

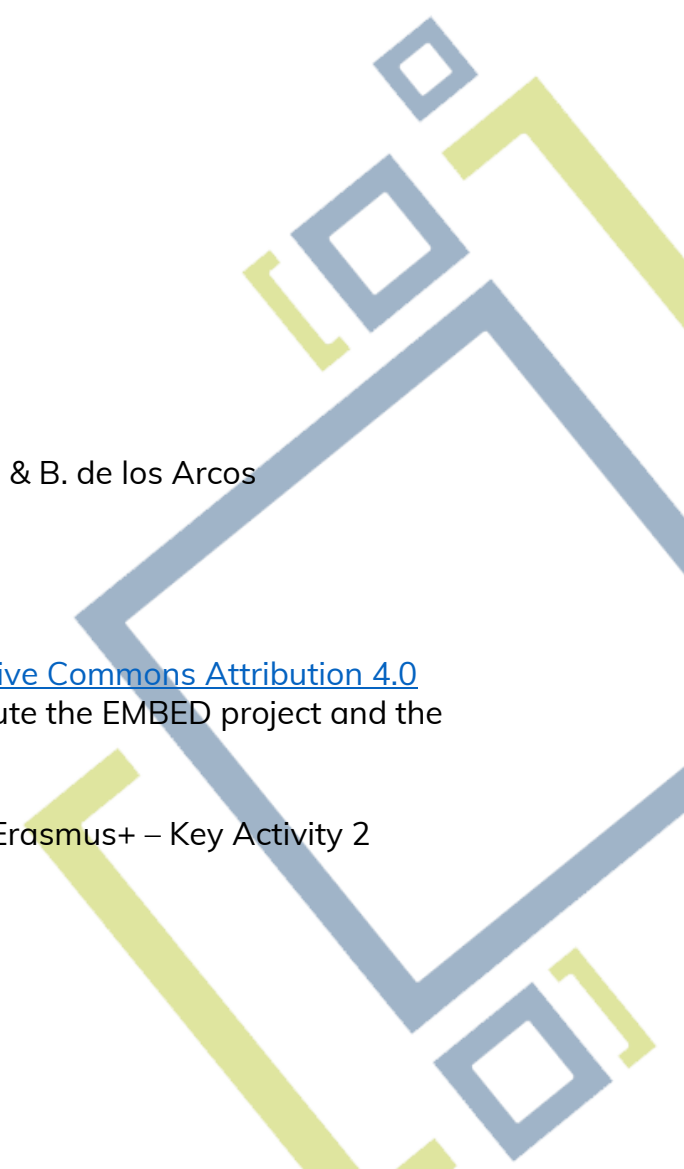
European Maturity Model for Blended Education

Authors: W.F. van Valkenburg, W.P. Dijkstra & B. de los Arcos
Delft University of Technology

Date: August 2019

License: This work is licensed under a [Creative Commons Attribution 4.0 International License](https://creativecommons.org/licenses/by/4.0/). Please attribute the EMBED project and the authors.

Funded by: European Union –funded project – Erasmus+ – Key Activity 2
01-09-2017 – 31-08-2020



[embed]

European Maturity Model
for Blended Education



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

Introduction

EMBED, a strategic partnership

The EMBED project partnership is established by EADTU (coordinator), connecting KU Leuven (Belgium), Delft University (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 work closely together to achieve different objectives related to the introduction and sustainable implementation of Blended Education.

The project partners embrace a multilevel framework in order to tackle conceptual and implementation issues at the course and programme level (micro), at the strategic/institution level (meso) and with the intent to give relevant input to governmental policy (macro). The macro level is not covered in this publication.

Maturity Model for blended education

This model is a framework which can be used to tackle any conceptual or implementation issues regarding blended learning, teaching and education. It indicates which dimensions are relevant for lecturers and educators, but also institutions, policymakers and educational centres. It aims to help, inspire and guide anyone who wants to implement or improve blended learning in their institution.

This model consists of three levels: course level, programme level, and institution level. Each level has multiple dimensions, which together should give a comprehensive overview of the field of blended learning and education. The dimensions include indicators which describe the level of maturity. The dimensions and indicators can help to determine your own level of maturity.

Realisation of the model

The EMBED model is based on thorough research by KU Leuven. The research consists of a literature research toward the concepts of blended learning, teaching and education, and also dozens of interviews with educators and management of the EMBED partners. Based on this research, the first draft of the maturity model was compiled.

In the period from December 2018 until July 2019, the maturity model is validated by more than 20 experts from Europe. All these experts have multiple years of

experience with blended learning or education. The model is validated by using a Delphi study. This means that experts reached consensus regarding the dimensions and indicators of the Maturity Model. The version in this document is the validated version of the European Maturity Model.

More information

If you would like to know more about the EMBED project and its partners, or want to read other publications, please go to <https://embed.eadtu.eu>.

Preliminaries

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. Before elaborating on the pillars of the maturity model, we refer to a series of implicit and explicit assumptions:

BLENDED LEARNING, TEACHING & EDUCATION

For this framework we use the following definitions:

- *Blended Learning* = learning as a result of a deliberate, integrated combination of online and face-to-face learning activities.
- *Blended Teaching* = designing and facilitating blended learning activities.
- *Blended Education* = the formal context of blended learning that is determined by policies and conditions with regard to the organization and support of blended learning.

MATURITY

The concept of 'maturity' relates to the degree of formality and optimization of the design, evidence-based decision making, documentation and continuous quality improvement which characterize the uptake of blended Learning practices, or the implementation of blended learning conditions and strategies.

QUALITY ≠ MATURITY

Quality approaches can be in place within each of the maturity levels. However, maturity does not equal quality. Moreover, it has been observed that repeated blended learning practice at a particular maturity level does not result in an actual increase in maturity.

ALIGNMENT

We assume that instructors or instructional designers are knowledgeable about how to align course objectives/expected outcomes, learning activities, and assessment (both formative and summative). We also assume that they are knowledgeable about the alignment between the course objectives and the target student group.

VALUE OF (INFORMED) DESIGN

We explicitly adhere to a design-focused approach of courses and programmes. Consequently, we see growth in maturity as a result of the ability of (teams of) instructors, instructional designers and others involved to make informed decisions about blended learning courses and programmes. This includes using design principles and/or instructional theories, from blended learning activity design right up to whole programme design (i.e. the organization, planning and documentation of a structured series of courses or units).

VALUE OF EVIDENCE, EXPERIENCE AND CONTINUOUS QUALITY IMPROVEMENT (CQI)

When backed up by research and/or practical evidence a course or programme design is reinforced. The extent to which continuous quality improvement processes and products are embedded in a course or programme determines the maturity level of a blended learning practice. These allow course instructors/designers to continuously improve blended learning courses in an iterative manner.

ACTION LEVELS AND KEY ACTORS

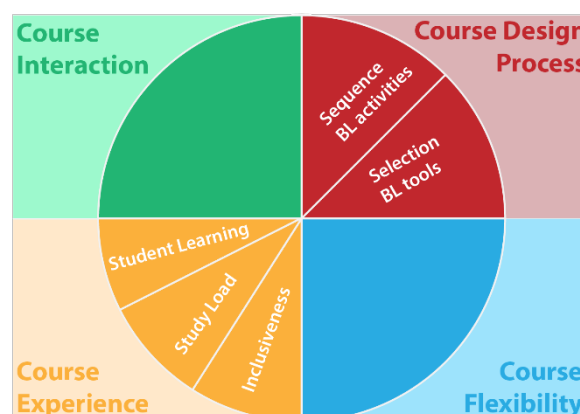
Three action levels are included in the model: the micro, meso, and macro level. We deem the main actor at the micro level to be the instructor or the instructional designer of a course. At the meso-level different key actors, teams, or bodies for decision making play a role in the decision-making process. Programme coordinators, department heads, deans, and heads of teaching and learning centres are involved, among others.

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 program

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.

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.

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.

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.

COURSE EXPERIENCE

Fit of particular blended course components with the course outcomes.

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.

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.

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.

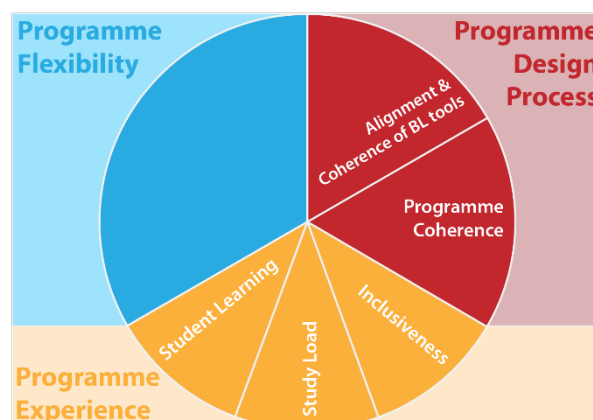
Level 1 Standard	Level 2 Advanced	Level 3 Comprehensive
No deliberate consideration for inclusiveness.	Initial attempts to facilitate and include the different needs and backgrounds of all learners. Special attention is paid to social belonging and identity in the online course environment. This process 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.

Programme Level

The program level refers to educational programs or curricula. A program is a structured series of educational courses. The stakeholders of this level are mainly teachers/educators and students, but also instructional designers, learning developers, content developers and management.

The programme level consists of the following three dimensions and corresponding subdimensions:

- Programme design process
 - Programme coherence
 - Alignment and coherence of blended learning tools
- Programme flexibility
- Programme experience
 - Student learning
 - Study load
 - Inclusiveness



PROGRAMME DESIGN PROCESS

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

Programme coherence

The vertical (course-programme) and horizontal alignment (between courses) of a blended programme.

Level 1 Ad hoc	Level 2 Design-based	Level 3 Programme cycle
No deliberate consideration for the horizontal and vertical alignment in a blended programme design.	Deliberate consideration for the horizontal and vertical alignment in the blended programme design, based on a shared vision, and a design method or principles.	Deliberate consideration for the horizontal and vertical alignment in the blended programme design, based on a shared vision on blended learning, and a design method or principles. Continuous quality improvement is implemented in order to enhance a programme in an iterative manner.

Alignment and coherence of blended learning tools

The rationale for the alignment and coherence of educational tools in blended learning programmes.

Level 1 Ad hoc	Level 2 Design-based	Level 3 Programme cycle
No deliberate alignment and coherence of tools used in a programme.	The alignment and coherence of the tools used in a programme are based on learning activities in courses, coordinated by the educators in the programme, and informed by evidence or experience.	The alignment and coherence of the tools used in a programme are based on learning activities in courses, coordinated by the educators in the programme, and informed by evidence or experience. This process is monitored, evaluated and changed based on quantitative and qualitative data.

PROGRAMME FLEXIBILITY

Opportunities for learners to adapt particular features of the blended learning programme. This includes features like the selection of courses/tracks, the mode of delivery (blended course, online course, traditional course), workload (full time/part time), pace (institution paced/self-paced), progress in a programme, and the possibility to follow courses at other institutions.

Level 1 No flexibility	Level 2 Flexible	Level 3 Adaptive flexible
No deliberate programme flexibility.	The flexibility in a programme is deliberately designed. Learners have some opportunities to adapt particular features of the blended learning programme. This process is informed by evidence or experience.	The flexibility in a programme is deliberately designed. Learners have many opportunities to adapt particular features of the blended learning programme and receive advice on their options. The offering of flexibility is based on evidence or experience. Flexibility is monitored, evaluated and changed based on quantitative and qualitative data.

PROGRAMME EXPERIENCE

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

Student learning

The use of blended programme 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 at the programme level.	Students are guided and supported throughout the blended programme on self-regulating their learning. Students and teaching staff are made aware of the blended nature of the programme, and what this means for both learning and teaching.	Students are guided and supported throughout the blended programme on self-regulating their learning. The blended aspect of the programme is internalized in all processes for the students and teaching staff. These processes are monitored, evaluated and adjusted based on quantitative and qualitative data.

Study load

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

Level 1 Standard	Level 2 Advanced	Level 3 Comprehensive
No deliberate alignment of study load between courses in a blended programme.	The study load, including deadlines, of a course is aligned to that of other courses in a blended programme.	The study load, including deadlines, of different courses in a blended programme are aligned, monitored, evaluated and adjusted.

Inclusiveness

The consideration of the diverse needs and backgrounds of students in order to create a programme where all students feel valued, safe, have a sense of belonging, and where all students have equal access to the online and face-to-face environments of the blended learning programme.

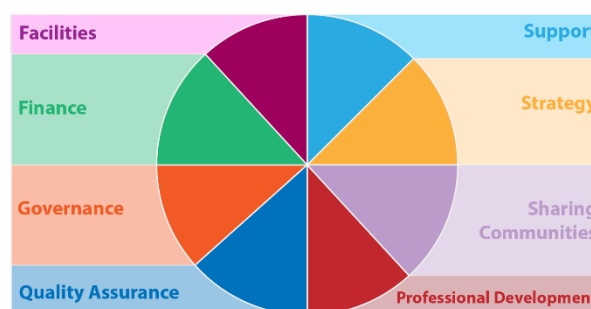
Level 1 Standard	Level 2 Advanced	Level 3 Comprehensive
No deliberate consideration for inclusiveness between courses.	Initial attempts to align inclusiveness in a collection of courses. Special attention is paid to social belonging and identity in the online environment of the programme. This process is informed by evidence or experience.	Inclusiveness is aligned in all of a programme's courses. 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 programme.

Institute Level

The institutional level refers to the formal context of blended learning and education. This is determined by policies and conditions with regard to the organization and support of blended learning. At the institutional level different key actors, teams, or bodies play a role in the decision- making process. Among others, program coordinators and heads of teaching and learning centers are involved.

The institution level consists of the following eight dimensions:

- Institutional support
- Institutional strategy
- Sharing and communities
- Professional development
- Quality Assurance
- Governance
- Finance
- Facilities



INSTITUTIONAL SUPPORT

The manner in which an institution supports teachers and students' blended learning activities

Level 1 Ad Hoc	Level 2 Consolidated	Level 3 Strategic
Limited support for blended learning and teaching aimed at individual teaching staff and students	Dedicated support for blended learning and teaching is available for all teachers, students and departments.	Support for blended learning and teaching is part of the standard support services of the institution. Continuous quality improvement is deliberately embedded in order to improve the support for blended learning.

INSTITUTIONAL STRATEGY

The extent to which blended learning, teaching and education are embedded in the vision, educational model and goals of an institution

Level 1 Ad Hoc	Level 2 Consolidated	Level 3 Strategic
No uniform blended learning strategy is in place.	A dedicated blended learning strategy is consolidated within the institution. University administrators recognize and advocate the importance of blended learning, teaching and education.	Blended learning is an integral part of the institutional strategy. The strategy is embedded in the whole institution (throughout faculties and departments), well documented, and evaluated and adjusted on a regular basis. University administrators and departments recognize and advocate for the importance of blended learning, teaching and education.

SHARING AND COMMUNITIES

The degree to which an institution facilitates communities for sharing blended practices, materials and courses.

Level 1 Ad Hoc	Level 2 Consolidated	Level 3 Strategic
Individual teachers or departments share 'blended' best practices with colleagues.	Communities for sharing 'blended' best practices are facilitated. Processes and/or platforms are in place for sharing good practices and/or materials.	Communities for sharing 'blended' best practices are facilitated, actively built and maintained. Processes and platforms are in place for sharing good practices and materials. Processes are in place for quality assurance of the shared materials.

PROFESSIONAL DEVELOPMENT

The extent to which teaching staff are able to develop their blended teaching skills

Level 1 Ad Hoc	Level 2 Consolidated	Level 3 Strategic
A few different workshops or courses related to blended learning and teaching are offered.	Solid efforts to organise workshops and/or courses related to blended learning and teaching are offered for the teaching staff. The blended teaching activities of staff are incidentally recognized.	All teaching staff is trained in blended learning and teaching. The institution offers a well aligned portfolio of workshops and/or courses (related to blended learning and teaching) for the continuous professional development of their staff. The blended teaching activities of staff are recognized and valued by the institution.

QUALITY ASSURANCE

The process where blended courses, programs, strategy, rules and regulations are evaluated and revised on a regular basis

Level 1 Ad Hoc	Level 2 Consolidated	Level 3 Strategic
No deliberate quality assurance for blended courses, programs, strategy and policies.	Special processes for evaluation of blended courses, programs, strategy and policies are developed and implemented. Some research is conducted on blended courses and/or programs.	Quality assurance for blended courses is part of the standard quality assurance processes of the institution. The evaluation and improvement are based on clear criteria and multiple data sources. The institution has a research agenda for researching its own courses, programs and education.

GOVERNANCE

The way in which the vision and policies are translated to rules, regulations and actions that facilitate blended education

Level 1 Ad Hoc	Level 2 Consolidated	Level 3 Strategic
<p>Some informal policies, rules, regulations, action plans and guidelines (e.g. legal, ethical, privacy, data) related to blended learning are used in the institution. The institution does not have standardized models for blended course and program design.</p>	<p>Policies, rules, regulations, action plans and guidelines (e.g. legal, ethical, privacy & data) related to blended learning are developed and implemented in the institution. Some key actors in the institution are involved in the process of developing new and existing policies, rules, regulations and action plans. Models for blended course and program design are shared in the institution.</p>	<p>Policies, rules, regulations, action plans and guidelines (e.g. legal, ethical, privacy & data) related to blended learning are embedded in the standard governance structure of the institution. The governance of the institution is systematically reviewed and adjusted. Key actors, at different levels in the institution, are involved in the process of reviewing, adjusting and developing new and existing policies, rules, regulations and action plans. Standardized models for blended course and program development are provided.</p>

FINANCES

The extent to which financial resources are allocated to develop, support, and stimulate blended learning

Level 1 Ad Hoc	Level 2 Consolidated	Level 3 Strategic
No allocation of financial resources specifically for blended learning purposes.	Financial resources are incidentally allocated (e.g. projects, pilots) to develop, support, stimulate and improve blended learning and teaching. The allocation of the resources is evaluated.	Financial resources are structurally allocated to develop, support, stimulate and improve blended learning, teaching and blended education. The allocation of the resources is systematically evaluated and adjusted, based on clear criteria and qualitative and quantitative data.

FACILITIES

The extent to which institutions are equipped to facilitate blended learning and teaching.

Level 1 Ad Hoc	Level 2 Consolidated	Level 3 Strategic
Limited availability of blended learning and teaching facilities.	A wide variety of facilities is available. This includes both digital (e.g. digital learning environment, educational tools) and physical (e.g. video recording studios, the availability of different classroom set-ups) facilities.	A wide variety of facilities is available. This includes both digital (e.g. digital learning environment, educational tools) and physical (e.g. the availability of different classroom set-ups, video recording studios) facilities. Teachers have influence on the scheduling of the facilities. The development of facilities is aligned with the institutional strategy. The quality, quantity and assortment of facilities is

		systematically evaluated and adjusted, based on clear criteria and multiple data sources.
--	--	---