

## Διεθνές Συνέδριο για την Ανοικτή & εξ Αποστάσεως Εκπαίδευση

Τόμ. 11, Αρ. 1Α (2022)



### Blended Learning Pedagogical Framework for Conventional Programs of Study in Higher Education

*Nikleia Eteokleous*

doi: [10.12681/icodl.3320](https://doi.org/10.12681/icodl.3320)

## Blended Learning Pedagogical Framework for Conventional Programs of Study in Higher Education

Nikleia Eteokleous

Frederick University

Associate Professor in Educational Technology

[n.etekleous@frederick.ac.cy](mailto:n.etekleous@frederick.ac.cy)

### Abstract

Educational institutions faced and continue to face great challenges due to the COVID-19 pandemic. Decisions needed to be made, new processes were established and actions took place within frightening deadlines, in some cases overnight. The world keeps battling with the ongoing pandemic and the Universities are struggling to decide which mode of delivery to apply for next semester(s). We are at the stage that we need to re-design our courses, meaning that as university instructors we need to see beyond the traditional approach and 're--- conceptualize what can be done in multiple delivery modes. The current paper describes and explains the pedagogical framework that serves as the backbone to guide the re-design of the courses of a private university in the European Region (refer to as FU), intended to be delivered through the BL approach. The proposed framework is based on research evidence and contemporary theoretical and practical approaches to BL in higher education and capitalizes on the expertise gained by the University (FU) from its distance learning programs of study.

**Keywords:** *blended learning, higher education, pedagogical framework, conventional programs of study*

### Περίληψη

Τα εκπαιδευτικά ιδρύματα αντιμετώπισαν και συνεχίζουν να αντιμετωπίζουν μεγάλες προκλήσεις λόγω της πανδημίας COVID-19. Έπρεπε να ληφθούν αποφάσεις, καθιερώθηκαν νέες διαδικασίες και πραγματοποιήθηκαν δράσεις σε ασφυκτικά πιεστικά χρονικά διαγράμματα. Ο κόσμος συνεχίζει να παλεύει με την τρέχουσα κατάσταση που έχει δημιουργήσει η πανδημία και τα πανεπιστήμια προσπαθούν να αποφασίσουν ποια προσέγγιση και εκπαιδευτική μέθοδο παράδοσης μαθημάτων θα εφαρμόσουν. Είμαστε στο στάδιο όπου θα πρέπει να επανασχεδιάσουμε τα μαθήματά μας, κάτι που σημαίνει ότι ως διδάσκοντες θα πρέπει να σκεφτούμε πέρα από τη συμβατική προσέγγιση και να επανασχεδιάσουμε τα μαθήματά μας. Η τρέχουσα εργασία περιγράφει Παιδαγωγικό Πλαίσιο Υβριδικής Μάθησης το οποίο αποτελεί τη βάση για τον επανασχεδιασμό των μαθημάτων και του εκπαιδευτικού υλικού ιδρύματος τριτοβάθμιας εκπαίδευσης. Το προτεινόμενο εκπαιδευτικό πλαίσιο αναπτύχθηκε με βάσει ερευνητικές μελέτες, καλές πρακτικές, σύγχρονες θεωρητικές και πρακτικές προσεγγίσεις και αποτελέσματα ερευνητικών προγραμμάτων. Τέλος, το Πανεπιστήμιο αξιοποιεί την εμπειρία που έχει αποκτήσει από το σχεδιασμό, ανάπτυξη και προσφορά εξ αποστάσεως προγραμμάτων σπουδών.

**Λέξεις-κλειδιά:** μεικτή/υβριδική μάθηση, τριτοβάθμια εκπαίδευση, παιδαγωγικό υπόβαθρο, συμβατικά προγράμματα σπουδών

## Introduction

There has been an extensive literature review regarding BL, its practices, design, delivery, implementation. BL is ambiguously defined in literature and there is no unified view (Graham, 2013; Graham, Woodfield, & Harrison, 2012). The term 'blended learning' is used synonymously to refer to hybrid learning (e.g. Cheung, Fong, Zhang, Kwan, Kwok, 2014; O'Byrne & Pytash, 2015; Pecot---Hebert, 2012; Vernadakis, Antoniou, Giannousi, Zetou, & Kioumourtzoglou, 2011). Recently BL was characterized as the future **'major instructional movement'** (Yen & Lee, 2011) or the **'new normal'** (Dziuban, Graham, Moskal, Norberg, & Sicilia, 2018).

BL has been given various characterizations related to the integration of the offline and online learning spaces/ resources/ materials, etc. In Osguthorpe and Graham (2003) work BL is being referred as providing 'the best of two worlds' - one should be 'using the web for what it does best and using class time for what it does best' (p. 227). Along the same lines, Watson (2008) refers to BL as the 'new, robust instructional approach that takes advantage of the best elements of both settings' (Watson, 2008, p. 4). Additionally, BL is reported as the 'convergence of online and traditional instruction' (Young, 2002) and as the 'integration of digital technologies with conventional methods of teaching and learning' (Laurillard, 2015, p. 10; Ward & LaBranche 2003: 22). BL is a design of teaching that combines online and face---to---face instruction (Halverson et al., 2012), where it integrates online and offline learning activities or, respectively, 'face---to---face (F2F) learning experiences and online learning' (Gedik, Kiraz&Ozden, 2013, p. 1; Steffens & Reis, 2010). A course or a program cannot be labelled 'blended' only if a certain percentage of it is conducted online (Allen, Seaman & Garrett, 2007). There are other elements involved in order to be considered as blended, such as the combination of media and tools employed in-class and out-of-class learning activities (i.e. LMS, zoom, discussion forums, wikis, chat rooms, online quizzes, blogs, feedback tools), the facilitation of individual study and group work through the use of technological tools (either in class or out of class) (Whitelock&Jelfs, 2003). The overarching goal of BL is to integrate onsite (i.e. face---to---face) with online experiences (learning spaces and activities, tools) in order to develop effective, efficient, and flexible learning (Stein & Graham, 2014).

Educational institutions faced and continue to face great challenges due to the COVID-19 pandemic. Decisions needed to be made, new processes were established and actions took place within frightening deadlines, in some cases overnight. About 1.5 billion learners in all educational levels were influenced by institutions decisions to lockdown in 191 countries due to the pandemic (UNESCO, 2020). The world keeps battling with the ongoing pandemic and the Universities are struggling to decide which mode of delivery to apply for next semester(s)/year(s). Given that what we have experienced becomes our new reality, what further decisions need to be made and actions taken in order to be in a position to implement it? Universities need to assess and evaluate their reactions during the pandemic, so that informed decisions are made for the future (Gudmundsdottir, & Hathaway, 2020).

A private university in the European region (the FU) seized the opportunity granted by the regulatory authorities in June 2012 to introduce new programs of study using the distance learning (DL) mode of delivery. Offering DL programs was seen both as

an opportunity and as a challenge. An opportunity, because given the established demand for such programs, and additionally, the ability to reach students that would be otherwise impossible, provided growth opportunities for the University. This was also seen as a challenge because for the FU, as with all programs, achieving and maintaining quality was of paramount importance. DL governance is described and explained by the operations, roles and responsibilities of three DL bodies: Distance Learning Committee (DLC), Distance Learning Unit (DLU) and Learning Services Unit (LSU). The Distance Learning Committee (DLC) refers to the Senate, the Distance Learning Unit (DLU) reports to the Studies and Student and Welfare services, and the LSU belongs to the Information Systems Department of the University. Finally, the Open and Distance Learning Center (ODCL) operates under the auspices of the DLC and the LSU. The DLC, the LSU, the DLU and the ODCL each have defined responsibilities, which include internal mechanisms to monitor and identify emergent technologies and educational developments in the field of distance learning.

We are at the stage that we need to re-design our courses, meaning that as instructors we need to see beyond the traditional approach and 're--- conceptualize what can be done in multiple delivery modes' (Goeman, Poelmans, & Van Rompaey, 2018, p.50). The current paper section describes the pedagogical framework that serves as the backbone to guide the re-design of the University courses intended to be delivered through the BL approach. The proposed framework is based on research evidence and contemporary theoretical and practical approaches to BL (Conole, 2013; Driscoll, 2002; Duhaney, 2004; George-Walker, & Keeffe, 2010; Horn, & Staker, 2014; Hirumi, Bradford & Rutherford, 2011; Kerres & De Witt, 2003; Koper, 2005; Montrieux, Vangestel, Raes, Matthys & Schellens, 2015; OECD, 2018; Skill & Young, 2002; Stein & Graham, 2014; Yelon, 2006) in higher education and capitalizes on the expertise gained by the University (FU) from its distance learning programs of study.

### **BL @ FU: The Philosophy of the Pedagogical Framework**

The philosophy that underlies the PF of BL at FU calls for various elements to be taken into consideration. The pedagogical framework developed includes the elements needed in order to design student-centered learning environments that allow students learners to experience guided independent learning and permanent student activity, through constant interaction of instructor-student, student-student, student-others, materials or resources. The pedagogical framework encompasses processes where they allow the development of student-controlled meaningful learning communities (both in person and virtual) (Skill & Young, 2002) which is the key to learner engagement (Boelens et al., 2017; McGee & Reis, 2012; Park, Perry, & Edwards, 2011; Song, Singleton, Hill, & Koh, 2004). It intends to develop online and face-to-face learning spaces and individual/collaborative learning processes where students will take responsibility of their own learning and increase the self-perceived knowledge. Quality control and assurance mechanisms were developed in order to support, guide and advise the instructors. Finally, a series of professional development courses aiming to pedagogically and technologically support the instructors planned and implemented.

### **The Blended Learning Pedagogical Framework**

The BL framework consists of the following 3 main parameters (See Figure 1):

- 1) Learning and Teaching Spaces**
- 2) Teaching Components and Learning Activities**

### 3) Technological Tools

The section below describes and explains each of the three aforementioned parameters:

1) **Learning and Teaching Spaces** Localization of teaching and learning: online and face-to-face. The framework allows for flexibility between online and face-to-face learning space.

The courses are delivered in the following setting:

**A 3-period/week course:**

- Every week a 2-period session is scheduled to be delivered online or face-to-face.
- Every 2 weeks one more/ a second 2-period session is scheduled to be delivered online or face to face. This session aims to focus more on tutoring, practice, discussion, exploration, production and hands-on experience and learning.

**A 2-period/week course:**

- Every week one-period session is scheduled to be delivered online or face-to-face.
- Every 2 weeks one more/ a second 1-period session is scheduled to be delivered online or face to face. This session aims to focus more on focus on tutoring, practice, discussion, exploration, production and hands-on experience.

The timetable is adjusted accordingly in order to accommodate the BL Framework. Hybrid classrooms are also available to be used on rotation for face-to-face time. There are total of 6 hybrid classrooms(3 in each campus) equipped with high-end technologies to be used for collaborative activities and group work. The hybrid classroom setting is expected to accommodate the needs for the students which decide not to be on campus to be able to interact and collaborate with their classmates.

The key is the balance between the face-to-face and online time, where face-to-face is expected to be 50% or less of the total course time. It is up to the instructor to decide the percentage allocated between the two spaces. The framework provides flexibility so as the instructor takes advantage of the affordances of each space. Therefore, face-to-face time is expected to be oriented towards mastering students' knowledge and skills through tutoring, practice, discussion, exploration, production, feedback and hands-on experience and learning, without excluding content material delivery. For example, face-to-face sessions are expected to focus on: addressing students' questions on the content, solving exercises, conducting experiments, practicing in the lab/art room, working on assignments, exercises, simulations, case studies and others (i.e. interactive educational games, interactive scenarios for problem solving), programming, providing feedback, guidance and support. On the other hand, online meetings and other means (narrated and interactive presentations and videos, and readings) are expected to be employed for content and material delivery and lecturing(Boelens et al., 2017; Driscoll, 2002; Duhaney, 2004; George-Walker, &Keeffe, 2010; Horn, &Staker, 2014; McGee & Reis, 2012; Park, Perry, & Edwards, 2011; Skill & Young, 2002; Song, Singleton, Hill, & Koh, 2004).

### 2) Teaching Components and Learning Activities

The thoughtful mix of the following parameters (teaching components), better specify BL arrangements: **1) content and material delivery, 2) participation and engagement, and 3) assessment**. BL is expressed as a particular sequencing and proportion of online and face-to-face, synchronous or asynchronous learning activities such as: Read, watch, listen, acquire, review, collaborate, discuss, investigate, practice, produce and assess. Thus, the BL framework is based on the following three pillars (See Figure 2):



**1. Content and material delivery (Read, Watch, Listen, Acquire, Review, and Interact):**

- The aim of Content and Material Delivery is to introduce and explain the key concepts of each course. These activities aim to engage students in studying, reading, viewing, listening, and overall acquiring permanent, static, and/ or online materials. These materials include books, e-books, digitalized books, articles, case studies, instructor's notes, open access resources (OERs), readings from various sources (i.e. websites, blogs, online newspapers, etc.). The majority of the aforementioned is available through the eLearn platform and students are directed on what and from which source to study for each week/unit (provided that the principles of copyright are respected).
- Students are given educational content to read, watch, listen and interact in the form of digital/multimedia material that includes: simple, narrated and presentations with notes, video lectures, interactive presentations and interactive videos, audio files (podcasts), and other multimedia sources for material delivery (e.g. tutorials, videos). Also, the digital/ multimedia material includes the teleconferences recordings and/or other educational videos.
- Content Material delivery is expected to be mainly delivered synchronously through online meetings (i.e. web-based lectures) and asynchronously (i.e. narrated presentations and readings)

**2. Participation and Engagement (Collaborate, Discuss, Investigate, Practice and Produce):**

- Participation and engagement can be achieved through various activities where students master their knowledge and skills via hands on experience and learning. Thus, the activities are designed in such a way to provide students with opportunities to: practice, produce, communicate, collaborate, discuss, interact, investigate, share opinions, criticize and query their understanding of the key course concepts.
- The participation and engagement activities are expected to be mainly delivered synchronously, exploiting to the maximum face-to-face time with students. Participation and engagement can be also designed to be delivered via online synchronous or asynchronous activities.

**3. Assessment (Collaborate, Discuss, Investigate, Practice, Produce and Access):**

- Regular assessment, feedback and support are important elements of the BL framework. In each course, there are the following 3 assessment methods: 1) Final, 2) Continuous/formative and 3) Self-assessment. Final and continuous assessment count towards students' final grade in each course.
- The **final assessment** consists of the final exam and/or any other kind form of assessment given the course type and requirements.
- The **continuous/formative assessment** methods may include assignments, quizzes, midterm exams, research reports, simulations, problem solving learning scenarios, virtual environments, educational interactive games, case studies, role playing, online presentations, development of wikis, e-portfolios, participation in discussion forums and blogs. The continuous/formative evaluation form and the weight of assessment are determined by the instructor in the course outline (syllabus). Within the BL framework where face-to-face time is reduced, participation and engagement activities are considered to be an important part of continuous/ formative assessment.

- **Self-assessment** does not take place with the purpose of grading the students but it aims to help students to conceptualize and improve the level of their knowledge and skills. Self-assessment is achieved through a variety of activities, such as online quizzes, online multiple-choice exercises, essays, reflective journals, rubrics, and checklists given to the students after the completion of each unit.

### 3) Technological Tools

Instructors are expected to select and integrate a mix of tools to deliver and scaffold learning activities. Strong and extensive use of the eLearn platform is required. Specifically, the instructors are encouraged to use build-in platform tools (i.e. zoom for teleconferencing sessions, discussion forums, chat rooms, wikis) as well as tools outside the platform (i.e. simulations, blogs, online documents, wikis). The technological tools are grouped in the following categories:

- Communication Tools
- Collaboration, Interaction and Information Sharing Tools
- Content Development Authoring tools
- Assessment and Feedback Tools
- Simulation Tools, Virtual Reality and Augmented Reality Tools

Brief description of each technological tool category is given below:

- *Communication tools*: Tools mainly used for communication purposes such as: video and audio conferencing, text messages, instant messaging, emails and announcements. Additionally, discussion forums and blogs can be used for communication purposes. Social networking tools are also characterized as communication tools.
- *Collaboration, Interaction and Information sharing tools*: Tools mainly provide collaborative spaces for students to work, discuss, interact, exchange ideas and opinions, develop and share content, argue, critique, collaborate on group activities and assignments as well as share information.
- *Content Development Authoring tools*: Tools mainly used for the development of multimedia, digitalized educational material such as: simple, narrated and presentations with notes, video lectures, interactive presentations and interactive videos, audio files (podcasts).
- *Assessment and Feedback Tools*: Tools mainly used to assess student work either for feedback purposes and/ or grading purposes.
- *Simulation Tools, Virtual Reality and Augmented Reality Tools*: Tools used to help students simulate a real phenomenon, process, context, situation, etc. It can be used in various fields such as: Computer Science, Engineering, Law, Health: Pharmaceutical, Nursing, Business, Education.

### Alternative Models of the BL framework and Types of Courses

Based on the literature (Boelens, et al., 2015; Bos, 2016; Cho & Shin, 2014; Dziuban, et al., 2018; Ellis, & Calvo, 2007; Martyn, 2003; Pombo, & Loureiro, 2013; Skill, & Young, 2002), the following alternatives are provided taking into consideration the guideline provided by the University: f2f sessions are up to 50% of the total course time.

- A) Alternative Model 1: Switch between online and face to face, either every session or every other session.

*Example 1:*

- a. 2-period session delivered every week has the following flow:

- *online, f2f, online, f2f, online, f2f, ..., ..., online, f2f, ...,*
  - b. A second 2-period session delivered every two weeks has the following flow:
    - *online, f2f, online, f2f, online, f2f, ..., ..., online, f2f, ...,*
- Representation:

a.

Online	F2f	online	F2f	online	F2f	online	F2f	...
--------	-----	--------	-----	--------	-----	--------	-----	-----

b.

Online	F2f	online	F2f	online	F2f	online	F2f	...
--------	-----	--------	-----	--------	-----	--------	-----	-----

*Example 2:*

- a. 2-period session delivered every week has the following flow:
  - *online, online, f2f, f2f, online, online, f2f, f2f, online, online, f2f, f2f, ..., ..., online, online, f2f, f2f, ...*
- b. A second 2-period session delivered every two weeks has the following flow:
  - *online, online, f2f, f2f, online, online, f2f, f2f, online, online, f2f, f2f, ..., ..., online, online, f2f, f2f, ...*

a.

Online	online	F2f	F2f	online	online	F2f	F2f	online	online	F2f	F2f	online	online	...
--------	--------	-----	-----	--------	--------	-----	-----	--------	--------	-----	-----	--------	--------	-----

b.

Online	online	F2f	F2f	online	online	F2f	F2f	online	online	F2f	F2f	online	online	...
--------	--------	-----	-----	--------	--------	-----	-----	--------	--------	-----	-----	--------	--------	-----

*Note: other combinations of online and f2f sessions may apply*

B) Alternative Model 2: Develop a learning network between online and face to face  
*Example 1:*

- a. 2-period session delivered every week has the following flow:
  - *a number of f2f sessions at the beginning (for example, 1/4 of the course sessions), then continuous online sessions (for example, 2/4 of the course sessions) and then the rest of the sessions to be delivered f2f (1/4 of the course sessions).*
- b. A second 2-period session delivered every two weeks has the following flow:
  - *A number of online sessions at the beginning (for example, 1/4), then continuous f2f sessions (2/4) and then the rest of the sessions to be delivered online (1/4 of the course sessions).*

Representation:

a.

F2f	F2f	F2f	online	online	online	online	online	online	F2f	F2f	F2f
-----	-----	-----	--------	--------	--------	--------	--------	--------	-----	-----	-----

b.

Online	Online	online	F2f	F2f	F2f	F2f	F2f	F2f	Online	online	online
--------	--------	--------	-----	-----	-----	-----	-----	-----	--------	--------	--------

*Example 2:*

- c. 2-period session delivered every week has the following flow:
  - *A number of online sessions at the beginning (for example, 1/4 of the course sessions), then continuous f2f (for example, 2/4 of the course sessions) and then the rest of the sessions to be delivered online (1/4 of the course sessions).*
- d. A second 2-period session delivered every two weeks has the following flow:



- A number of f2f sessions at the beginning (for example, 1/4), then continuous online sessions (2/4) and then the rest of the sessions to be delivered f2f (1/4 of the course sessions).

Representation:

a.

Online	Online	online	F2f	F2f	F2f	F2f	F2f	F2f	Online	online	Online
--------	--------	--------	-----	-----	-----	-----	-----	-----	--------	--------	--------

b.

F2f	F2f	F2f	Online	online	Online	online	Online	online	F2f	F2f	F2f
-----	-----	-----	--------	--------	--------	--------	--------	--------	-----	-----	-----

Note: other combinations of online and f2f sessions may apply

**C) Alternative Model 3: Mainly focus on one learning space (development of one learning space) for a specific period of time and then conclude the course with the other learning space**

**Example 1 – Development of the online sessions/ Emphasis on the online sessions:**

- 2-period session delivered every week has the following flow:
  - The majority of the courses to be continuously delivered online (for example,  $\frac{3}{4}$  of the course sessions) and the remaining to be delivered f2f
- A second 2-period session delivered every two weeks has the following flow:
  - A small proportion of the sessions to be delivered online (for example,  $\frac{1}{4}$  of the sessions) and the majority of the sessions to be delivered f2f (for example,  $\frac{3}{4}$  of the sessions to be delivered f2f)

Representation:

a.

Online	online	online	Online	online	online	online	online	online	F2f	F2f	F2f
--------	--------	--------	--------	--------	--------	--------	--------	--------	-----	-----	-----

b.

Online	online	F2f	F2f	F2f	F2f	F2f	F2f	F2f	F2f	F2f	F2f
--------	--------	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

Note: other combinations of online and f2f sessions may apply

**D) Alternative Model 4:– The Continuous Approach: the f2f session is an extend/ a continuity of the online session (online – face to face/ online-face to face)**

- 2-period session delivered every week has the following flow:
  - All of the sessions are delivered online
  - OR
  - the majority is delivered online and the rest are delivered f2f
- A second 2-period session delivered every two weeks has the following flow:
  - All of the sessions are delivered f2f

Representation

a.

Online	online	online	Online	online	online	online	online	online	online	online	online
--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------

OR

Online	online	online	F2F	online	online	online	F2F	online	online	online	F2F
--------	--------	--------	-----	--------	--------	--------	-----	--------	--------	--------	-----

b.

F2f	F2f	F2f	F2f	F2f	F2f	F2f	F2f	F2f	F2f	F2f	F2f
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

**Types of Courses – Suggestions****Alternative Model 1 – Theoretical Courses**

Alternative Model 1 is suggested to be employed for theoretical courses/ theory-based courses.

**2-period session delivered every week - Suggested teaching and learning activities:**

The 2-period session every week mainly focuses on theory and basic content delivery and lecturing without excluding any collaborative activities, discussions and group work (either online or f2f). The F2f sessions include: Content delivery, Lecturing, mini---lecture video reviews, or screencasts, for in class use while notetaking, review of core contents of the online part, as a repetition of parts of the course, as an extension of the course, and for revision purposes. On the other hand, the online sessions are expected to include: Teleconferencing sessions (through ZOOM) - web-based lectures, as a preparation for online or f2f activities/ exercises, as a repetition of parts of the course, as an extension of the course, and for revision purposes.

**A second 2-period session delivered every two weeks**

The second 2-period session is designed to be delivered every two weeks is expected to focus more on tutoring/practice/discussion/exploration and hands-on experiences (combining f2f and online sessions), The second 2-period is expected to include the following:

- Q & A sessions on the content delivered and assignments
- Group discussions
- Working on assignments
- Group and individual exercises and activities, i.e.:
  - Research on specific subject
  - Presentations
  - Case studies work
  - Role playing
  - Problem solving scenarios
- Feedback
- Online interactive collaborative activities (i.e. break out rooms, poll function)

**Alternative Model 2 and Alternative Model 3 - Combination of Theory and Practice**

Alternative Model 2 and 3 are suggested to be employed for courses that combine theory and practice in computer labs, art rooms, pharmaceutical labs, etc.

**2-period session delivered every week - Suggested teaching and learning activities:**

The 2-period session every week mainly focuses on theory and basic content delivery and lecturing without excluding any collaborative activities, discussions and group work.

F2f sessions includes the following:

- Content delivery
- Lecturing
- mini---lecture video reviews, or screencasts, for in class use while notetaking
- review of core contents of the online part
- as a repetition of parts of the course
- as an extension of the course
- Revision

Online sessions include the following:

- Teleconferencing sessions (through ZOOM) - web-based lectures
- As a preparation for online or f2f activities/ exercises
- as a repetition of parts of the course
- as an extension of the course
- Revision

### **A second 2-period session delivered every two weeks**

The second 2-period session to be delivered every two weeks is expected to focus more on tutoring/practice/discussion/exploration and hands-on experiences (combining f2f and online sessions). The f2f sessions may take place in labs and includes the following:

- Q & A sessions on the content delivered and assignments
- Group discussions
- Working on assignments
- Artefacts development
- Focus on exercises (i.e. practicing and solving exercises).
- Group and individual exercises and activities, i.e.:
  - Research on specific subject
  - Presentations
  - Case studies work
  - Role playing
  - Problem solving scenarios
  - Simulations
  - interactive educational games,
  - interactive scenarios for problem solving
- Practice in the computer lab / art lab (i.e. software programming, artefact development)
- Feedback
- Online interactive collaborative activities (i.e. break out rooms, poll function)

### **Alternative Model 4**

Alternative Model 4 is suggested for courses where the use of labs/ art rooms is required/ part of the course. The students are expected to practice (i.e. programming) and produce (i.e. artefacts). This model applies for courses in: Arts & Design, Architecture, Engineering, Computer Science, Nursing, Pharmaceutical. The instructors are suggested to use the 2 periods every week for content material delivery and the second period every week for practice and production.

Additionally, a modification of this model may apply for courses where practice outside the University is required. For example, *practice in schools, pharmacies, hospitals, etc* (based on the guidelines provided by the authorities).

### **Asynchronous time - Study time – Preparation for synchronous sessions**

Since the contact among students and between instructor-students is limited to up to maximum 50%, important focus should be given to asynchronous communication, teaching and learning activities. This time can be defined as the study time at home/library (time on task, homework), self-paced, independent student learning as well as preparatory work. For example: pre- in class reading and activities and to supplement content delivery and lecturing. It is important to provide students with the appropriate reading materials and guidelines in order to prepare for the synchronous sessions. It includes:

- narrated and interactive presentations and videos
- instructional videos,
- Various readings
  - study materials and readings (books, articles)
  - OERs, (web)links or other online resources
- online quizzes for self-evaluation,
- Exercises – collaborative work and discussions (i.e. wikis, blogs, discussion forums)
- Online activities (discussion forums, group exercises, presentations, wikis, blogs, online collaborative documents and platforms )
- Group and individual activities via the use of technology (Wikis, Blogs, Simulations)
- Reflective activities (blogs, reflective journals)
- interactive lecture modules with brainstorming questions,
- short exercises and problems (documents and video clips), aimed at independent learning (pre- in class)
- mini---lecture video reviews, screencasts, for pre- in class reviewing or revising course contents after class
- tutorial videos (e.g. software training)

### **Students Presence**

Students get to decide to be on campus or off campus during Fall 2020. However, they will be advised to be on campus and specifically to participate to face-to-face meetings and activities. They can follow course sessions from home, any other location or in class. They are expected to show adequate online and face-to-face attendance in order to succeed in a course. The PF allows for students that are off campus to be able to participate in courses as well. The Hybrid classrooms contribute to this goal. Students that are off campus will be able to participate as well in the online and face-to-face sessions (Hybrid classrooms) based on the framework developed.

### **Concluding Remarks**

The Blended Learning framework was implemented during Fall 2020 and Spring 2021 in all conventional programs of study at FU. Internal Quality Committee of the University in collaboration with the Open and Distance Learning and developed a quality control process in order to evaluate and examine the implementation of the BL framework. The data collection took place during Spring 2021 and the data are in the process of being analyzed. The goals of the control process is to identify the gaps of the BL framework, identify good practices in order to appropriately decide on the next

steps and corrective measures and actions such as the need for professional development training, guidance and support to the faculty members.

The BL approach connects offline and online sessions and components (activities) with a meaningful flow from one medium to the next providing the students different paths through the course content and preferably through different media, to better construct their knowledge. The use a combination of synchronous and asynchronous activities and tools, in a stepwise implementation is expected. The challenge is to get the “blend” right and create and sequence learning experiences between online and face-to-face through the use of various technological tools.

It seems that educational systems are moving towards the design and development of more hybrid, flexible and open learning environments. Therefore, it is imperative to take advantage of the experiences and knowledge gained due to the pandemic in order for educators to advance their teaching and learning practices employing distance learning principles and practices into conventional teaching and learning.

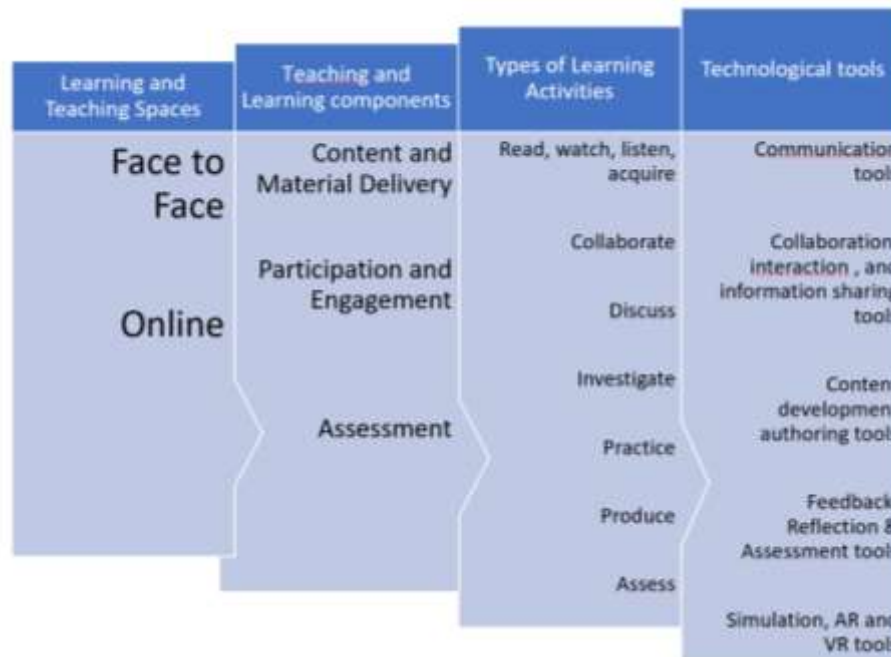
## References

- Allen, I. E., Seaman, J., & Garrett, R. (2007). Blending in: The extent and promise of blended education in the United States. The Sloan Consortium.
- Boelens, R., Van Laer, S., De Wever, B., & Elen, J. (2015). *Blended learning in adult education: towards a definition of blended learning*. Project Report of ALO---SBO WP2 --- 15.06.2015.
- Bos, N. (2016). *Effectiveness of Blended Learning. Factors Facilitating Effective Behavior in a Blended Learning Environment* (Unpublished doctoral dissertation). Heerlen, The Netherlands: OU Nederland. Retrieved May 20<sup>th</sup> 2021 from <https://openaccess.leidenuniv.nl/handle/1887/60428>
- Cho, K. C., & Shin, G. (2014). Operational effectiveness of blended e-learning program for nursing research ethics. *Nursing Ethics*, 21(4), 484-495
- Conole, G. (2012). *Designing for learning in an open world* (Vol. 4). New York: Springer Science & Business Media.
- Driscoll, M. (2002). Blended learning: Let's get beyond the hype. *E-learning*, 1(4), 1-4.
- Duhaney, D. C. (2004). Blended learning in education, training, and development. *Performance improvement*, 43(8), 35-38.
- Dziuban, C., Graham, C. R., Moskal, P. D., Norberg, A., & Sicilia, N. (2018). Blended learning: The new normal and emerging technologies. *International Journal of Educational Technology in Higher Education*, 15, 1---16.
- Gedik, N., Kiraz, E., & Ozden, M. Y. (2013). Design of a blended learning environment: Considerations and implementation issues. *Australasian Journal of Educational Technology*, 29(1).
- Ellis, R. A. & Calvo, R. A. (2007). Minimum Indicators to Assure Quality of LMS-supported Blended Learning. *Educational Technology & Society*, 10(2), 60- 70
- George-Walker, L. D., & Keeffe, M. (2010). Self-determined blended learning: a case study of blended learning design. *Higher Education Research & Development*, 29(1), 1-13.
- Horn, M.B., & Staker, H (2014). *Blended: Using Disruptive Innovation to Improve Schools*. San Francisco: Jossey-Bass
- Graham, C. R. (2013). Emerging practice and research in blended learning. In M. G. Moore (Ed.), *Handbook of distance education* (3rd ed., pp. 333– 350). New York, NY: Routledge.
- Graham, C.R., Woodfield, W., & Harrison, J.B. (2013). A framework for institutional adoption and implementation of blended learning in higher education. *The Internet and Higher Education*, 18, 4–14.
- Gudmundsdottir, G.B. & Hathaway, D.M. (2020). "We Always Make It Work": Teachers' Agency in the Time of Crisis. *Journal of Technology and Teacher Education*, 28(2), 239-250. Waynesville, NC USA: Society for Information Technology & Teacher Education.
- Halverson, L. R., Graham, C. R., Spring, K. J., & Drysdale, J. S. (2012). An analysis of high impact scholarship and publication trends in blended learning. *Distance Education*, 33(3), 381---413.
- Kerres, M. & Claudia De Witt (2003). A Didactical Framework for the Design of Blended Learning Arrangements, *Journal of Educational Media*, 28:2---3, 101---113,
- Laurillard, D. (2014). *Thinking about blended learning A paper for the Thinkers in Residence programme*. Brussels: Royal Flemish Academy of Belgium for Science and Arts.

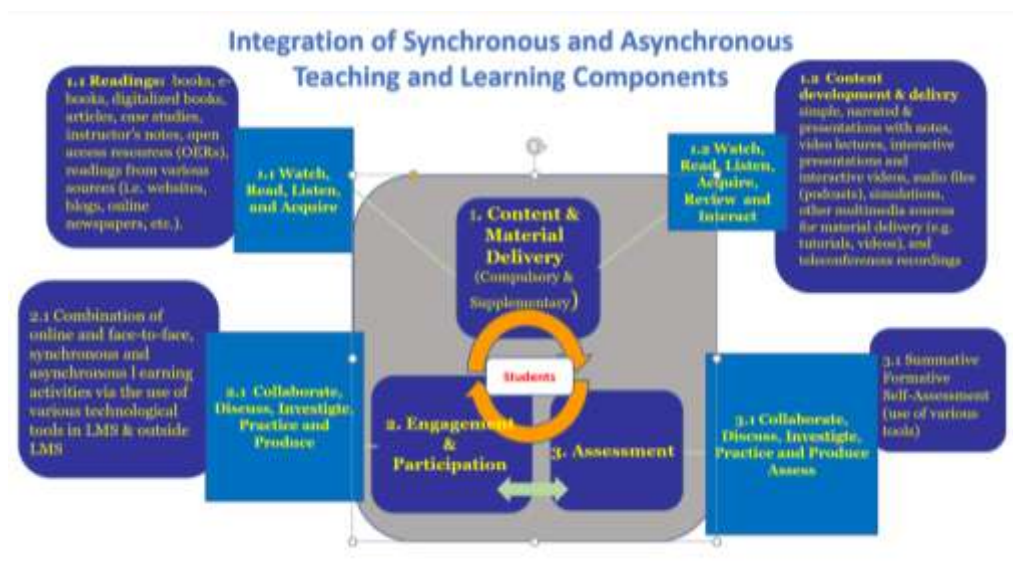
- Martyn, M. (2003). The hybrid online model: good practice. *Educause Quarterly*, 26(1), 18–23
- McGee, P., & Reis, a. (2012). Blended course design: A synthesis of best practices. *Journal of Asynchronous Learning Networks*, 16(4), 7–22.
- Montrieux, H., Vangestel, S., Raes, A., Matthys, P., & Schellens, T. (2014). Blending face---to--- face higher education with web---based lectures: Comparing different didactical intended purposes. *Educational Technology & Society*.
- OECD (2018). *Teachers as Designers of Learning Environments: The Importance of Innovative Pedagogies*. Paris: OECD Publishing.
- Osguthorpe, R. T., & Graham, C. R. (2003). Blended Learning Environments: Definitions and Directions. *The Quarterly Review of Distance Education*, 4(3), 227–233.
- Park, C. L., Perry, B., & Edwards, M. (2011). Minimizing attrition: Strategies for assisting students who are at risk of withdrawal. *Innovations in Education and Teaching International*, 48(1), 37–47. doi: 10.1080/14703297.2010.543769
- Pombo, L., & Loureiro, M. (2013). Using peer assessment for promoting the learning process in a doctoral blended learning program-a longitudinal design-based research approach. *International Journal of Advanced Corporate Learning*, 6(2), 9–15.
- Skill, T. D., & Young, B. A. (2002). Embracing the hybrid model: Working at the intersections of virtual and physical learning spaces. *New Directions for Teaching and learning*, 2002(92), 23–32.
- Song, L., Singleton, E.S., Hill, J.R. & Koh, M.H. (2004). Improving online learning: Student perceptions of useful and challenging characteristics. *Internet and Higher Education*, 7(1), 59–70. Elsevier Ltd. Retrieved February 15, 2021 from <https://www.learntechlib.org/p/102596/>.
- Staker, H., & Horn, M. B. (2012). *Classifying K-12 blended learning*. Innosight Institute.
- Stein, J., & Graham, C. (2014). *Essentials for Blended Learning*. New York: Routledge.
- Watson, J. (2008). *Blended Learning: The Convergence of Online and Face---to---Face Education. Promising practices in online learning*. North American Council for Online Learning. Retrieved August 29<sup>th</sup> 2018 from [http://www.inacol.org/research/promisingpractices/NACOL\\_PP---BlendedLearning---lr.pdf](http://www.inacol.org/research/promisingpractices/NACOL_PP---BlendedLearning---lr.pdf)
- Whitelock, D. & Jelfs, A. (2003). Editorial: Journal of Educational Media Special Issue on Blended Learning. *Journal of Educational Media*, 28(2–3), 99–100.
- UNESCO (2020, April 15). COVID-19 Impact on education. Retrieved June 20, 2020 from <https://en.unesco.org/covid19/educationresponse>
- Yen, J. C., & Lee, C. Y. (2011). Exploring problem solving patterns and their impact on learning achievement in a blended learning environment. *Computers & Education*, 56(1), 138–145.
- Young, J. R. (2002). Hybrid teaching seeks to end the divide between traditional and online instruction. *The Chronicle of Higher Education*. Retrieved August 29<sup>th</sup> from <https://www.chronicle.com/article/Hybrid---Teaching---Seeks---to---End/1848>



## Appendix



**Figure 1:** Blended Learning Pedagogical Framework Parameters



**Figure 2:** Teaching and Learning Components of Blended Learning Pedagogical Framework