European Maturity Model for Blended Education

Implementation Guidelines

This report is founded on the European Maturity Model for Blended Education:

Van Valkenburg, W. F., Dijkstra, W. P., De los Arcos, B., Goeman, K., Van Rompaey, V., & Poelmans, S. (2020, May). European Maturity Model for Blended Education. EADTU. https://embed.eadtu.eu/download/2470/European%20Maturity%20Model%20for%20Blended%20Education.pdf?inline=1

Contents

Introduction

EMBED, a strategic partnership

The EMBED project partnership is established by EADTU (coordinator), connecting the KU Leuven (Belgium), Delft University of Technology (The Netherlands), Aarhus University (Denmark), University of Edinburgh (United Kingdom), Dublin City University (Ireland) and Tampere University of Applied Sciences (Finland).

During a period of three years (2017-2020) experts in the field of quality assurance, online and blended learning worked closely together to achieve different objectives related to the sustainable implementation of blended education. The project partners embraced a multilevel framework in order to develop a maturity model for blended education. It distinguishes maturity at the course and program level (micro) and at the institution level (meso). The intent is also to provide relevant information to governments (macro). The macro level is not addressed in this report.
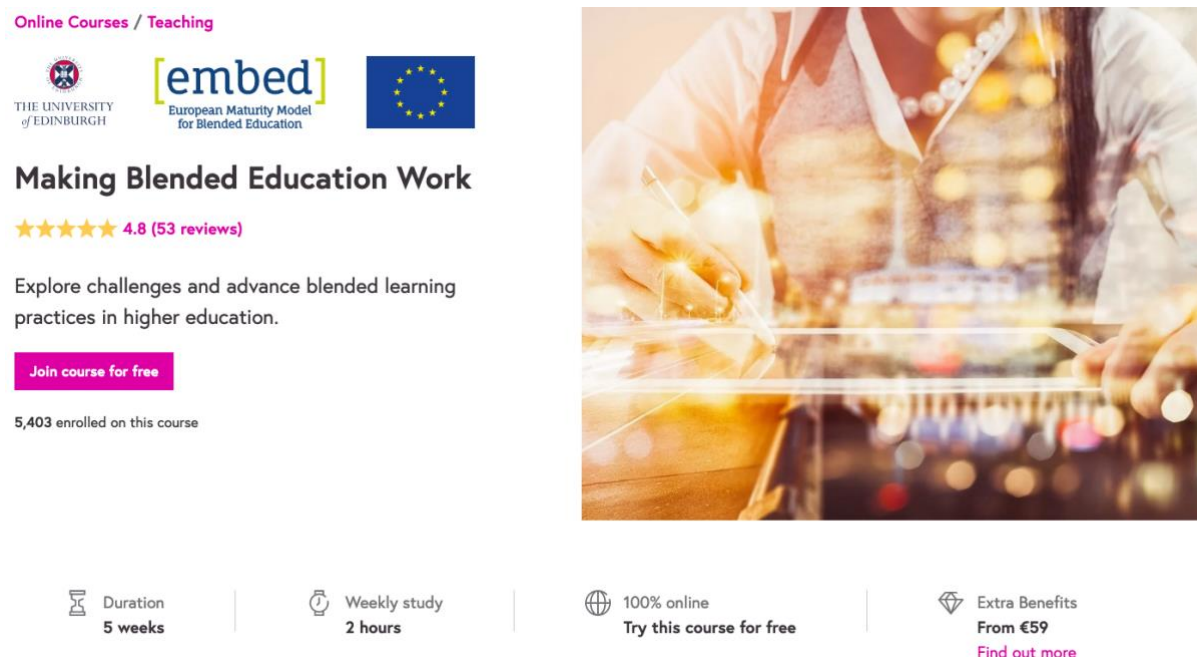
Towards a European Maturity Model (EMM)

By means of the European Maturity Model (EMM) the partners wish to frame conceptual and implementation issues regarding blended learning, teaching and education. Aim is to indicate the 'maturity' of practices by means of dimensions and indicators deemed relevant. Instructors but also decision makers within higher education institutions and educational service centres may apply the model for continuous improvement purposes. As a consequence, it may help, inspire and guide anyone who wants to implement blended teaching in his/her institution in a sustainable manner.

As previously mentioned, the EMM consists of three levels, namely the course, programme and institution level. Each level encompasses multiple dimensions, which united give a comprehensive overview of the 'maturity' at the selected level of assessment. Corresponding to the maturity level, there is more or less room for continuous improvement of a particular practice. The EMM is on the hand based on a literature synthesis, on the other hand on results of about thirty interviews with instructors and educational managers within the EMBED partner institutions. These research efforts resulted in an extensive [report about the status of affairs in the field of blended education, teaching and learning](#) and a [repository of proven practices](#). Subsequently, the first draft of the maturity model was compiled.

Between December 2018 and July 2019, twenty-eight European experts in the field of online and blended learning were involved in a three-round Delphi study, which led to adaptations of the original model and a validation of the current maturity model. Consensus was achieved regarding the set of dimensions and indicators of the EMM. [The model](#) was published on the project website in May 2020.

In order to make the EMM useful for all stakeholders, implementation guidelines were developed. These are specified for each dimension of the model. They provide background information, examples, models, tips and tricks, as well as recent references to resources, in line with the foundations of the EMM. A number of these guidelines were integrated in the Massive Open Online Course (MOOC) 'Making Blended Education Work' which is based on the EMM and the EMBED project (see https://www.futurelearn.com/courses/making-blended-education-work).

Figure 1: The EMBED MOOC website

Foundations of the EMM

The maturity model's aim is to map blended learning practices, conditions, strategies and policies in a systematic manner and, ultimately, to identify tracks for optimization or change. The EMM can be used to assess the maturity of blended courses, programs and institution-wide provisions. Important to note is that the EMM does not state anything about their quality; it only covers their maturity (see further). Before elaborating on the dimensions and interactions of the maturity model, we refer to a series of explicit assumptions of the model.

1. Blended learning, teaching and education

In the context of EMBED the following definitions were developed and used as backdrop to the EMM:

- **Blended learning** refers to learning as a result of a deliberate, integrated combination of online and face-to-face learning activities.
- **Blended teaching** refers to designing and facilitating blended learning activities.
- **Blended education** is the formal context in which blended teaching and learning take place, determined by policies and conditions with regard to the organization and support of blended teaching and learning.

2. Maturity of practices

The concept of 'maturity' relates to the degree of formality and optimization of the design, evidence-based decision making, documentation and CQI(CQI) which characterize the uptake of blended practices, or the implementation of dedicated conditions and strategies. When backed up by research or practical evidence, a course or program design is reinforced. The extent to which CQI processes and products are embedded in a course or program determines the maturity level of a blended learning practice. These allow course instructors/designers to continuously enhance blended practices in an iterative manner.

Maturity does not equal quality. High- or low-quality approaches can be in place within each of the maturity levels. Moreover, it has been observed that repeating a practice at a particular maturity level does not *per se* results in an actual increase in terms of maturity.

3. The action levels and key actors

Two action levels are distinguished in the model: the micro and meso level. The EMM deems the main actor at the micro level to be the instructor or the instructional designer of a course. At the meso level different key actors, teams, or bodies for decision making and management play a role. Program coordinators, deans and department heads or heads of teaching and learning centers are involved, among others.

4. The constructive alignment

It is assumed that instructors or instructional designers are knowledgeable about how to align course objectives or expected outcomes with target student groups, learning activities and assessment (both formative and summative).

5. The value of (informed) design

The EMM explicitly adheres to a design-focused approach of courses and programs. Consequently, growth in maturity is considered as a result of the ability of (teams of) instructors, instructional designers and others involved, to make informed decisions. This includes using design principles and/or instructional theories, from blended course design right up to whole program design, that is the organization, planning and documentation of a structured series of courses or units).

The EMM framework

The EMM consist of 21 (sub)dimensions, divided over three levels. The following table provides an overview of all the (sub)dimensions of the EMM.

COURSE LEVEL	PROGRAMME LEVEL	INSTITUTION LEVEL

Course design process
   o Selection of blended learning activities and their sequence
   o Selection of blended learning tools
Course flexibility
Course interaction
Course experience
   o Student learning
   o Study load
   o Inclusiveness
	Programme design process
	   o Programme coherence
	   o Alignment and coherence of blended learning tools
	Programme flexibility
	Programme experience
	   o Student learning
	   o Study load
	   o Inclusiveness
		Institutional support
		Institutional strategy
		Sharing and openness
		Professional development
		Quality assurance
		Governance
		Finances
		Facilities

The EMM user guidelines

The model can guide discussions on blended teaching and education in an institution, a department, a team of educational managers or instructors. In this regard, one's engagement in such conversations are *in se* more important and deemed valuable than the 'scoring' of maturity. It is essential to involve the right stakeholders. These differ according to the subject of the discussions, that is the agreed number of dimensions that will be debated.

Optimally, the model is employed in a team-based, interactive manner, with the aim of reaching consensus. To this end, it seems that a workshop is the most appropriate manner to use the model (as demonstrated during the 2020 European Learning & Teaching Forum). In one or more sessions, the participants determine individually and cooperatively the maturity level of the different model dimensions. We recommend to follow the next steps:

1. A facilitator with knowledge of the EMBED framework guides the sessions. The facilitator introduces the EMM, elaborates on the action level (e.g., course, programme or institution) and explains the setup of the workshop. It should be clear for all participants which level and what subject matter they will discuss in detail (e.g., which course or which programme). Each participant individually assesses the maturity level of each dimension. To this end, both the EMM framework as well as the digital materials - the maturity self-assessment tool and worksheets - support this process. In particular, the participants create a spider graph based on the scores of their present maturity assessment. Such visualization gives a clear overview of the current state of affairs.

2. The facilitator discusses with all participants the results of the self-assessments. The goal of this third phase is to reach consensus on the scoring of the present maturity level of a specific dimension. are retained and used to justify why a specific level of maturity has (not) been designated to a particular practice). These are used in the following step.
3. The participants create an action plan, which includes what one wishes to change, the reason(s) behind, a specification of who needs to be involved, and when the change should be implemented. A template for such action plan is also downloadable from the EMBED website. It is recommended that when changes are extensive, it is more useful to initiate a (small) project and involve a project team to design, plan and implement the changes.
4. After the changes are implemented, the results of the action plan or project are evaluated using the same framework and materials.
5. It is further recommended that participants make monitor on regular occasions whether the maturity levels maintain the same level, increase or decrease.

Not only participants of the above-described workshop may use the EMM; any individual instructor, instructional designer or team interested in how to mature in blended teaching or education, will find the EMM framework and materials easy-to-use and useful resources or sources of inspiration for introducing (new) blended practices.

More information

Further information about the EMBED project, its partnership, or related publications, please visit https://embed.eadtu.eu. Questions, remarks or additions to the model or the implantation guidelines, are more than welcome by e-mail.
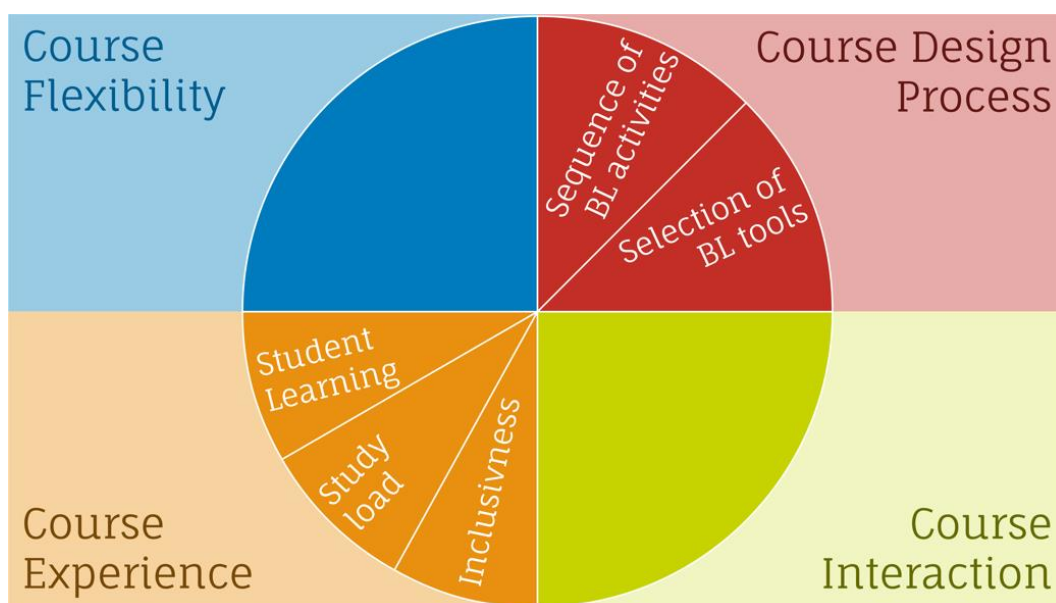
Course Level

Course Level

The course level 'refers to the core of the educational system, where both learning processes and instructional processes are situated'. It refers to the primary educational process, in other words the development, execution and evaluation of courses. The stakeholders of this level are mainly teachers/ educators and students, but also instructional designers, learning developers, content developers and sometimes management.

The course level consists of the following four dimensions and corresponding subdimensions:
- Course design process
  - Selection of blended learning activities and their sequence
  - Selection of blended learning tools
- Course flexibility
- Course interaction
- Course experience
  - Student learning
  - Study load
  - Inclusiveness

COURSE DESIGN PROCESS

The process of planning, designing, developing and evaluating a blended learning course.

Selection of blended learning activities and their sequencing

The rationale for the deliberate selection and integration of face-to-face and online learning activities.

Level 1 **Explorative**	Level 2 **Design-based**	Level 3 **Course cycle**
No considered selection and integration of face-to-face and online learning activities.	Learning activities (both face-to-face and online) are deliberately selected, integrated, and sequenced based on a design method or design principles.	Learning activities (both face-to-face and online) are deliberately selected, integrated, and sequenced based on a design method or design principles. Quality assurance processes are deliberately embedded in order to continuously improve a course in an iterative manner.

Implementation Guidelines

In order to mature in this dimension, one should apply a design model or a set of design principles for the selection, integration and sequencing of face-to-face and online learning activities. These include particular logics and/or methods to design blended learning. Some examples from the field: the Integrated Course Design (Dee Fink, 2003), the ABC Learning Design method (Young & Perović, 2020) and the Carpe Diem design method (Salmon, 2020).

To reach the highest level of maturity (Course cycle), adequate quality assurance (QA) principles must be in place in order to continuously improve a course design. Multiple data sources from the current or past runs of a course can be used, i.e., course grades, students experience questionnaires or (group) interviews, interviews with lecturers, learning analytics, etc. These data inform action plans that stipulate how to improve or redesign a course. Frameworks such as the e-learning Maturity Model (Marschall, 2005) may provide the actual QA standards hereto.

References

Dee Fink, L. (2003). *A Self-Directed Guide to Designing Courses for Significant Learning.* Retrieved from https://deefinkandassociates.com/GuidetoCourseDesignAug05.pdf

Salmon, G. (2020). *Carpe Diem - A team based approach to learning design.* Gilly Salmon. Retrieved from https://www.gillysalmon.com/carpe-diem.html

Marshall, S. (2005). *e-Learning Maturity Model.* E-Learning Maturity Model. Retrieved from http://e-learning.geek.nz/emm/publications.php

Young, C., & Perović, N. (2020). *ABC Learning Design @ UCL.* UCL Home. Retrieved from https://blogs.ucl.ac.uk/abc-ld/

Selection of blended learning tools

The rationale for selecting tools for the delivery and organisation of blended learning activities

Level 1 **Tool-based**	Level 2 **Design-based**	Level 3 **Course cycle**
The selection of particular tools is based on their availability at the institution.	The selection of particular tools is based on learning activities, informed by evidence or experience.	The selection of particular tools is based on learning activities, informed by evidence or experience. This process is monitored, evaluated and changed based on quantitative and qualitative data.

Implementation Guidelines

As to reach maturity level 2 (Design-based), the selection of learning tools during the course design process should be based on evidence or experience. Some relevant evidence is available. Glover and colleagues (2016), for example, developed a menu for selecting appropriate learning tools. Some institutions also developed supporting materials and guidelines, among others: the Tool Wheel based on the conversational framework of Laurillard (Last, Jongen & Hardy, 2020), the Wheel of Pedagogy (Radboud Teaching and Learning Centre, 2020) or the Tool Guide (Educate-it, 2020)

The third maturity level of this dimension is labeled as 'Course cycle' because the outcomes of the selection of tools are systematically monitored, evaluated and changed, based on quantitative and qualitative data. These data consist of learning analytics (*how (often) are tools used?*), surveys and interviews with students and instructors (*what are their user experiences?*) and/or feedback from tool administrators (*is the selected range of tools proven to be useful, easy-to-use and efficient?*).

References

Educate-it. (2020). *Tool guide*. Retrieved from https://educate-it.uu.nl/en/tool-guide/

Glover, I., Hepplestone, S., Parkin, H. J., Rodger, H., & Irwin, B. (2016). Pedagogy first: Realising technology enhanced learning by focusing on teaching practice. *British Journal of Educational Technology, 47*(5), 993–1002. Retrieved from https://doi.org/10.1111/bjet.12425

Last, B., Jongen, S., & Hardy, P. (2020). *Tool wheel*. Maastricht University Library. Retrieved from https://tutorials.library.maastrichtuniversity.nl/Tool_Wheel/

Radboud Teaching and Learning Centre. (2018). *The Educational ICT Toolbox*. Retrieved from https://www.ru.nl/lecturers/education-ict/lecture-halls-pc-rooms/pc-rooms-study-halls/what-types-educational-tools-available/

COURSE FLEXIBILITY

Opportunities for learners to adjust particular features of the blended learning course, based on their needs and preferences. This includes features such as the selection of learning activities, the selection of resources, the mode of delivery (online/face-to-face activities), pace (educator-paced/self-paced).

Level 1 No flexibility	Level 2 Flexible	Level 3 Adaptive flexible
No deliberate course flexibility.	The course's flexibility is deliberately designed. Its design is based on evidence or experience.	The course's flexibility is deliberately designed. Its design is based on evidence or experience. Continuous quality improvement is deliberately embedded in order to enhance course flexibility.

Implementation Guidelines

Level 2 of the course flexibility dimension (Flexible) states that course flexibility is deliberately designed, based on theory or experience. If in search of more background or examples, Andrade and Alden-Rivers (2019), developed a framework for sustainable growth of flexible learning opportunities. Additionally, the report regarding 'Flexible pedagogies' (Gordon, 2014) and the report 'Flexible Learning' (Universities UK, 2018) show some useful examples to design flexibility.

To obtain maturity level 3 (Adaptive), CQI is embedded to assess and enhance course flexibility on a regular basis. Therefore, quantitative or qualitative user experience accounts from students can be collected to understand how students perceive the course flexibility. These include survey and interviews data, which may be complemented with behavior data from the learning management system (LMS). Applying techniques such as educational data and process mining leads to further insight into the data (Pechenizkiy, 2012).

References

Andrade, M. S., & Alden-Rivers, B. (2019). Developing a framework for sustainable growth of flexible learning opportunities. *Higher Education Pedagogies*, 4(1), 1–16. https://doi.org/10.1080/23752696.2018.1564879

Gordon, N. (2014). *Flexible pedagogies: technology-enhanced learning*. The Higher Education Academy. Retrieved from https://www.advance-he.ac.uk/knowledge-hub/flexible-pedagogies-technology-enhanced-learning

Pechenizkiy, M. (2012). *Educational Data and Process Mining*. TU/e Data Mining Expertise Group Research. Retrieved from https://www.win.tue.nl/%7Empechen/projects/edm/

Universities UK. (2018). *Flexible learning: The current state of play in UK higher education*. Retrieved from https://www.universitiesuk.ac.uk/policy-and-analysis/reports/Documents/2018/flexible-learning-the-current-state-of-play-in-higher-education.pdf

COURSE INTERACTION

Extent to which the blended course facilitates learners' interaction (learner-content, learner-learner, learner-educator).

Level 1 **Non-responsive**	Level 2 **Interactive**	Level 3 **Responsive**
No deliberate course interaction.	Interaction in the course is deliberately designed, informed by evidence or experience.	Interaction in the course is deliberately designed, informed by evidence or experience. Interactions are monitored, evaluated and changed based on data and feedback.

Implementation Guidelines

Level 2 of the dimension course interaction (Interactive), describes that interaction in a course is deliberately designed, informed by evidence or experience. Such endeavour might be supported by the interaction theory of Anderson (2003) or Stanley's model (2013) which extends Anderson's reasoning and presents 'The 5 Interactions of A Robust Blended Learning Model'.

The highest maturity level, (Responsive), is characterized by monitoring, evaluating and adjusting the interactions in a course. In this regard, both the quantity and quality of the interactions are scrutinized. For student-content interaction this involves questions such as 'how often and how long do students study the materials?', 'how do they interact in the online environment' and 'how do they score on tests?' (based on user and usage data from the LMS and interactive course ware). For student-student interaction, it is looked at how often face-to-face and online interactions take place in the digital and physical learning spaces (e.g., discussion boards, chat apps, meetings) and what can be observed regarding the quality of the interactions (do students ask questions, collaborate, etc.). For student-teacher interactions it is investigated what kind of interactions students and teachers have (one-way interaction, or two-way interactions), their quantity and quality. Additionally, these data may be further evaluated in terms of student and instructor satisfaction against the background of models of change and improvement. Recent developments in the field of adaptive learning analytics, eye tracking and multimodal data capturing with or without wearables allow for analysing complex interactive student or instruction behaviour and their relationship with a plethora of learning outcomes.

References

Anderson, T. (2003). Getting the Mix Right Again: An Updated and Theoretical Rationale for Interaction. *The International Review of Research in Open and Distributed Learning*, 4(2), 1–14. Retrieved from https://doi.org/10.19173/irrodl.v4i2.149

Stanley, T. (2013). *The 5 Interactions Of A Robust Blended Learning Model*. Teachthought. 1. Introduction, 2. Student-student-interaction, 3. Student-Teacher interaction, 4. Student-community interaction, 5. Student-material interaction, 6. Student-technology interaction.

COURSE EXPERIENCE

The extent to which a course enhances students' learning and eliminates any obstacles that stand in the way of learning.

Student learning

The use of blended course features which facilitate students' self-regulated learning (orienting and planning, monitoring, adjusting and evaluating).

Level 1 Standard	Level 2 Advanced	Level 3 Comprehensive
No deliberate consideration for student learning.	Blended course features are used in order to facilitate student learning, informed by evidence or experience.	Blended course features are used in order to facilitate student learning, informed by evidence or experience, and continuous quality improvement is deliberately embedded in order to enhance student learning.

Implementation Guidelines

To reach maturity level 2 of this dimension (Advanced) it is important that (features of) the blended course facilitate self-regulated learning (SRL). This can be done in various ways, for example by integrating the seven recommendations of Quigley, Muijs and Stinger (2018). Also, particular technology-supported tools contribute to the facilitation of self-regulated learning in a blended learning environment, such as pedagogical agents, learning analytics and data visualization (Triquet, Peeters, & Lombaerts, 2017).

The third level (Comprehensive) refers to embedded CQI approaches which enhance self-regulated student learning. In general terms, SRL student data are collected and, subsequently, targeted interventions in a blended course are planned in order to improve the facilitation of SRL. This involves adapting or changing specific course features. Triquet et al. (2017) describe 7 methods to measure SRL among students and link these to two instruments for practice (a survey and a semi-structured interview).

References

Quigley, A., Muijs, D., & Stringer, E. (2018). *Metacognition and self-regulated learning*. Education Endowment Foundation. Retrieved from https://educationendowmentfoundation.org.uk/tools/guidance-reports/metacognition-and-self-regulated-learning/

Triquet, K., Peeters, J., & Lombaerts, K. (2017). Self-Regulated Learning Online: Benefits, Empirical Foundations, Multi-level, and Multi-modal Promotion & Evaluation thereof for Teacher Professional Development. Contributing SRL Part to Teach-UP. A policy experimentation co-funded by Erasmus+. Deliverable D1.1: Gaps in ITE and CPD provision report. Department of Educational Sciences, Vrije Universiteit Brussel. Retrieved from http://teachup.eun.org/documents/556205/1092039/TeachUP_D1.1b_Self-Regulated-Learning-Online.pdf/3d155d94-8a05-4cde-b18c-d6a33f4fc2b9

Study load

The match between the intended and achieved study load of a course (distribution and correctness).

Level 1 **Standard**	Level 2 **Advanced**	Level 3 **Comprehensive**
The calculation of course study load is based on guesses.	Course study load is calculated based on experience. Different course elements (e.g., online learning activities, face-to-face learning activities, exam preparations) are taken into consideration for the calculation of the study load.	Course study load is calculated based on data and experience. All course elements (e.g., online learning activities, face-to-face learning activities, exam preparations) are taken into consideration for the calculation of the study load. The study load is monitored, evaluated and changed based on quantitative and qualitative data.

Implementation Guidelines

This dimension refers to the (mis)match between the intended and achieved study load of a blended course. Particular to blended learning environments is the fact that study load should consider both face-to-face learning activities (e.g., in-class lectures, tutor sessions, tutorials, excursions, lab sessions) and online learning activities (e.g., video watching, readings, exercises, discussions, simulations). At the second maturity level (Advanced), study load is estimated based on experience. The Erasmus University (2009) and Radboud University (2018) in the Netherlands, for example, have common guidelines about how to calculate study load. Students are informed on how much time they should spend on a specific topic or an assignment, which aids them to plan and manage their study time. This can be done in a paper-based manner as part of the course syllabus or by incorporating a specific instrument in the LMS (see Figure 1).

Figure 2 A Learning Management System, including study load indications for students

On level 3 of this dimension (Comprehensive), the study load is based on data as well as experience. This means that various data sources, both quantitative and qualitative, are included to monitor, evaluate, and adjust the study load of a course. Examples of quantitative data are statistics from the LMS (how often a page is accessed and for how long), data from learning tools and from course evaluation surveys. Qualitative data can be gathered by means of focus groups and interviews with students to gain additional insights related to the study load. Based on these various data sources, the study load is evaluated and, if needed, adjusted.

References

Erasmus University. (2009). *Calculating study load*. Retrieved from
https://www.eur.nl/sites/corporate/files/15_Studielastberekening_juli_2007_ENd.pdf

Radboud University. (2018). *Credits and study load*. Course Guides FFTR 2018. Retrieved from https://www.ru.nl/prospectus/2018/fftr/rules-regulations/courses-exams/credits-study-load/

Inclusiveness

The consideration for the diverse needs (including accessibility aspects) and backgrounds of all students to create an online and face-to-face course experience where all students feel valued, safe, have a sense of belonging, and where all students have equal access to learn.

Level 1 **Standard**	Level 2 **Advanced**	Level 3 **Comprehensive**
No deliberate consideration for inclusiveness.	Initial attempts to facilitate and include the different needs and backgrounds of all learners. Special attention is paid to social belonging and identity in the online course environment. This process is informed by evidence or experience.	The different needs and backgrounds of all learners are included and facilitated. Students feel valued, safe, and have a sense of belonging. The realization of inclusiveness is based on evidence or experience. Continuous quality improvement is deliberately embedded in order to improve inclusiveness in the course.

Implementation Guidelines

Inclusiveness is an important, yet complex dimension of a blended course. A series of blended course features have to be taken into consideration in order to design or assess its inclusiveness. Maturity level 2 (Advanced) is related to the fact that students feel valued, safe, and have a sense of belonging. Salmon (2020) has developed a five-stage framework to support incorporation of these aspects into the course design. It covers both the technical and social aspects of learning. Although it aims online learning with so-called 'e-tivities' and 'e-moderation', all features may be implemented for blended teaching and learning purposes. Another facet of inclusiveness is that all materials are accessible to diverse learners. This requires that images are accompanied by explanatory texts, that alternative font styles are available (e.g., headings, paragraphs), that videos include closed captions or transcripts, and that fonts are preferably sans serif. The University of Edinburgh (2020) offers a useful checklist for assuring the accessibility of both materials and collaborative learning activities. Informed by the experiences of instructors, inclusiveness may be(come) part of the course enhancement processes. The accessibility toolkit (Coolidge, Doner, Robertson & Gray, 2018) and the paper by Gronseth (2018) also offer concrete guidelines for implementing accessibility principles. Finally, Leiden University and Romein (2017) collected 11 teacher stories of inclusive teaching. This booklet can stimulate and inspire others to improve the inclusiveness of their course.

Level 3 of inclusiveness (Comprehensive) states that the different needs of all students must be supported. This means that all the efforts of level 2 should be implemented at the maximum. Additionally, CQI is embedded with targeted actions to enhance the inclusiveness of a blended course. Course evaluations, complemented with inclusiveness data obtained by means of surveys, focus groups and interviews are common ways of assessment.

References

Coolidge, A., Doner, S., Robertson, T., & Gray, J. (2018). *Accessibility Toolkit* (2nd edition) [E-book]. BCcampus. Retrieved from https://opentextbc.ca/accessibilitytoolkit/

Gronseth, S. (2018). Inclusive Design for Online and Blended Courses. *Educational Renaissance, 7*(1), 14–22. https://doi.org/10.33499/edren.v7i1.114

Salmon, G. (2020). *Five Stage Model*. Gilly Salmon. Retrieved from https://www.gillysalmon.com/five-stage-model.html

The University of Edinburgh. (2020). *Accessibility Checklist*. Retrieved from https://www.ed.ac.uk/information-services/learning-technology/accessibility/checklist

Universiteit Leiden, & Romein, D. (2017). *Teacher's tales: On the road to inclusive teaching.* ICLON - Leiden University. Retrieved from https://www.universiteitleiden.nl/binaries/content/assets/algemeen/diversiteit/boekje-teachers-tales-webversie.pdf