Dokuz Eylül University

DISTANCE EDUCATION APPLICATION AND RESEARCH CENTER

POST-PANDEMIC EDUCATION: HYBRID AND BLENDED LEARNING MODELS

AUGUST 2021

This study was prepared by Dokuz Eylül University Distance Education Application and Research Center (DEUZEM).

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POST-PANDEMIC EDUCATION: HYBRID AND BLENDED LEARNING MODELS

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2021, Izmir, TURKEY

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1st Edition: August 2021, Izmir

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FOREWORD

Prof. Dr. Nükhet HOTAR

RECTOR

The global Coronavirus pandemic has deeply affected Turkey's higher education activities and forced us to change our habits, behaviour and traditional approaches to education. During this period when physical restrictions have been imposed, precautions have been taken, face-to-face teaching activities at universities have been suspended, and distance education models, in which communication technology is intensely used, have been adopted. As a natural result of this, all kinds of information, documents and materials have been transferred to digital media.

Online lectures, presentations, assignments and exams in academic units have been rescheduled on the internet; new measurement and evaluation methods have been implemented by means of innovative applications. During this period, which covers about one and a half years, universities have focused on methods that utilize effective use of technology providing people with ease of time, space and access. Thus, the hybrid education model of the future has begun to take shape at the national level in line with the institutions' own facilities and capabilities. At this point, substantial investment has been made in the online DEU Distance Education Portal at our university; publications on the hybrid model have been prepared, and it has been ensured that our students have not been adversely affected. Thanks to the progress in vaccination studies in our country, the 2021-2022 Academic Year started in accordance with the new normal.

The spread of computer and internet-based technologies has by all means opened the door to the digital world. At this point, we have encountered many elements from the creation of content to the development of digital literacy skills. This book, which was prepared under the leadership of Dokuz Eylul University Distance Education Application and Research Center (DEUZEM), aims to develop the competencies and abilities of trainers in this field.

We believe that this work, in which many topics, from preparing an effective presentation to setting up the website and from drone use to the development of content, are shared in a relevant program with a video link provided, will be useful to all those who want to improve themselves in this field, and not just educators. We thank those who have contributed to the preparation of this publication.

Post-Pandemic Education: Hybrid and Blended Learning Models

Foreword

Dokuz Eylül University has decided to switch to online education (distance education) on 23.03.2020 due to the Covid-19 pandemic. In this urgent process, Dokuz Eylül University has successfully carried out distance education activities with its strong hardware infrastructure and qualified human resources, feedback from students, instructors and continuous improvements based on evidence.

DEUZEM has played an important role in the successful execution of this process with a minimum loss with the support of the Dokuz Eylül University Rectorate in distance education activities, student and instructor webinars, YouTube videos, educational documents prepared for students and instructors, chat support and telephone support. Distance education activities were carried out by using the onlineDEU Learning Management System within the university by all faculties and units. Up-to-date statistics on the use of the onlineDEU Learning Management System can be found at https://deuzem.deu.edu.tr/istatistikler/.

The Council of Higher Education (YÖK) has worked with the Ministry of Health to include the academic and administrative staff working at universities in the Covid-19 vaccination program, to start face-to-face formal education and training activities at universities as soon as possible and to carry out them in a healthy way. In this context, university personnel are given priority in the vaccination program. While the studies on the transition to face-to-face education continue, the literature has revealed that the distance education activities, which are compulsory during the pandemic process, will take place in traditional classroom environments with different models (blended and hybrid models) after the pandemic. It is known that technology plays an important role in the process of pedagogically transforming traditional classroom environments. However, it should not be forgotten that technology is a tool in the learning process, that is, the technology used is not the main factor that enables learning. It is possible to enrich the learning environment, transform it pedagogically, and realize permanent learning with effective and successful technology integration in educational environments.

Many institutions in higher education actively use online learning platforms, especially in the process of diversifying educational opportunities. These platforms play an important role in reaching a particularly large audience. After the pandemic, our university is expected to benefit greatly from online education with the increasing technology literacy of our instructors and students. In this context, I hope that this study, which was developed with the aim of giving an idea to the target audience about hybrid or blended learning models, will contribute to the process of planning the academic activities of the Dokuz Eylül University Rectorate for the 2021-2022 academic year and increasing the quality of the courses.

I wish it would be beneficial...

Prof. Dr. Bahar BARAN
DEUZEM Manager


TIME RIPENS ALL THINGS; NO MAN İS BORN WISE.
Cervantes

Contents

DEFINITIONS

DISTANCE EDUCATION:

It is an education model in which the learner can access educational resources and content, regardless of time and place, by participating in activities, synchronously or asynchronously, with rich communication technologies as well as printed learning materials.

SYNCHRONOUS LEARNING:

It is a learning model where learners also participate in learning activities or able to access educational resources and content.

ASYNCHRONOUS LEARNING:

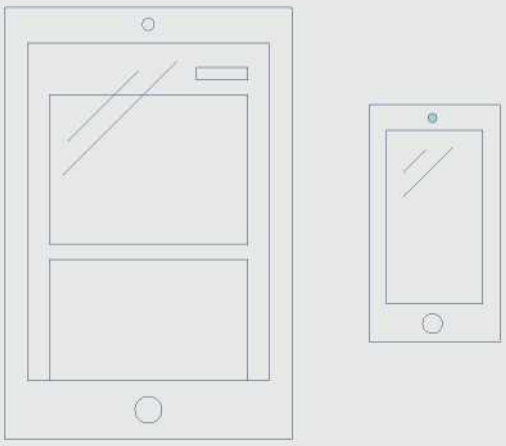
It is a learning model where learners participate in the learning process at different times.

LEARNING MANAGEMENT SYSTEM (LMS):

It is a web-based platform that facilitates various activities such as the management, documentation and reporting of an online distance education system, publishing the course content, conducting measurement-evaluation activities, and providing communication between instructors and students. For example; onlineDEU uses the Sakai learning management system.

VIRTUAL CLASSROOM:

It is an online learning environment that enables the synchronous communication and interaction of instructors and students with online lectures. For example, onlineDEU uses the "BigBlueButton" as a virtual classroom tool.



ONLINE LEARNING:

It is defined as the ability of learners to achieve learning goals with LMS and virtual classrooms, synchronously or asynchronously, regardless of time and place.

HYBRID LEARNING APPROACH:

It is an educational approach where students who do not have the opportunity to participate in learning activities face-to-face participate online and other students participate face-to-face. In the blended learning approach, online and face-to-face learners can be the same individuals, while in the hybrid learning approach, they can be different individuals.

BLENDED LEARNING APPROACH:

In the blended learning approach, the advantages of online and face-to-face learning environments are combined, and the disadvantages of these environments are reduced. Face-to-face and online learning applications can be carried out at different rates according to the characteristics of the course.

FLIPPED CLASSROOM MODEL:

In this teaching model, theoretical content is presented to students online prior to the face-to-face session. Applied course contents are carried out face-to-face in classroom/laboratory/workshop/stage etc.

AIM

The aim of this study is to introduce hybrid and blended learning models that can be easily applied in the departments of our university in the Fall semester of the 2021-2022 Academic Year. The purpose of sharing the guide is not simply to select a model. With this study, it is aimed to guide the instructor to realize an effective technology integration by considering the course content, student characteristics and their own digital literacy skills in the context of each course.

For this purpose, **5 basic model** suggestions have been made by DEUZEM and information on the definitions, advantages and disadvantages of the models are presented in the following sections. Application examples can be accessed by **QR codes** on the relevant pages. However, it should not be forgotten that **technology** is a **tool** in the learning process, that is, the technology used is not the main factor that enables learning. It is possible to enrich learning environments and increase learning with an effective and successful technology integration process that considers the student as a subject and takes into account the factors of interaction and motivation in learning environments.

DEUZEM

EDUCATION AFTER THE PANDEMIC

Hybrid and Blended Learning Models

01

THE FACE-TO-FACE MODEL SUPPORTED WITH LIVE ONLINE LESSONS

02

FLIPPED CLASSROOM MODEL

03

ASYNCHRONOUS LEARNING SUPPORTED FACE-TO-FACE MODEL

04

LIVE ONLINE LEARNING MODEL BASED ON LIVE ONLINE COURSES

05

ONLINE REPEATED FACE-TO-FACE MODEL

MODEL 1

THE FACE-TO-FACE MODEL SUPPORTED WITH LIVE ONLINE LESSONS

Description: In this model, while face-to-face lessons are held in the classroom environment, some students participate in the live lesson simultaneously (synchronously) outside the classroom (at home, etc.). All students attend the class simultaneously, but not all of them may be in the same place. The instructor (if they wish) can share the course materials with the students online.

ADVANTAGES

• It provides the opportunity to attend the class for students who cannot attend the class in person due to different reasons (illness, unexpected reasons, fire, earthquake, etc.).

• It reduces the burden of the instructor in preparing digital course content for students.

• It offers the opportunity to learn while being in different places.

• Students who do not have the opportunity to attend the in person can follow the lesson live, ask questions and attend the lesson.

DISADVANTAGES

• It may prove difficult to maintain communication and interaction between students that are in different environments.

• The instructor should organize their class suitable for live lessons.

NECESSITIES

• Adequate technological infrastructure (projection, computer, camera, microphone, etc.) is required to present live lessons synchronously in the classrooms.

• It is necessary to pay attention to copyright and personal data in live lessons, learning resources or all kinds of activities in digital environments.

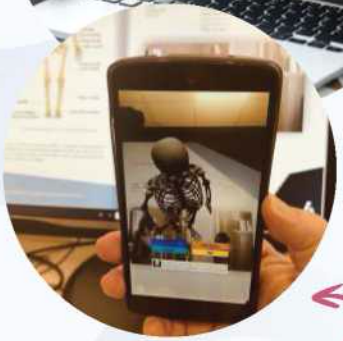
• Internet infrastructure should be provided for students who do not have sufficient internet access or who do not have at all.

To see the application example scan the QR code below.

MODEL 2

FLIPPED CLASSROOM MODEL (ONLINE THEORETICAL + FACE-TO-FACE APPLICATION)

Description: In this model, while the theoretical content is presented to the students online before the lesson, students are invited to the classroom/laboratory/workshop/stage environment for applied activities. The important thing in the model is to present the theoretical (cognitive) content to the students before the application, and to experience the learned information as a cognitive, affective and psycho motor during the application and to create a meaningful learning performance. In this model, the distance education process can be carried out synchronously or asynchronously.



ADVANTAGES

- It ensures efficient use of time.
- Learning performance related to course applications increase.
- Allows collaborative (group work, projects, assignments etc.) work.
- Communication and interaction between instructor-student, student-student increases.
- It enables the student to take responsibility in learning activities.
- Students who cannot attend the class for various reasons can receive information whenever they want. It offers independent access at any place and time.

DISADVANTAGES

- Failure of students to complete online course tasks (watching videos, completion of the activities etc.), may result in ineffectiveness in face-to-face course applications.
- This model is not. suitable for students with low self-regulation skills.
- It can be time consuming and difficult for instructor to plan and prepare course videos and content.

NECESSITIES

- Internet infrastructure should be provided for students who do not have sufficient internet access or who do not have at all.
- While preparing instructional videos, various hardware and software tools may be required.
- It is required to follow attendance in online activities by instructors (log records).
- It is necessary to pay attention to copyright and personal data in live lessons, learning resources or all kinds of activities in digital environments.

You can use Augmented Reality (AR) technology in your lessons.

To see the video example scan the QR code below.

MODEL 3

ASYNCHRONOUS LEARNING SUPPORTED FACE-TO-FACE MODEL

Definition: In this model, the lessons are face-to-face class/lab/workshop etc. For the students who cannot attend the course, weekly contents (presentation, video, project, homework, etc.) are uploaded to the Learning Management System (onlineDEU). All students have access to weekly course content via onlineDEU. Educational videos prepared by the instructor can be shared as a learning resource.

ADVANTAGES

- Students who cannot attend classes in person for various reasons have access to course materials regardless of time and place.
- Students can access course resources and materials asynchronously.

DISADVANTAGES

Apart from the face-to-face lecture, the instructor should take the time to publish various digital teaching materials related to the course online.

NECESSITIES

- Software (articulate, camtasia, etc.) may be required for the preparation of digital learning materials.
- It is necessary to pay attention to copyright and personal data in live lessons, learning resources or all kinds of activities in digital environments.
- Internet infrastructure should be provided for students. who

To see sample lecture videos, scan the QR codes below.

Recording a face-to-face lecture

360° Lesson Recording

MODEL 4

THE ONLINE LEARNING MODEL BASED ON LIVE ONLINE COURSES

Description: In this model, an online course hour is defined according to the decision of the university senate, and the courses are conducted synchronously over the virtual classroom application on the days and times specified in the curriculum. In addition to the live lessons, the instructor should share the course resources and materials with the students via LMS. The student should be informed in advance about the structure of the course.

ADVANTAGES

• It provides students with the opportunity to access the course content from different places synchronously.

• Determining the virtual meeting hours between the lecturer and the student facilitates the communication process for the course.

DISADVANTAGES

• It can be difficult to maintain interaction in a live lesson environment.

• For students with low intrinsic motivation, the learning process is difficult.

NECESSITIES

• Software (articulate, camtasia, etc.) may be required for the preparation of digital learning materials.

• Learning Management System (Sakai, Moodle, Blackboard etc.) is required.

• Internet infrastructure should be provided for students who do not have sufficient internet access or who do not have at all.

• It is necessary to pay attention to copyright and personal data in live lessons, learning resources or all kinds of activities in digital environments.

MODEL 5

ONLINE REPEATED FACE TO-FACE MODEL

Description: In this model, lessons are held face-to-face with all students in a classroom/lab environment. For students who cannot attend the face-to-face lesson, a virtual lesson time is determined, and the lesson is conducted live (synchronously) at the specified time. No additional tuition payment is made to the instructor for the repeated live course. The main advantage of this model for students is the opportunity to attend the lesson synchronously from a distance, in cases where students cannot attend the lesson face-to-face for various reasons during the semester.

ADVANTAGES

• Students who cannot attend the lesson in person can attend remotely (synchronous).

• Access to course materials is easy.

DISADVANTAGES

• It increases the workload of the instructor.

• For distance students (working or for a reason, etc.), it can be difficult to determine the appropriate time for all students.

• The application can be difficult in the sections where the student density is high.

NECESSITIES

• Learning Management System (Sakai, Moodle, Blackboard etc.) is required.

• Software to perform live lectures (BigBlueButton, Zoom, Webex etc.). live lesson tools) and hardware (computer, microphone, and camera, etc.) are required.

• Internet infrastructure should be provided for students who do not have sufficient internet access or who do not have at all.

• It is necessary to pay attention to copyright and personal data in live lessons, learning resources or all kinds of activities in digital environments.

In this guide models are offered to specify the structure of a lecture.

DIGITAL PLATFORMS THAT CAN BE USED IN DISTANCE EDUCATION

In case the distance education courses are carried out asynchronously, digital course contents can be prepared by using various digital platforms. Rich course contents can be developed using these platforms. Here are some platforms that we think will be useful, many of which are open-source tools.

Text-Based	Simultaneous Discussion Tools	Twitter, Mentimeter
	Discussion Forums	ProBoards
	Note-taking and Document Creation	Evernote
Image-Based	Image Sharing	Instagram
	Image Creation and Editing	Adobe Spark
	Drawing	FlockDraw
	Online Whiteboard	Whiteboard Fox
	Creating Diagrams	Draw.io
	Creating a Concept Map	MindMup, Popplet
	Mapping	Mapmaker Interactive, MapHub
	Word Clouds	EdWordle
Auditory	Audio sharing	SoundCloud
	Sound creation and editing	123apps
Video-based	Video-Sharing and broadcasting	YouTube
	Video Creation and Editing	Kdenlive, LIVES, OpenShot, VidCutter, Shotcut, Flowblade, Avidemux, Pitivi, Edpuzzle
Multimedia Production Tools	Digital Clipboard	Trello
	Presentations	Nearpod
Digital Story Tools	Online Book Creation	Publitory
	Caricature Creation	Witty Comics
	Creating Animation	Blender, Synfig Studio, Pencil 2D, OpenToonz, Maefloresta Tupitube, GIMP, Krita, Unity, Unreal, Powtoon
Website Building Tools	Creating a Personal Website	Google sites, Wix
	Blogs	Blogger, WordPress
Info Sharing and Organization Tools	File Sharing	Google Drive
	Social Bookmarking	Diigo
	Collectors	Flipboard, Feedly
Data Analysis Tools	Creating a Survey	Google Forms
	Online Worksheet	Google Docs
	Infographics	Visme
Other Tools	Timeline Tools	Tiki-toki
	3D Modeling Tools	Tinkercad, sketchup
	Evaluation Tools	Quizizz, Kahoot
	Simultaneous Online Conference	Google Hangout
Augmented Reality Tools		ARToolKit+, Mixare, Holokit, BRIO, Adobe Aero, Vuforia
Virtual Reality Tools		GuriVR, OpenSpace3D, Google's ARCore, Holokit, ApertusVR, OSVR, A-Frame, JanusVR

Commercial (Licensed) Programs That Can Be Used for Content Creation:
Camtasia (Windows and macOS), Final Cut (MacOS), iMovie (Included for MacOS), iSpring (Windows, macOS), FlipHTML5 (macOS and Windows)

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