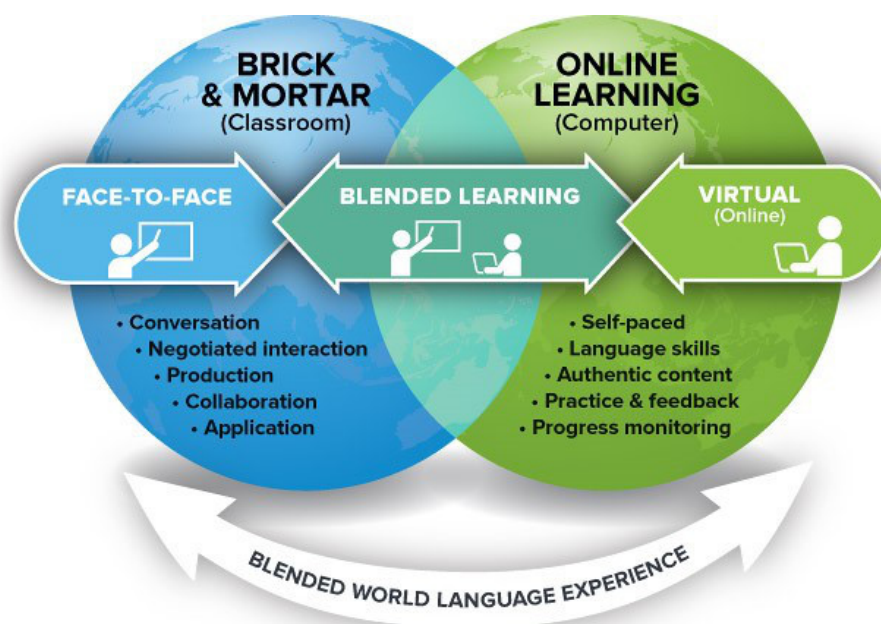
Fig. 1. The fusion of online and face-to-face contact between teachers and, students.

Blended learning is part of the innovative transformation of education in the 21st century. Blended learning embraces personal quality learning. This widely recognized and personalized method engages, facilitates, and, supports learning. UNESCO and the Commonwealth of Learning (COL) emphasize this approach, as it makes learning more flexible and convenient. This will help learners´ being part of a global digital society. Blended learning concerns mindset and pedagogy more than it does technology (Adams, et al., 2017; Adams et al., 2018). In educational programs, both formal and informal, the use of the blended learning model is accepted as the mainstream approach to learning in schools, colleges, and universities across the globe in line with technological development and increased digitization (Latchem, 2017).

Because blended learning is highly context dependent, the concept has been interpreted and defined variously over time and in many cultural contexts. The two most-often cited definitions are provided by the Christiansen Institute and Wikipedia. The former defined blended learning as:

> [Blended learning is] a formal education program in which a student learns; at least
> in part through online delivery of content and instruction, with some element of
> student control over time, place, path, and/or pace; at least in part in a supervised

brick-and-mortar location away from home, and the modalities along each student's learning path within a course or subject are connected to provide an integrated learning experience (Christiansen, Horn & Staker, 2013 p. 8).

The definition is from the learners' perspective, even if the school itself is not offering blended courses, the modalities along each student's learning path within a course or subject are connected to provide an integrated learning experience. (Horn & Staker, 2014).

The latter defined it as follows:

> Blended learning is a formal education program in which a student learns at least in part through the delivery of content and instruction via digital and online media with some element of student control over time, place, path, or pace. (Wikipedia, 2017).

The Commonwealth of Learning (COL) (2015) defined blended learning as an approach to teaching and learning that combines different methods, technologies, and resources to improve student learning. The Online Learning Consortium (OLC) (2015) defined blended and hybrid learning as online activities that supplemented by classroom meetings, replacing a significant percentage of the required face-to-face instruction. In other words, most course activity is done online, but some face-to- face instruction is required, such as lectures, discussions, labs, and other in-person learning activities.

Related frame of references to blended learning and quality.

Two other frames of references related to blended learning and quality are the eight attributes of open pedagogy by Hegarty (2015), and the Substitution, Augmentation, Modification and Redefinition (SAMR) framework developed by Puentedura (2012) to integrate technology into the curriculum. First, the open pedagogy framework is described, and after that, the SAMR framework is presented.

Open pedagogy

Blended learning includes the open pedagogy model defined by Wiley (2013). In this model, teaching and learning are only possible in the context of free access, and the 5Rs approach, described by Wiley (n.d) (i.e., reuse, revise, remix, redistribute, and retain) of open educational

resources (OER). Teachers who practice open pedagogy use open resources to facilitate learning and encourage their students to share their work openly with open content licenses, as for example creative commons (CC). The open pedagogy approach not only concerns resources but also changes the way work is performed. This approach requires infrastructure, policies, and strategies that support it, including the important factors of capacity building, peer work, and staff development in professional competence. It must be emphasized that open pedagogy requires a change in mindset, attitudes, and values as well as a culture of openness (Ossiannilsson, 2017). Hegarty's framework of open pedagogy enables ubiquitous personal learning. Personal and collaborative networking are enhanced, and ownership and power are rebalanced. One of the attributes of open pedagogy is sharing and working in a connecting community (Ossiannilsson, 2017). The framework based on these attributes includes even collaborative online international learning (COIL),[1] aiming to develop intercultural awareness and competence across shared multi-cultural online learning environments.

The open pedagogy by Hegarty (2015) relates to eight open attributes, as pictured in Figure 2; reflective practice, innovation and creativity, sharing ideas and resources, people, openness and trust, participatory technology, connected community, learner centered, and peer-review. All attributes are related to openness and opening up education.[2]

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[1] http://www.coilconsult.com

[2] The eight attributes are described as follows:
Participatory technologies are used to interact with Web 2.0 and 3.0, social networks, and mobile apps
People, openness, and trust refer to developing trust, confidence, and openness in working with others.
Innovation and creativity refer to encouraging spontaneous innovation and creativity.
Sharing ideas and resources refers to sharing ideas and resources freely to disseminate knowledge.
Connected community refers to participating in a connected community of professionals.
Learner generated refers to facilitating learners' contributions to open educational resources (OER).
Reflective practice refers to engaging in opportunities for reflective practice.
Peer review refers to the open critique of the scholarship of others.

Ossiannilsson, E. (2018). Quality concerns - Blended learning in continuous vocational training (C-VET), and continuous professional development (CPD) within the Technical Innovation in Blended Learning (TIBL), a KA202 - Strategic Partnerships for vocational education and training project, 2017-1-ES01-KA202-038256

Fig. 2. Hegarty (2015) Open pedagogy framework.

The SAMR framework

The substitution augmentation modification redefinition model (SAMR)[3] developed by Puentedura (2012) is worth considering for the implementation or enhancement of the quality of blended learning. The model offers a method of determining integration of technology into the curriculum, as well as the effects of computer technology on teaching and learning. As instructors integrate technology tools into instruction, the model can be used to determine whether the technology application is enhancing or transforming the learning The SAMR model provides indictors of progress that adopters of educational technology often follow as they learn to use it in teaching and learning, Figure 3. The model has four levels that explain the increasing impact of the integration from substituting another traditional learning method (such as writing with pen and paper) to creating a completely new learning style (such as students complete and present a team project using global videoconferencing and a virtual classroom).
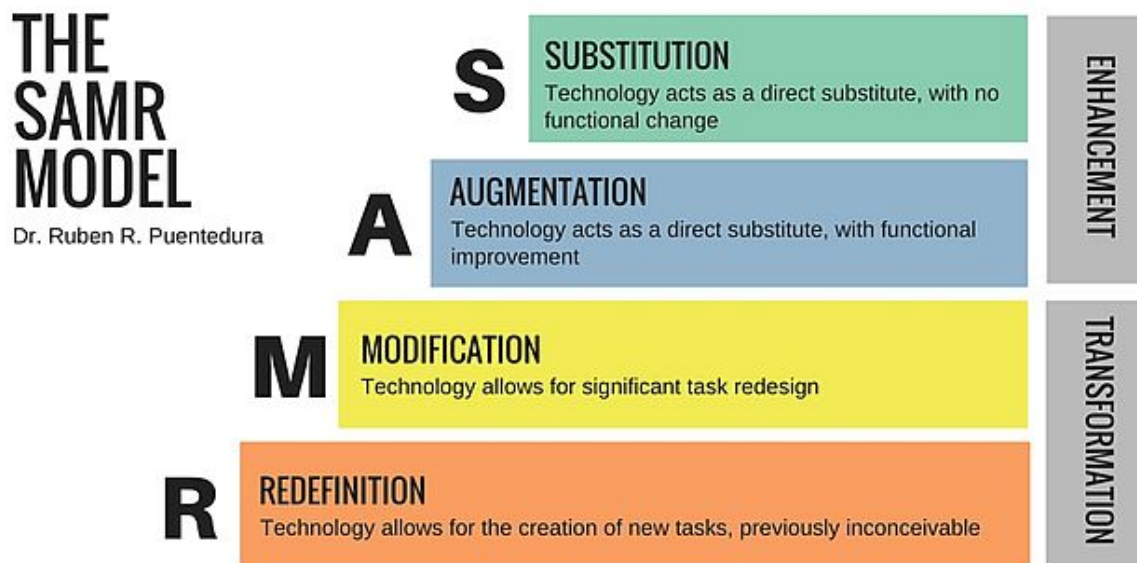
Fig. 3. The SAMR model (Puentedura, 2012).

The SAMR model offers a method of seeing how computer technology might impact teaching and learning. It also shows a progression that adopters of educational technology often follow as they progress through teaching and learning with technology. While one might argue over whether an activity can be defined as one level or another in the SAMR model, the important concept to grasp here is the level of student engagement. One might well measure progression along these levels by looking at who is asking the important questions. As one moves along the continuum, computer technology becomes more important in the classroom but at the same time becomes more invisibly woven into the demands of good teaching and learning.

The SAMR model is even related to Blooms digital taxonomy, which the Padagogy wheel by Carrington (2017) gives a good explanation. In addition, the Padagogy wheel relates even to tasks, activities and active verbs (outcomes), Figure 4.
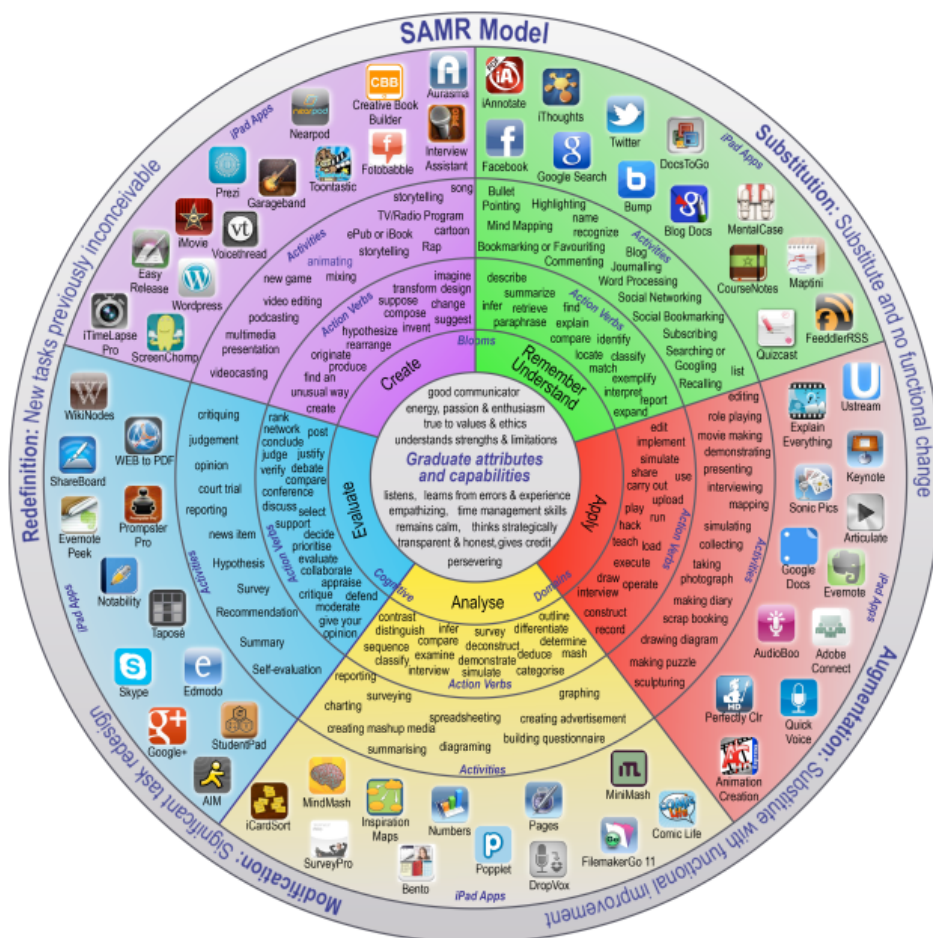
Fig. 4. The Padagogy wheel by A Carrington (2017).

Blended learning and quality concerns

Blended learning involves people as learners, teachers, academics, librarians, administrators, technicians, leaders, and managers with a variety of aspirations and ambitions. Clearly, there is a renewed focus on quality, and the blended learning approach is worthy of consideration.

The concept of quality in online, blended and distance education is elusive and complex (Ossiannilsson, et al., 2015). The International Organization for Standardization (ISO) defines quality as the ability of a set of inherent characteristics of a product, system or process to fulfil requirements of customers and other interested parties. (ISO 9000:2000).

In the research study by Ossiannilsson et al. (2015) over 40 different internationally recognized quality models were investigated. The analyzed quality models included different spectra and purposes, norm-based accreditation models, process-based models, self-evaluation and benchmarking models, and guidelines. Maturity levels and stakeholders' perspectives on

quality were also researched. A set of characteristics of quality and recommendation were provided. Ossiannilsson et al.' (2015) found that although the models had different benchmarks, features, dimensions, indicators or categories, they all had some features in common, such as services (for learners and staff), products (curricula development, course design, and course delivery), and management (strategic planning and development), and they all emphasized the student-centered approach. This model is exemplified by the European Association for Distance Teaching Universities (EADTU) E-xcellence quality label model (Kear et al., 2016; Ossiannilsson, 2012, 2015; Ossiannilsson et al., 2015), modified by Ossiannilsson (2012). Subsequently, Ossiannilsson (2015) added success factors from the learner's perspectives to the model, which is shown in Figure 5.
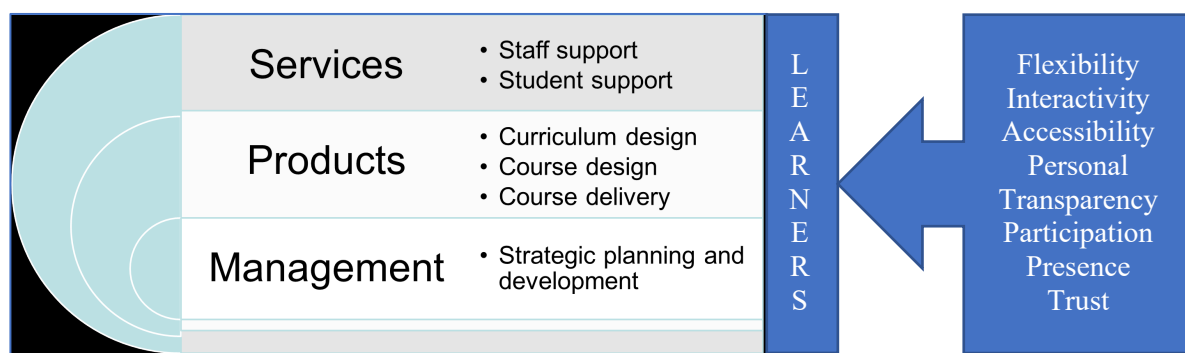
Fig. 5. An overview of quality domains and dimensions in Open Online Flexible, and TEL OOFAT), and success factors from the learners' perspectives (Ossiannilsson, 2012, 2015; Ossiannilsson et al., 2015.

Ossiannilsson et al., (2015) argued that any quality model of blending learning, or online learning must be flexible enough to adapt to emerging developments in the institution's subject areas, maturity level, and incentives to ensure the quality of the learning they provide (Ossiannilsson, et al., 2015). Thus, the ecosystem of blended learning must be embraced to ensure the quality of a culture of blended learning (Ossiannilsson, 2017).

The studies of UNESCO Bangkok and the Education University of Hong Kong (2016) could be used as examples by institutional leaders and policymakers to implement and support blended learning based on current and future needs, particularly if they emphasized the following:

- In the process of implementing blended learning strategies, attention should be paid to learning inputs, processes, and assessments and the measurement of overall personal development.

- In implementing a holistic approach, teachers and administrators should be well prepared, motivated, and have sufficient time and resources.
- To succeed, students need creative learning opportunities that include guidance by well-supported faculty in dynamic learning environments.

In the report on blended learning Ossiannilsson (2017) gave a set of recommendations for blended learning, and successful implementation and sustainability of culture of quality in blended learning:

- Base success on people, that is, the human dimension.
- Promote the ownership of learning by allowing personal learning.
- Ensure that strategies, funding, and visions are understandable to all.
- Implement a culture of smart learning, open pedagogy, and mobile learning.
- Enable ubiquitous learning, time (anytime), space (anywhere), path, mode, and access.
- Apply the iNOCOL framework of blended learning.
- Apply the UNESCO Bangkok and the Education University of Hong Kong recommendations.
- Support and facilitate capacity building, incentives, and recognition in all staff.
- Cultivate a culture of quality and an ecology of blended learning.
- Encompass digitization throughout the curricula and assessments, including finding, evaluating, creating, disseminating, and communicating.
- Ensure that blended learning concerns all stakeholders at micro, meso, and macro levels.
- Ensure that leadership and management at all levels support and facilitate the culture and quality of blended learning.
- Conduct research that focuses on blended learning per se not only in comparison with other teaching and learning models.

ISO/IEC 19796

Numerous approaches to quality management and assurance and their different scopes and objectives lead to confusion within communities that depend on information technologies to support and facilitate learning, education, and training. Therefore, a harmonized quality standard ISO/IEC 19796, was developed by ISO and (the International Electrotechnical Commission (IEC). The standard has five parts as a series. ISO/IEC 19796-1 is the basic

framework for quality development in organizations within the field of learning, education, and training (LET). It serves as a framework to describe, compare, and analyze quality management and quality assurance approaches. In addition to providing a descriptive model that can be used to compare and analyze quality approaches, ISO/IEC 19796-1 identifies the components of a seven-part process model within the lifecycle of information and communication systems for learning, education, and training. As a framework it may be used to compare different quality assurance and quality management processes. This part of ISO/IEC 19796 provides reference methods and metrics used in the lifecycle process. It also provides examples of how methods and metrics can be generically described, compared, and used for specific contexts. For each process in the e-learning lifecycle, a set of potential methods and metrics should be specified. This set of methods and metrics can be used during the development of an individual quality approach that is based on defined quality objectives. The ISO/IEC 19796-1 describes the processes for the e-learning lifecycle.

Mazohl (2017), and his consortium argued that this ISO/IEC 19796 standard could be applicable for blended learning as well. However, they extended the standard with a special focus on learners' needs. In addition, they analyzed and transferred the results of research work on blended learning into a practical quality framework for blended learning, with special focuses on the concepts of the quality of courses, the courses itself, the quality in organizations responsible for blended learning courses and activities, and last but not least on the needs and the environmental conditions of the learners.

ISO 21001:2018

In 2018, a new standard was launched by ISO, the ISO 21001:2018 on educational organizations - - Management systems for educational organizations. The standard has 15 principles; (i) a focus on the needs of learners and other beneficiaries, (ii) learning centeredness, (iii) visionary leadership, (iv) engagement of people, (v) process approach, (vi) improvement, (vii) evidence -based decisions, (viii) relationship management, (ix) social responsibility, (x) accessibility and equity, (xi) ethical conduct in education, (xii) data security and protection, (xiii) holistic approach, (xiv) adaptability, and finally (xv) extensibility (ISO, 2018). This standard has especially considered open online, e-learning, and distance education. Moreover, the United Nation and UNESCO Sustainability Goals (SDG), especially goal number four are in focus.

ENQA

Recently, the European association for quality assurance in higher education (ENQA, 2018) launched their occasional paper on considerations for quality assurance of e-learning provision, which stated that educational objectives and pedagogical models are often included in institutional strategies. In the e-learning context, it is well to consider innovation strategies, rapid iterative review, and connections between research and pedagogy and/or learning design (which requires knowledge of the latest innovations in order to select the most appropriate means for achieving learning objectives). Their recommendations are that institutions (educational organizations) seriously take the responsibilities for their own internal quality assurance. The following parts should be considered, monitored and evaluated:

- policy for quality assurance
- design and approval of programmes
- student-centred learning, teaching and assessment
- student admission, progression, recognition, and certification
- teaching staff
- learning resources and student support
- information management
- public information
- ongoing monitoring and periodic review of programmes
- cyclical external quality assurance

Each of the benchmarks have then further indicators and best practice, as was described above for E-xcellence. The ENQA considerations have its foundation in the EADTU Excellence, as well as from the EADTU /ENQA project SEQUENT (Supporting Quality in e-learning networks.[4]

In the following, some of the investigated quality models (Ossiannilsson, et al., (2015) are briefly outlined toe get an understanding of the benchmarks, those are; E-xellence, OpenupEd, OEC scoreboard and Quality Matters.

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[4] https://sequent-network.eu
Ossiannilsson, E. (2018). Quality concerns - Blended learning in continuous vocational training (C-VET), and continuous professional development (CPD) within the Technical Innovation in Blended Learning (TIBL), a KA202 - Strategic Partnerships for vocational education and training project, 2017-1-ES01-KA202-038256

Excellence

The third edition of EADTU E-xcellence includes additional material reflecting on new and recent trends: the rapid rise of Massive Open Online Courses (MOOCs), a surge of interest in learning analytics, and an increasing use of learning design in a more systematic approach to the development of e-learning courses. A number of other topics that are not yet widespread have also been included, such as an increased focus on personalization, flipped approaches to teaching, virtual and remote laboratories, digital badges and e-portfolios (Kear et al., 2016), Figure 6.

Fig. 6. Excellence Manual, EADTU.
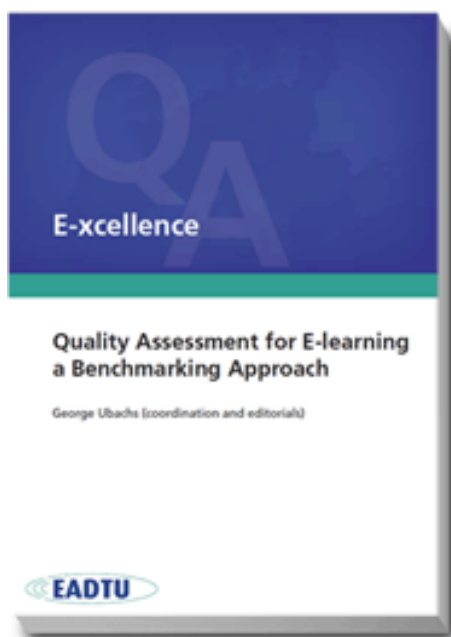
The quality label E-xcellence, provided by EADTU comprises six areas, and in total 35 benchmarks and also divided into indicators. The manual is built on the following chapters:

- Introduction to third edition
- Chapter 1: Strategic management
- Chapter 2: Curriculum design
- Chapter 3: Course design
- Chapter 4: Course delivery
- Chapter 5: Staff support
- Chapter 6: Student Support

OpenupEd

OpenupEd is, worldwide, one of the largest Massive Open Online Courses (MOOC) providers for higher education. MOOCs are considered as to be: (i) online courses designed for large numbers of participants, (ii) that can be accessed by anyone anywhere as long as they have an internet connection, (iii) are open to everyone without entry qualifications (iv) and offer a full/complete course experience online for free. OpenupEd aims to contribute to an opening up of education to the benefit of both of learners and of wider society while reflecting European values such as equity, quality and diversity. Benchmarks have been derived from Quality Assessment for E-learning: a Benchmarking Approach (Williams, Kear & Rosewell 2012).[5] The benchmarks, manual and review process were developed and refined through a series of projects involving some 35 European HEIs since 2005 Rosewell, 2014; Rosewell & Jansen, 2014. They were designed to complement or supplement existing QA processes by focusing on e-learning aspects, Figure 7.

Fig. 7. OpenupEd, provided by EADTU.

To ensure that OpenupEd courses meet this mission, courses should show eight common features; (i) openness to learners, (ii) digital openness, (iii) learner-centred approach, (iv) Independent learning, (v) media-supported interaction, (vi) recognition options, (vii) quality focus, and (viii) spectrum of diversity. The benchmarks below have been mapped to these features. This means that the benchmarks can also be used to gather evidence that a MOOC (or more broadly a program of MOOCs) support the OpenupEd features. In turn, supporting these features helps to ensure that OpenupEd MOOCs reflect the values of equity, quality and diversity (Jansen, Rosewell, & Kear, 2016).

Openness to learners: This captures aspects such as: open entry (no formal pre-requisites), freedom to study at time, place and pace of choice, flexible pathways, suitability for a wide

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[5] http://e-xcellencelabel.eadtu.eu/.

variety of lifelong learners. In a broader perspective this feature stresses the importance of being open to learners' needs.

Digital openness: Courses should be available online for free but in addition apply open licensing so that material and data can be reused, remixed, reworked and redistributed (e.g. using CC-BY-SA or similar)

Learner-centred approach: Courses should aid students to construct their own learning from a rich environment, and to share and communicate it with others; they should not simply focus on the transmission of content knowledge to the student.

Independent learning: A MOOC should provide high quality materials to enable an independent learner to progress through self-study.

Media-supported interaction: Course materials should make best use of online affordances (interactivity, communication, collaboration) as well as rich media (video and audio) to engage students with their learning.

Recognition options: Successful course completion should be recognized as indicating worthwhile educational achievement.

Quality focus: There should be a consistent focus on quality in the production and presentation of a MOOC.

Spectrum of diversity: A course should be inclusive and accessible to the wide diversity of citizens.

Open Education Consortium OEC Scoreboard[6]
The Blended Learning Toolkit by Open Education Consortium is a free repository of information, tools, resources, models, examples, and research related to blended learning, Figure 8. Offered under a Creative Commons license (CC BY-NC-SA), it is designed to assist any faculty member or institution in developing a blended course or program.

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[6] https://blended.online.ucf.edu/about/toolkit-elements/

The Toolkit consists of the following components:

- Best practices, strategies, models, and course design principles.
- Two prototype blended course templates in key core general education disciplines: Composition and Algebra.
- Directions and suggestions for applying the Toolkit resources to create original blended courses other than Composition and Algebra.
- Train-the-trainer materials for faculty development.
- Assessment and data collection protocols, including survey instruments and standards.
- Research and literature references related to blended learning.
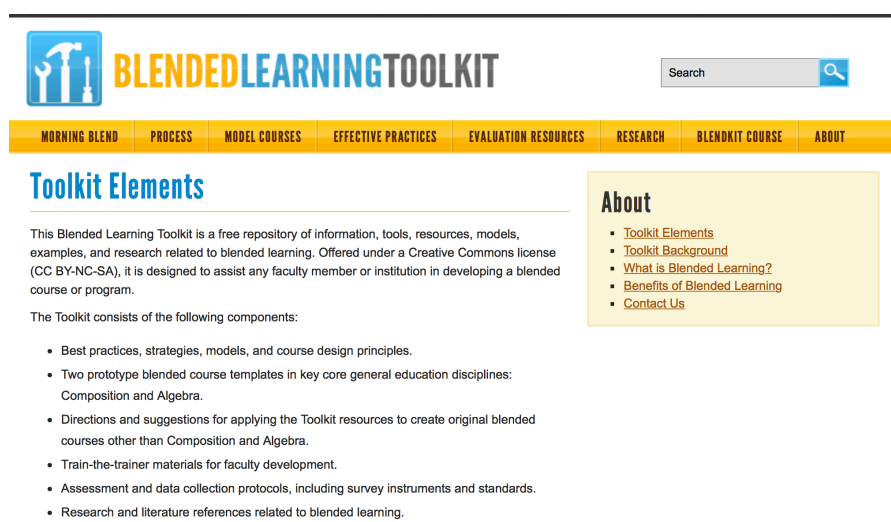
Fig. 8. Blended learning toolkit.

QM Quality Matters

Quality Matters (QM), U.S. Department of Education, provides a pathway for benchmarking quality, objectively. repeatedly, and predictably, Figure 9. The QM Rubrics are supported by literature reviews of online learning research. Their research library contains a searchable database of curated research relating to the Rubrics. QM periodically examines and updates the Rubrics—typically every three years—to reflect new findings in ongoing literature reviews and to ensure each Rubric is supported by research from the field. QM has three different tracks; (i) higher education rubric standards, (ii) K-12 secondary rubric standard, and (iii) continuing and professional rubric standards. The CPE Rubric is based on the Quality Matters^{TM} Higher Education Rubric but adapted to the needs of CPE. The original version was developed in collaboration with the University Professional and Continuing Education Association (UPCEA) through the participation of the UPCEA Mid-Atlantic Regional Organization.

Fig. 9. Quality Matters.

The eight General Standards of this Rubric are:

1. Course Overview and Introduction
2. Learning Objectives (Competencies)
3. Assessment and Measurement
4. Instructional Materials
5. Course Activities and Learner Interaction
6. Course Technology
7. Learner Support
8. Accessibility and Usability

Quality concerns related to the workforce and SME

EASME/COSME/2017/001 (2018) emphasized in their report promoting online training opportunities for the workforce, and especially for SMEs in Europe, that the learning landscape today looks completely different than it did a few years ago. Modern learners expect content to be short and personalised and are more committed to their learning goals. These trends indicate the need for change for both content and technology in the learning space. They argued that the technology-enabled learning trends that will have a significant impact on the workplace learning ecosystem include the following:

- Traditional e-learning is in steep decline
- There is a growing need for microlearning
- There is a rapid growth in mobile learning
- The real-world learning is on its rise
- Gamification has proven to be an effective strategy
- Social learning is becoming a mainstream approach

They emphasized in addition, that examples of the latest innovations in pedagogies include learning through social media, learning from the crowd, learning through games, formative analytics, open textbooks, immersive learning and learner-led analytics.

In order to identify the factors that would form the base for good online training experience, SMEs first need to perform an analysis of specific needs and objectives of learning. It is a continuous and iterative process that is likely to require revisions of the initially set needs and objectives in the course of the development of online training.

The EASME/COSME/2017/001(2018) argued that the key characteristics of a good online training course for SMEs generally include detailed analysis, structured and interactive content, assessment opportunities, enjoyable and fun activities, and achievable milestones. Other relevant factors among others include visual stimulation, 24/7 accessibility, the use of real-life case studies, certification and accreditation

EASME/COSME/2017/001(2018) identified the following main conditions to be fulfilled for a massive take-up of online training by SMEs:

- Raising awareness among SMEs about the opportunities offered by online training and specific benefits of it for both employers and employees;
- Providing SMEs with knowledge and skills to implement online training for business needs;
- Developing understanding of learning economics;
- Creating networks among SMEs and developing joint Human Resource Development programmes;
- Developing schemes for the assessment and recognition of online training in academia and in companies;
- Encouraging the development and use of micro-credentials through active collaboration between academia and business;
- Encouraging pan-European, cross-sectoral collaboration between universities, companies, policy makers and supporting structures, to allow more transferability, flexibility and permeability in the EU educational & training systems;
- Developing measures aiming at quality assurance of the online training offer;

- Maximising pedagogical and learning relevance of online training; *and*

- Introducing specific incentives for SMEs to use online training.

According to TeachOnLine/Contact North (2017) there are no doubts, that there still are issues with quality of the student experience and with completion rates in online learning. Some courses are outstanding in their design, deployment and delivery and others are not. Some are "tired" and many are simply attempts to move what is done in a classroom into a learning management system and often this is not done well. Three things need to happen:

1. There are needs to see the work of creating online courses as requiring a team of people – we should stop relying on an individual faculty member or instructor to do the work of three or four people. The ideal team comprises a faculty member or instructor as a subject matter expert, an instructional designer, an expert student who has studied the subject and knows where students struggle, a technology advisor and a librarian familiar with open educational resources (OERs). Together they will create a learning experience much better than anyone of them doing this on their own.

2. There are needs to make much more use of available open educational resources with proven track records of effective deployment in our design – stop creating everything from "scratch".

3. There are needs to do much more to align learning processes with the capabilities of technologies and the work of instructional design – we are not using all the technologies available to the learner effectively in many of the courses we offer and we could do much better with more imaginative and challenging designs which seek to strongly engage the learner, both on their own and with their peers.

In addition, there are needs to rethink our understanding of quality – moving away from a mechanistic, tick-box approach to quality assurance practices and towards an approach which gives greater emphasis to learning processes, engagement, analytics and outcomes.

People drive learning, not technology. Learning by design can leverage emerging technologies but, in the end, it is a deeply personal and human experience. What changes understanding, develops knowledge, supports new capabilities and competencies are the

exchanges between people as was argued by Ossiannilsson (2017). Technology just makes more of this possible.

According to TeachOnLine/Contact North (2017) five technologies can be identified as being "in the race" to have an impact on learning in higher education. These technologies include:

- Artificial intelligence and machine intelligence will generate new ways of assessing and supporting students, using adaptive learning systems and automated assessment. Such developments may also lead to a growing use of robotic technologies to support learning and student services.

- Enhanced simulations and games using augmented virtual reality to permit life-like laboratories in science, engineering, music, art and other disciplines but also make remediation for struggling learners more manageable when combined with adaptive learning technologies.

- More visual and aural learning than text and graphics – with the growth of voice and gesture recognition and an increase in computing power, learners may make more use of audio, video, graphics, gesture and 3D imaging in their study and in their assignment activities.

- More personalized and differentiated use of adaptive learning and analytics – as the technology becomes more ubiquitous (the so-called "Internet of things"), then learning can shift from batch-processing (classes with an instructor) to a more individualized and self-paced experience.

- Far more extensive use of open educational resources (OER) by both learners and their instructors, both because of the ease of access and cost but also because of quality assurance now being attached to such resources.

While in the past, the barrier to accelerated adoption of such technologies was the willingness of faculty members to utilize them, student behavior and the other trends and patterns listed here will lead to more colleges, universities, and the workforce adopting these technologies, not simply for competitive advantage but also for survival.

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Acknowledgement

Ossiannilsson, E. (2018). Quality concerns - Blended learning in continuous vocational training (C-VET), and continuous professional development (CPD) within the Technical Innovation in Blended Learning (TIBL), a KA202 - Strategic Partnerships for vocational education and training project, 2017-1-ES01-KA202-038256

References

Adams Becker, S., Cummins, M., Davis, A., Freeman, A., Hall Giesinger, C., & Ananthanarayanan, V. (2017). NMC horizon report: 2017 higher education edition. Austin, Texas: The New Media Consortium.

Adams Becker, S., Brown, M., Dahlstrom, E., Davis, A., DePaul, K., Diaz, V., & Jeffrey Pomerantz. J. (2018). *NMC Horizon Report: 2018 Higher Education Edition*. Louisville, CO: EDUCAUSE.

Banditvilai, C. (2016). Enhancing students' language skills through blended learning. *The Electronic Journal of e-Learning, 14*(3), 220–229.

Bates, T. (2015). *Teaching in a digital age: Guidelines for designing teaching and learning for a digital age.* Retrieved from https://opentextbc.ca/teachinginadigitalage/

Bates, T. (2016, December 12). Re: Are you ready for blended learning? [Web log post]. Retrieved from https://www.tonybates.ca/tag/blended-learning/

Bates, T. (2017, April 25). What is online learning? Seeking definition [Web log message]. Retrieved from
https://www.tonybates.ca/category/teaching-and-learning/blended-learning-teaching-and- learning/

Christiansen, C., Horn, M., & Staker, H. (2013). *Is K-12 blended leaning disruptive? An introduction to the theory of hybrids*. Clayton Christensen's Institute for disruptive innovation.

EASME/COSME/2017/001 (2018, August 29). Promoting Online Training Opportunities for the Workforce in Europe" initiative. *EUROPEAN COMMISSION, Executive Agency for Small and Medium-sized Enterprises (EASME), Department A – COSME, H2020 SME and EMFF, Unit A1 – COSME.*

ENQA. (2018). Considerations for quality assurance of e-learning provision. Occasional papers 26. Retrieved from
https://enqa.eu/indirme/Considerations%20for%20QA%20of%20e-learning%20provision.pdf

Ossiannilsson, E. (2018). Quality concerns - Blended learning in continuous vocational training (C-VET), and continuous professional development (CPD) within the Technical Innovation in Blended Learning (TIBL), a KA202 - Strategic Partnerships for vocational education and training project, 2017-1-ES01-KA202-038256

Hegarty, B. (2015). Attributes of open pedagogy: A model for using open educational resources. *Educational Technology*. Retrieved from https://www.scribd.com/doc/276569994/Attributes-of-OpenPedagogy-A-Model-for-Using-Open-Educational-Resources

Horn, M., & Staker, H. (2014). *Blended: Using disruptive innovation to improve schools.* Christiansen Institute. San Francisco: Jossey-Bass.

ISO (1979). ISO/IEC 19796-3:2009 Information technology — Learning, education and training — Quality management, assurance and metrics — Part 3: Reference methods and metrics.

ISO. (2018). ISO 21001:2018 on educational organizations -- Management systems for educational organizations -- Requirements with guidance for use. specifies requirements for a management system for educational organizations (EOMS).

Jansen, D., Rosewell, J. Kear, K. (2016). Quality Frameworks for MOOCs. In M. Jemni, Kinshuk & M.K. Khribi (Eds.), Open Education: from OERs to MOOCs. Lecture Notes in Educational Technology (LNET). pp. 261-281 Aug 18, 2016. Berlin: Springer.

Kear, K., Rosewell, J., Williams, K., Ossiannilsson, E., Covadonga Rodrigo, C., Sánchez-Elvira Paniagua, A., ... Mellar, H. (2016). Quality Assessment for E-learning a Benchmarking Approach (third edition). Maastricht, The Netherlands: European Association of Distance Teaching Universities (EADTU).

Latchem, C. (Ed.). (2017). *Using ICTs and blended learning in transforming TVET*. Burnaby: United Nations Educational, Scientific, and Cultural Organization (UNESCO). Retrieved from http:// unesdoc.unesco.org/images/0024/002474/247495e.pdf

Mazohl. P. (2016). Quality Assurance in Blended Learning - a Quality Framework. In P. Mazohl (Ed.) *Blended learning Quality – Concepts Optimized for Adult Education* (Chapter 2). Wiener Newstadt: Mazohl Publish.

Ossiannilsson, E. (2017). *Blended learning. The state of nation*. Oslo: International Council for Open and Distance Education (ICDE). Retrieved from

Ossiannilsson, E. (2018). Quality concerns - Blended learning in continuous vocational training (C-VET), and continuous professional development (CPD) within the Technical Innovation in Blended Learning (TIBL), a KA202 - Strategic Partnerships for vocational education and training project, 2017-1-ES01-KA202-038256

https://icde.memberclicks.net/assets/RESOURCES/Blended%20Learning%20ICDE%20Insight%20Paper%202017%20compressed.pdf

Ossiannilsson, E. (2018). *Quality considerations for blended learning.* Conceptual report for the Technical Innovation in Blended Learning (TIBL), a KA202 - Strategic Partnerships for vocational education and training project, 2017-1-ES01-KA202-038256.

Ossiannilsson, E., Williams, K., Camillery, A., & Brown, M. (2015). Quality models in online and open education around the globe: State of the art and recommendations. Oslo: International Council for Open and Distance Education (ICDE). Retrieved from https://www.icde.org/assets/WHAT_WE_DO/icdequalitymodels22.pdf

Puentedura, R.R. (2012). *The SAMR Model: Background and examples*. Retrieved from http://www.hippasus.com/rrpweblog/archives/2012/08/23/SAMR_BackgroundExemplars.pdf

Rosewell, J., & Jansen, D. (2014). The OpenupEd quality label: Benchmarks for MOOCs, INNOQUAL, 2 (3), 88-100 (Special Issue on Quality in MOOCs).

Rosewell, J. (2014). OpenupEd label, quality benchmarks for MOOCs. Retrieved from https://www.openuped.eu/images/docs/OpenupEd_quality_label_-_Version1_0.pdf

TeachOnline (2017, March 15) "*Five Key Questions About the State of Online Learning*". Retrieved from https://teachonline.ca/tools-trends/exploring-future-education/five-key-questions-about-state-online-learning

UNESCO. (2016). *Blended learning for quality higher education: Selected case studies on implementation in the Asia-Pacific*. Lim, Cher Ping, & Libing Wang (Eds.). Paris: United Nations Educational, Scientific, and Cultural Organization. Retrieved from http://unesdoc.unesco.org/ images/0024/002468/246851E.pdf

Wikipedia (2015a). Blended learning. Retrieved from https://en.wikipedia.org/wiki/Blended_learning

Ossiannilsson, E. (2018). Quality concerns - Blended learning in continuous vocational training (C-VET), and continuous professional development (CPD) within the Technical Innovation in Blended Learning (TIBL), a KA202 - Strategic Partnerships for vocational education and training project, 2017-1-ES01-KA202-038256

Wiley, D. (n.d). Re: The Access Compromise and the 5th R [Web log message]. Retrieved from https://opencontent.org/blog/archives/3221

Ossiannilsson, E. (2018). Quality concerns - Blended learning in continuous vocational training (C-VET), and continuous professional development (CPD) within the Technical Innovation in Blended Learning (TIBL), a KA202 - Strategic Partnerships for vocational education and training project, 2017-1-ES01-KA202-038256