Democratic and Popular Republic of Algeria
Ministry of Higher Education and Scientific Research
University of Ahmed Zabana- Relizane
Faculty of Letters and Languages
Department of English

جامعة غليزان
RELIZANE UNIVERSITY

Pedagogical handout

Blended learning Practices: The Foundation of Education in the 21st Century.

Document intended for students in LMD
Section: English language
Module: Blended Learning
Semestrial Module
Level: Master 2 (language and communication)

Presented by: Dr. BENADDA Abdelouahid

Academic Year
2024/2025

Level	**Master 2**
Fundamental Unit	***Blended Learning***
Weekly Time Load	03h00. (TD sessions)
Credits	4
Coefficient	2
Mode of Evaluation	Continuous Monitoring

CourseDescription

This course serves as a practical framework designed to enhance the preparedness of Master's students in blended instructional methodologies. It provides a structured training program focused on contemporary information and communication technologies, thereby improving interactions among participants. The primary objective of the course is to cultivate students' competencies across educational, social, cultural, and communicative dimensions. It introduces key theories, concepts, and applications of blended learning, aimed at deepening learners' comprehension of technology's role in education. The course aspires to familiarize EFL students with hybrid learning environments. Participants will gain insights into relevant tools and resources that are integral to blended learning, as well as clear expectations regarding their roles and responsibilities within these environments. This aspect of the course is crucial for ensuring that students feel confident and competent in navigating the complexities of hybrid educational settings..In addition to the technical and theoretical components, the course places a strong emphasis on promoting effective technology use in the design and management of educational content. Students will learn how to leverage various technological tools to enhance their instructional practices, making learning more engaging and accessible for their future students.

Course Requirements

Smartphones, laptops, tablets, Facebook accounts, email addresses.

Course Grading

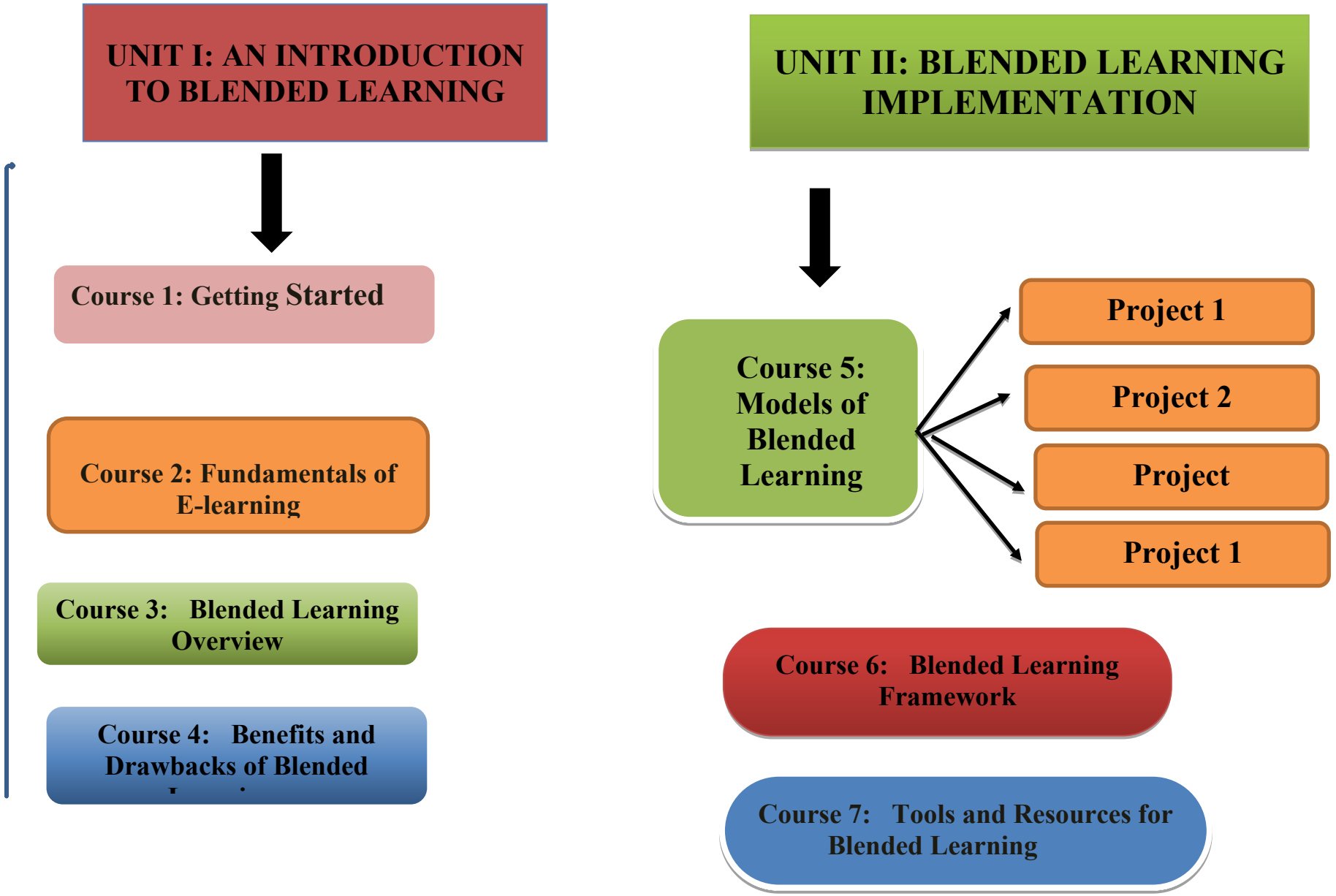
Students are evaluated according to:

- ***Communication assignments*** that involve discussions with classmates andinstructor.
- ***Classroom presentation*** about one of the learning theories or environments included in this course.

Domain: Foreign Languages
English Language
Speciality: Master 2- Langue and Communication

3- Semester 3

Teaching units	Time	Weekly load				Coeff	Crédits	Assessment method	
	15 weeks	Lecture	TD					Continuous assessment	Exam
Fundamental Units									
Applied Linguistics		1H30	3H			3	5	50	50
ESP		1H30	3H			3	5	50	50
Blended learning			**3H**			**2**	**4**		**100**
Human Resource Development		1H30	1H30			2	4	50	50
Methodological Units							18		
Oral Communication			3H			2	4	100	
Intercultural Communicative Competence (ICC)		1H30				1	2		100
Research Methodology			1H30			1	2	100	
Discovery Unit							08		
Discourse Analysis			1H30			1	2	100	
Transversal Units									
Communication Practices			**1H30**			**1**	**1**	**100**	
SPANISH/ FRENCH		1H30				1	1		100
Total Semester 3		9h	16h30			17	**30**		


UNIT I: AN INTRODUCTION TO BLENDED LEARNING
Course 1: Getting Started
Course 2: Fundamentals of E-learning
Course 3: Blended Learning Overview
Course 4: Benefits and Drawbacks of Blended
UNIT II: BLENDED LEARNING IMPLEMENTATION
Course 5: Models of Blended Learning
Project 1
Project 2
Project
Project 1
Course 6: Blended Learning Framework
Course 7: Tools and Resources for Blended Learning

Learning Outcomes

By the conclusion of this course, students will be better equipped in terms of blended learning practices. More specifically, students will have the ability to:

In terms of knowledge to:

- Demonstrate an understanding of the key concepts and theories in blended learning
- understand the benefits of a blended learning environment
- understand the basic features of blended learning
- become familiar with the blended learning continuum.

In terms of know-how:

- analyse and evaluate the methods used in blended learning.
- consider how content standards and objectives will impact decisions about planning for blended learning.
- review the availability of technology for the blended classroom.
- explore how instructional activities can be integrated into a blended learning environment.
- apply blended learning techniques to real- classroom situations .
- critically assess contemporary issues and debates within the field of blended learning.

In terms of interpersonal skills:

- develop a plan to implement blended learning into classroom.
- explore online resources and digital tools as an integral component of blended learning.
- explore considerations for implementing effective blended learning programs.

Semester 3

UNIT I: AN INTRODUCTION TO BLENDED LEARNING

Course 1: Getting Started
Course 2: Fundamentals of E-learning
Course 3: Blended Learning Overview
Course 4: Benefits and Drawbacks of Blended Learning
Course 5 Learner Roles and Teacher Roles in Blended Environments
Course 6: Digital Literacy for Blended Learning

UNIT II: BLENDED LEARNING IMPLEMENTATION

Course 7: Models of Blended Learning

Course 8: Blended Learning Framework

Course 9: Tools and Resources for Blended Learning

Course 10: Designing a Blended Course

Course 11: Online Interaction and Engagement Strategies

Course 12: Integrating Multimedia and AI Tools

UNIT I: AN INTRODUCTION TO BLENDED LEARNING		
Course 1:	***Getting Started***	***Weeks 1 - 2***
The orientation module for this course focuses on understanding of • *Teaching and learning in the Digital Age* • *Online learning and the use of online delivery systemstoachieveeffective learning.*		
Course 2:	***Fundamentals of E-learning***	***Week 3***
In this course, learners will; • *review the basics of e-learning* • *make sense for its effectiveness for today's learners*		
Course 3:	***BlendedLearningOverview***	***Week 4***
In this course, learners will; • *gain an overview of blended learning* • *makes sense for 21st century learners* • *explore features of blended learning and see many examples of blended learning experiences.*		
Course 4	***Benefits and Drawbacks of Blended Learning***	***Week 5***
• *In this course, learners will;* • *gain an overview of the benefits of blended learning* • *makes sense of the challenges of blended learning*		
Course 5	***Models of Blended Learning***	***Weeks 6-7-8***
In this module, participants will learn about : • *Models of Blended Learning* • *Project presentation*		
Course 6	***A Blended Learning Framework***	***Weeks 9- 10***
In this module, participants will learn about • *the steps they need to take in order to plan effective blended learning experiences* • *using technology in the classroom*		
Course 7:	***Tools and Resources for Blended Learning***	***Weeks 11 -12***
In this module, participants will : • *Identify and classify different technologies, tools, and applications.* • *Compare, contrast, and evaluate different technologies, tools, and applications.* • *Choose appropriate technologies, tools, and applications to most effectively support instruction and achieve learning outcomes*.		

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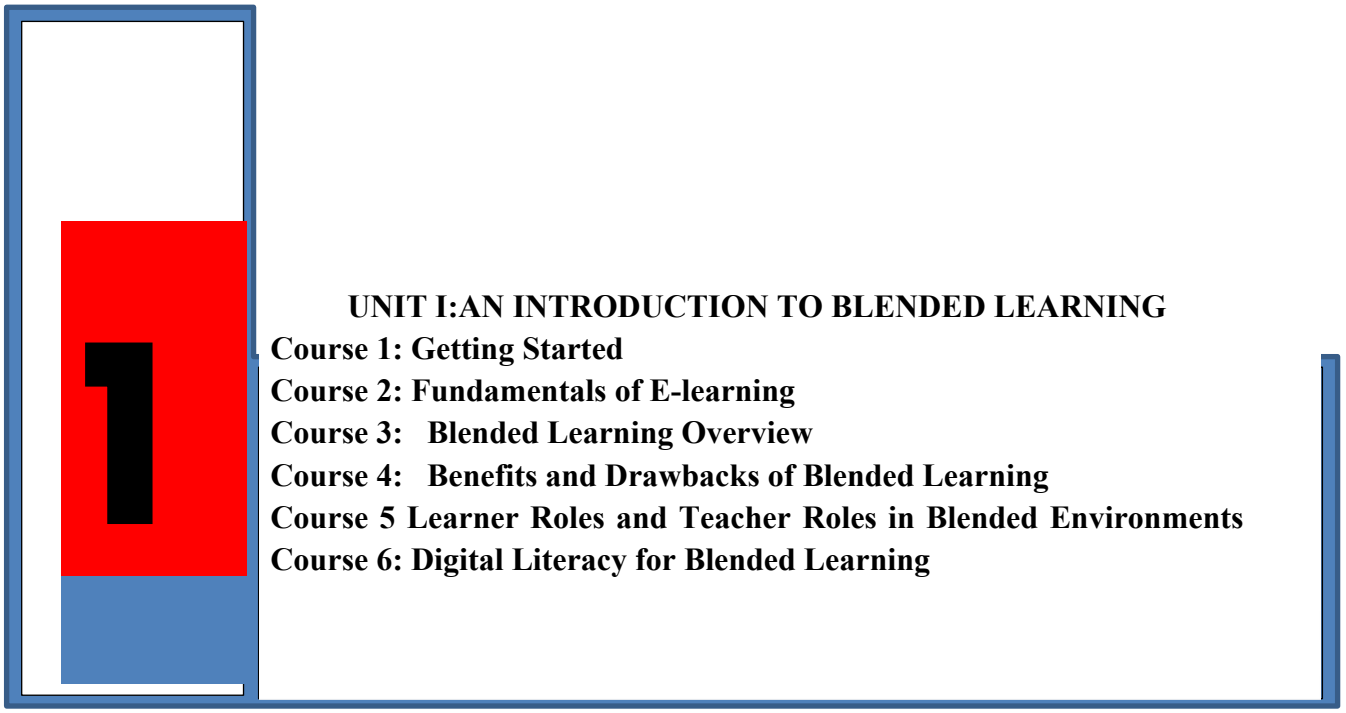
Introduction

Research in the domain of education has consistently demonstrated that change is a significant and ongoing phenomenon within the realm of information and communication technology. The evolving trends and the pressures of globalization have instigated transformative reforms in educational practices globally. Over recent decades, there has been a notable surge in interest towards blended learning, which appears to be on an upward trajectory. In today's digital landscape, where hybrid-learning environments are becoming increasingly prevalent, the role of ICT is more critical than ever. These technologies not only provide access to a wealth of information but also foster collaboration and communication among students and educators. However, the integration of ICT in classrooms is not without its challenges. Identifying and addressing these challenges is essential for improving the quality of higher education, particularly in contexts like Algeria, where educational institutions are striving to keep pace with global advancements.. Moreover, the rise of educational technology aligns closely with the expectations of the "Net Generation," a cohort of learners who have grown up in a digital world. This generation seeks technology-rich learning experiences that are interactive, engaging, and relevant to their lives. They are accustomed to leveraging extensive communication networks and accessing a variety of multimedia resources, which shapes their expectations of educational environments. As such, it is crucial for educational institutions to not only integrate ICT tools but also to ensure that these tools are aligned with the learning preferences and needs of today's students.

In conclusion, the integration of ICT in education is a dynamic and ongoing process that requires careful consideration of the challenges involved. By addressing these challenges, educational institutions in Algeria can enhance the quality of higher education and better prepare students for a rapidly evolving digital landscape. Embracing educational technology not only meets the demands of the Net Generation but also fosters a more inclusive and effective learning environment that can adapt to the needs of all learners.



UNIT I:AN INTRODUCTION TO BLENDED LEARNING

Course 1: Getting Started
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Course 5 Learner Roles and Teacher Roles in Blended Environments
Course 6: Digital Literacy for Blended Learning

Course 1: Getting started

Course Scope: An introduction to the general topic of e- learning "how people learn at distance" (this course is an overview of the current practices of learning in the digital age.)

➢ **Course Learning Objectives**

At the conclusion of this course, you should be able to:

- describe some of the structural changes that are affecting education in the digital age
- describe and discuss some of the key skills that are needed in the digital age
- identify and discuss some of the ways technology is leading to changes in teaching and learning
- discuss the extent to which contemporary developments
- require changes in how teachers teach and how students learn.

Guiding Thoughts to the Course

1. What is the Digital Age?
2. Do you think that education has changed in the digital age?
3. What are the characteristics of the Learners in the digital age?
4. What can be the new roles of the teacher in the digital age?

➢ **Course Content**

⊙ **Education in the Digital Age defined**

In today's tech-driven world, rapid technological advancements are transforming education. Digital tools have changed how materials are shared and redefined the roles of teachers and students, creating a more interactive learning experience. With widespread access to digital devices and the internet, online learning has gained popularity, making education more accessible and adaptable. However, existing education systems, designed for an industrial era, pose challenges for educators. The key questions are how to prepare students for the future and which teaching methods and structures need updating.

Teaching the new generations of learning within the 21st century digital era requires education to be conforming to:

1. ***Customization***: Adapting learning experiences to meet the unique needs of each student using adaptive learning tools and personalized study plans.

2. ***Availability***: Increasing educational access through online resources, which is especially helpful for remote or underserved areas.

3. ***Tech skills:*** Teaching students the necessary skills to effectively use and evaluate technology in today's society.

4. ***Involvement:*** Adding interactive and multimedia features to lessons to make them more engaging and encourage student participation.

5. ***Teamwork***: Using online tools that support collaborative learning, communication, and teamwork among students and teachers.

6. ***Insight-driven teaching***: Using data analyses to monitor student progress in real-time, helping teachers make better choices about teaching methods and support.

7. ***Future readiness:*** Aligning education with 21st-century needs to ensure students are ready for a fast-changing, tech-focused job market.

⊙ **The Digital Age Defined**

The digital age, often referred to as the 'information age', is ***"a period characterized by the rapid shift from traditional media to digital platforms and technologies for communication and information dissemination. This era has transformed how individuals access, share, and consume content, enabling instant connectivity and a global exchange of ideas***",[1].

⊙ **Characteristics of the Digital Age**

The digital age is characterized by:

⊙ **Digitization:** A process that has converted information into electronic bits, allowing computers to process data and creates new knowledge essential for "digital value creation." Sharing digital data promotes on-going knowledge growth and value opportunities. Effective digital communication depends on advanced network technologies, including wired and mobile methods since the mid-1990s. The Internet serves as a crucial global communication tool, fostering inclusivity across various political, social, and economic groups.

⊙ **Mobility:** Digital communication enables mobile data use, allowing access to digital information from almost anywhere. This mobility stems from the miniaturization of computer systems and the development of user-friendly interfaces, particularly in smartphones.

[1] https://library.fiveable.me/key-terms/apush/digital-age

⊙ **User-generated content :** The rise of user-generated content, particularly in the form of memes, has become a significant force in the digital landscape, producing an overwhelming volume of images and information that captures the attention of audience worldwide. Engagement and growth in an increasingly competitive digital world.

⊙ **The Digital Age Stages of Development**

Basically, the age of global digitization can be divided into four evolutionary stages[2].

- ***The first stage (1990 to 2000)***: The early stages included connecting fixed computers, like web servers and PCs, which led to the gradual growth of the commercial Internet.
- ***The second evolutionary stage (2000 to 2015)***: The Internet became widely accepted, mobile devices became part of everyday life, and collaborative apps gained popularity with the rise of Web 2.0.
- ***The third stage of evolution (now taking place)***:It includes the overall development of systems, the Internet of Things, and block chain technology.
- ***The fourth stage (Artificial intelligence)***: Self-learning algorithms could lead us to a perfect blend of the real and digital worlds.

The New Roles of the Teacher in the 21st Century Education

In the digital age, teachers face constant challenges, in their daily routines, with their learners. In fact, they unwittingly found themselves participating in new teaching and learning practices that swept away their traditional roles as teachers. Clearly, the needs of education in this digitized era are quite different from those of the past. The new approach to teaching is relevant to

- ***Student-Centred Classroom***

  In the 21st century classroom, students ***"need teachers who have the ability to inspire, motivate, set high expectations, and coach students to success"*** (Wormeli, 2014).

- ***Adjusting classroom pedagogy***

  The traditional model of delivery of content is no longer fitting the new generations of learners:

⊙ ***From Knowledge Givers to Facilitators of Learning***

In the past, teachers mainly lectured; today, they facilitate student-centered

[2] https://www.teamnext.de/en/blog/the-digital-age/

classrooms that promote active engagement, critical thinking, and independent exploration, fostering a passion for learning..

- ***Teachers as Technology Navigators***

  Technology is now essential in education, transforming student learning and teacher instruction. In the 21st century, teachers serve as technology guides, using digital tools to enhance teaching, create engaging experiences, and offer personalized feedback, catering to the diverse needs of tech-savvy students.

- ***Teachers as Lifelong Learners***

  In the evolving education landscape, teachers must continually update their skills through professional development, conferences, and collaboration. By embracing a growth mind set, they model the importance of lifelong learning for their students.

- ***Teachers as Collaborators and Mentors***

  The 21st century emphasizes teamwork, encouraging teachers to act as collaborators and mentors. They promote group work and discussions in an inclusive classroom, guiding students as they share ideas and prepare for the future.

- ***Teachers as Assessors of Learning***

  21st-century assessment methods have evolved to reflect changing teacher roles, moving beyond traditional exams to include formative assessments, project-based evaluations, and portfolios. This diverse approach enables teachers to identify students' strengths and challenges, facilitating targeted support and personalized instruction.

  In conclusion, the role of teachers in the 21st century has shifted from being knowledge givers to facilitators of learning

Learner Profiles in the Digital Age

The radical changes brought by the new globalization and the digital age have also made the learner profiles to change. Prensky (2001) argues:

> **Today's students have not changed incrementally from those of the past. A big discontinuity has taken place. This singularity is the arrival and rapid dissemination of digital technology in the last decades of the 20th century.**(Prensky, 2001)[3].

- **Digital Natives**

[3]Prensky, M. (2001). Digital Natives, Digital Immigrants. *on The Horizon, 9*.https://api.semanticscholar.org/CorpusID:145727934

The term digital native refers to someone who has been raised in the information age. Marc Prensky, an American author and speaker, created this term in his writings. It mainly applies to those born after 1980, who grew up during the digital age.[4].

Related terms: Millennials, Generation Z, and Generation Alpha.

Characteristics:

Individuals belonging to these age groups possess a remarkable ability to effortlessly locate, utilize, and disseminate digital information through various technological devices, including computers, smartphones, and social media platforms. Their familiarity with these tools enables them to navigate the vast landscape of online resources with ease.

21st-century skills.

The skills needed for education and in the current economy have been categorized by The'Partnership for 21st Century Skills' (2007)[5] , a joint government–corporate organization as:

- **Learning skills**

Creativity and innovation; critical thinking and problem-solving; communication and collaboration),

- **Literacy skills**

Computer Literacy, digital literacy; media literacy; and Information literacy

- **Specific skills**

(Flexibility and adaptability; initiative and self-direction; social and cross-cultural skills; productivity and accountability; leadership and responsibility).

4 Selwyn, Neil (5 July 2009). "The digital native – myth and reality". ASLIB Proceedings. 61 (4): 364–379. doi:10.1108/00012530910973776.

[5]https://www.marietta.edu/sites/default/files/documents/21st_century_skills_standards_book_2.pdf

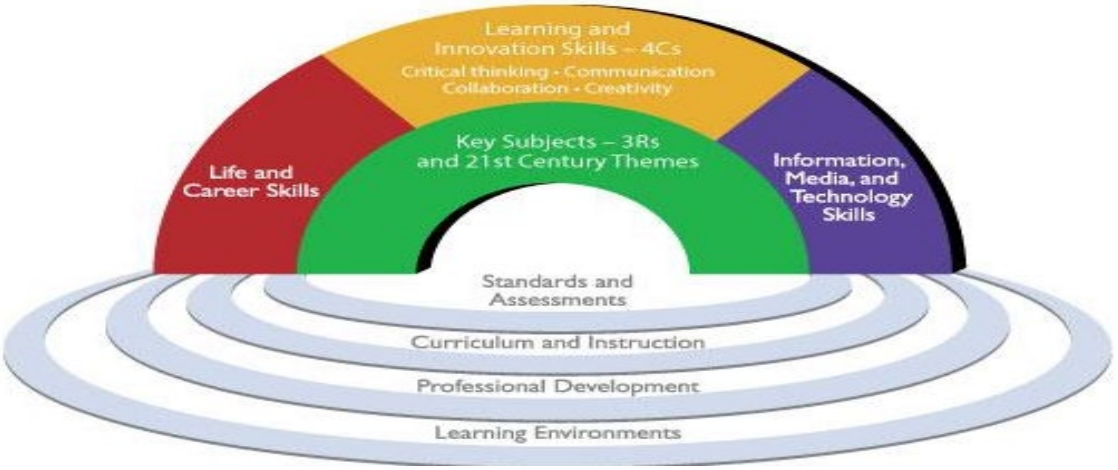

Fig1: Framework for 21st Century Learning.(http://www.21stcenturyskills.org/)

The skills required in a knowledge society include the following:

• ***Communications skills:*** In addition to the conventional communication skills of reading, speaking, and writing with clarity and coherence, it is essential to incorporate social media communication skills.

• ***Self-directed learning:*** entails assuming responsibility for identifying the necessary information and determining the appropriate sources to acquire that knowledge

• ***Collaboration and flexibility:*** Good teamwork and flexibility in handling tasks or solving issues are essential for combining collective knowledge and finding solutions.

• ***Thinking skills:*** Critical thinking, problem solving, creativity, originality, strategizing

• ***Digital skills:***most knowledge-based activities depend heavily on the use of technology.

• ***Knowledge management:*** The key skill in a knowledge-based society is knowledge management: how to find, evaluate, analyze, apply and disseminate information, within aparticular context. (Adapted from Conference Board of Canada, 2014)[6]

- **The Learning Environments in the Digital Age**

The remarkable growth in advanced communication technologies as well as the provision of electronic and digital educational facilities has revolutionized the teaching and learning strategies

The traditional view of schools as places solely for teaching has been questioned by the digital age. Schools are now seen as educational spaces for both students and teachers. Today's learners can study in many different places, including outside of school and in nature.

⊙ **Virtual Learning Environment vs. Traditional Learning Environments**

Virtual Learning Environments are gradually becoming an essential part of the approach

[6]The Conference Board of Canada (2014) Employability Skills 2000+ Ottawa ON: Conference Board of Canada

for delivering online and flexible learning. They are often built to emulate the traditional learning and teaching structures and processes of schools and universities

	Traditional Classroom Learning	E-Learning
Advantages	• Immediate feedback • Being familiar to both instructors and students • Motivating students • Cultivation of a social community	• Learner-centered and self-paced • Time and location flexibility • Cost-effective for learners • Potentially available to global audience • Unlimited access to knowledge • Archival capability for knowledge reuse and sharing
Disadvantages	• Instructor-centered • Time and location constraints • More expensive to deliver	• Lack of immediate feedback in asynchronous e-learning • Increased preparation time for the instructor • Not comfortable to some people • Potentially more frustration, anxiety, and confusion

Table 1:Virtual Learning Environment vs. Traditional Learning Environments[7]

Group Discussion: Communication Assignment

Here are some questions to reflect onas an extension of the course content (To be discussed in groups):

a) Who are 21st century learners and how are they shaped by the digital age??

b) Do digital natives learn in a different way and what are the limitations

c) Does technology change the nature of learning?

d) What are characteristics of new learning environments?

[7] https://in.pinterest.com/pin/can-elearning-replace-classroom-learning--230668812498428434/

COURSE NOTES
Course 1: Getting Started

Blended learning represents a pedagogical shift that integrates traditional classroom instruction with digital technologies. This course situates blended learning within the broader history of educational innovation, emphasizing its relevance in the 21st century.

Objectives

- Define blended learning and its role in modern pedagogy.
- Trace the evolution of instructional methods from face-to-face to hybrid formats.
- Identify digital tools and platforms that enable blended learning.
- Prepare learners for deeper exploration in subsequent courses.

Key Concepts

- **Definition:** Blended learning as a hybrid of synchronous and asynchronous modalities.
- **Historical Context:** From correspondence courses to e-learning, culminating in blended formats.
- **Digital Readiness:** Infrastructure, devices, and digital literacy as prerequisites.

Discussion Examples include universities integrating online lectures with in-person seminars, or corporations combining self-paced modules with workshops. These cases illustrate adaptability across contexts.

Challenges & Considerations Resistance to change, inequitable access to technology, and the need for institutional support.

Conclusion & Outcomes Learners gain foundational understanding of blended learning, positioning them to critically engage with advanced frameworks.

TEST YOUR UNDERSTANDING OF THE COURSE
Course 1: Getting Started

1. **What is the first step in beginning blended learning?**
    - Identifying learning goals
    - Designing advanced modules
    - Evaluating student outcomes
    - Choosing assessment tools
2. **Which skill is most important for learners at the start?**
    - Critical thinking
    - Familiarity with technology
    - Advanced research skills
    - Public speaking
3. **Why is orientation important in blended learning?**
    - It reduces teacher workload
    - It helps learners understand expectations
    - It eliminates the need for online tools
    - It replaces classroom sessions
4. **Which resource is commonly used in the 'Getting Started' phase?**
    - Printed textbooks only
    - Online tutorials and guides
    - Peer-reviewed journals
    - Recorded lectures exclusively
5. **What is the role of the instructor in the initial stage?**
    - To provide technical support and guidance
    - To grade assignments only
    - To avoid student interaction
    - To focus solely on classroom lectures

Readings

Read this article for more details about education in the digital age:

- **Education in the Digital Age: Do we need a new approach? Available at** https://observatory.tec.mx/edu-news/teaching-in-the-digital-age/

Videos

Watch these videos to conceive a clear idea about education in digital age:

- Education in Digital Age : Opportunities and Challenges At: https://www.google.com/url?sa=t&source=web&rct=j&opi=89978449&url=https://www.youtube.com/watch%3Fv%3DSeiefMFtY8&ved=2ahUKEwjZ1Z3bj82KAxWBWUEAHbQkHf0QtwJ6BAgPEAI&usg=AOvVaw2WTbvVTseljYXgnsBEPYe9

Assignment: Check your progress

- Reflect on your online and classroom discussions and readings and summarize your response in one to two paragraphs

• Additional Improvement Resources

1. Rethinking education in the digital age https://www.google.com/url?sa=t&source=web&rct=j&opi=89978449&url=https://www.europarl.europa.eu/RegData/etudes/STUD/2020/641528/EPRS_STU(2020)641528_EN.pdf&ved=2ahUKEwjFkdP5js2KAxViQkEAHZaJADU4FBAWegQIIhAB&usg=AOvVaw1zC75c272D0fwN37Q15Uh2

2. The challenge for the digital age: making learning a part of life https://www.emerald.com/insight/content/doi/10.1108/ijilt-04-2022-0079/full/html

3. Education in the digital age https://digieduhack.com/miscellaneous_images/MOOC-bite-1_Education-in-the-digital-age.pd

Course 2:Fundamentals of E-learning

At the conclusion of this course, you should be able to:

- Identify the theoretical constructs and philosophical orientations that supporte-learning in networked environments.
- Explore the scope, trends, and characteristics of e-learning.
- Go through the basic types of e-learning courses and their components.
- Discover the opportunities and affordances of e-learning.
- Describe how the internet is changing how and where learning is occurring.

Guiding Questions to the Course

1. What is eLearning?
2. What do you know about the evolution and the history of eLearning?
3. When did eLearning start?
4. Who coined the term eLearning?

1.1 E-learning Defined

E-learning is commonly referred to the use of networked information and communication technologies in teaching and learning[8]. The term includes a number of other terms to describe this mode of teaching and learning: ***online learning***, ***'web- based learning,*** '***virtual learning', and 'distributed learning'***. They all refer to educational processes that exploit information and communication technology to mediate asynchronous as well as synchronous learning and teaching activities(Naidu, 2003)..

The term e-learning comprises the letter ***"e"*** that stands for the word ***"electronic"***. Thus, e-learning incorporates all educational activities that are carried out by individuals or groups working online or offline, and synchronously or asynchronously via networked computers and other electronic devices. (Romiszowski, 2004)[9].

E-learning covers both ***Internet-based*** learning and ***computer-based*** learning that consist of components of online learning (see Figure 2).

[8]Naidu, S. (2003). *E-Learning: A Guidebook of Principles, Procedures and Practices*. New Delhi, India: Commonwealth Educational Media Centre for Asia(CEMCA), and the Commonwealth of Learning. p1
[9]Romiszowski, A. (2004). How's the e-learning baby? Factors leading to success or failure of an educational technology, Educational Technology, 44(1),5-27.

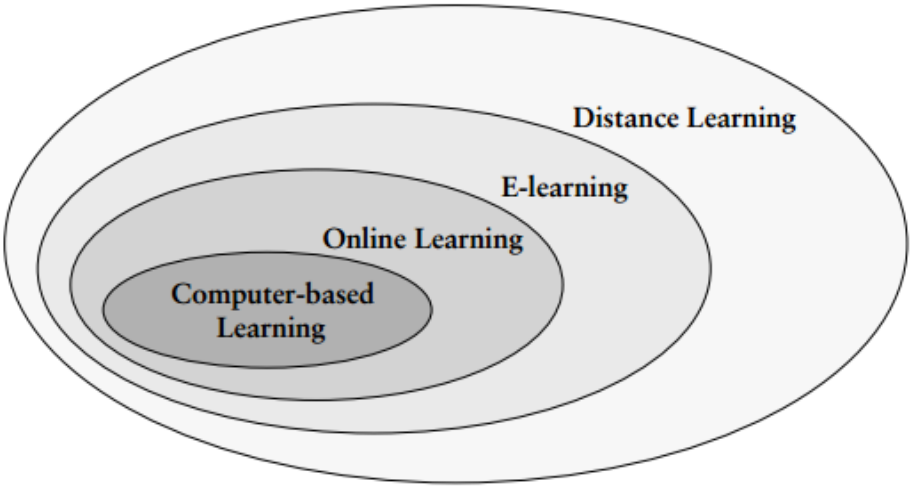

Fig2: Scopeof E-Learning (Bachman, 2000)[10].

- **Other Definitions**

- "The acquisition and use of knowledge distributed and facilitated primarily by electronic means. It currently depends on networks and computers but will likely evolve into systems consisting of a variety of channels (e.g., wireless, satellite), and technologies (e.g., cellular phones, PDAs) as they are developed and adopted. E-learning can take the form of courses as well as modules and smaller learning objects. E-learning may incorporate synchronous or asynchronous access and may be distributed geographically with varied limits of time." (Adeoye & Wentling, 2007)[11].
- "E-Learning is one such alternative where students can access course-related materials via online computer systems. It is being explored as an effective way of delivering materials to previously unreachable students with previously unavailable access and presentation methods", (Horton, 2002)[12].

1.2 Related Terms

There are many terms used to explain learning that is carried online, using the internet, from computerized electronic learning to distance education, internet learning, and online learning. E-learning includes in itself:

[10]Bachman, K. (2000). Corporate e-learning: Exploring a new frontier. Available at http://www.internettime.com/Learning/articles/hambrecht.pdf.pdf
[11]Adeoye, B. & Wentling, R. M.(2007). The relationship between national culture and the usability of an e-learning system. International Journal on E-learning, 6, 119-146.
[12]Horton, S. (2002). Web teaching. Academic computing. Hanover, NH: Dartmouth College; http://www.dartmouth.edu/~Web teach/misc/about.html

Technology-enhanced learning (TEL), computer-based instruction (CBI), computer managed instruction, computer-based training (CBT), computer-assisted instruction or computer-aided instruction (CAI), internet-based training (IBT), flexible learning, web-based training (WBT), online education, virtual education, virtual learning environments (VLE)…

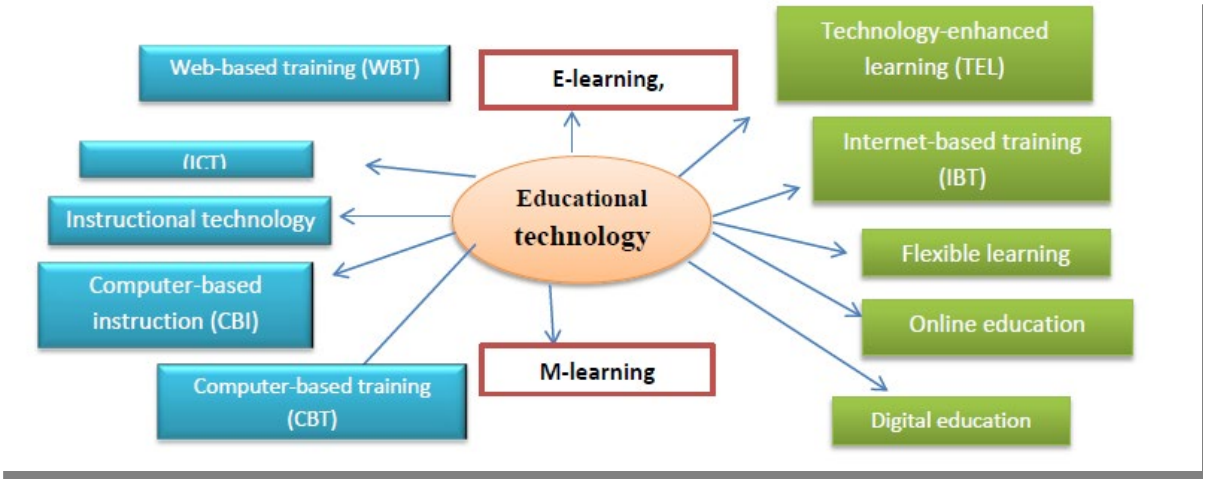

Fig3 : Educational technology related terms (Selwyn, 2011)[13]

- **Typesof e-learning**

Some educational scientists have distinguished between ***computer-based e-learning*** and ***internet-based e-learning***. This method of classification is more accurate as it singles out e-learning from online learning. Figure 5 displays the different types of e-learning:

E-learning

- **Computer Managed Learning (CML)**
- **Computer Assisted Instruction(CAI)**
- **Synchronous Online Learning**
- **Asynchronous Online Learning**
- **Adaptive E-learning**
- **Interactive Online Learning**
- **Collaborative Online Learning**

Fig4:Types of E-learning

[13]Selwyn, N. (2011). Education and Technology: Key Issues and Debates. London: Continuum International Publishing Group.

- **Computer Managed Learning (CML)**

This category of computers is exploited for the administration and evaluation of learning processes. Students are required to engage with information databases that stock various data points. Educational institutions use computer-managed learning systems forstoringand retrieving information, which assists in educational management such as lecture information, training materials, grades, curriculum information, and enrolment information among others.

- **ComputerAssistedInstruction(CAI)**

Computer Assisted Instruction (CAI) is another type of eLearning that associates computerswithtraditionalteaching.Computer-assistedtrainingmethodsuseacombinationof multimedia such as text, graphics, sound, and video in order to enhance learning.

- **SynchronousOnlineLearning**

Synchronous online learning enables groups of students to participate in a learning activity together at the same time, from any place in the world. It involves online chats and videoconferencing. This kind of online learning has been made possible with the rapid development of communication technologies. Synchronous e-learning is currently one of the most popular and quickest growing types of e-learning.

- **AsynchronousOnline Learning**

In thecaseofasynchronous onlinelearning, groups ofstudents studywithout real-time communication taking place. Asynchronous e-learning methods are often considered to be more student-centered as it gives students more flexibility.

- **Adaptive E-learning**

Adaptive e-learning makes possible for individual learners to adapt and redesign learning materials according to their own preferences. It takes into consideration a number of parameters that relate to students such as their individual goals, abilities, skills, and characteristics.

- **Interactive Online Learning**

Interactive e-learning allows a two-way communication channel involving instructor and students.Interactive e-learning is considerably more popular than linear as it allows teachers and students to communicate more freely with each other.

- **Collaborative Online Learning**

Collaborative e-learning is a modern type of learning method that enables multiple students to learn and achieve their learning objectives together as a group. Collaborative

e- learning expands on the idea that knowledge is best developed inside a group of individuals where they can interact and learn from each other.

- **Models of Learning in Higher Educational Institutions**

Conventional forms of study in higher education can be implementedin different models of learning:

- ***Traditional model:*** It uses a conventional model known from school and requiringface-to-face communication with the teacher during all training sessions.
- ***Electronic mode l:***This model involves information technologies: Internet resources, communication with the teacher on forums and web chats, watching learning materials online, computer testing,... This model is the basis for e-learning and has several varieties depending on the proportion of traditional and electronic learning in the total number of learning hours.
- ***Open model:*** What differentiates it from the models above is that teaching materials are freely available and any student can use them for self-study. Here, students are not bound to demonstrate the knowledge acquired by taking a summative assessment. Such a model is used in open universities and academic institutions that are providers of open educational resources.

- **E-learning Didactical Models (LearningTheory)**

The quality of online learning depends on the proper use of digital technologies in accordance with modern educational theories. Miller and Miller (2000) suggested that developers of Web-based instruction choose a theoretical approach, with more emphasis placed on being consistent with the chosen theory than on picking the “correct” theory.

E-learning didactical models can find efficient practice in the following learning theories:

Behaviourism

Behaviourismexamineshowstudentsbehavewhilelearning.Itfocusesonhow learnersrespondtocertainstimuli.Whenthestimuliarerepeated,learners can observe, control, and modify their individual behaviour. Learners follow instructions and are only required to reproduce basic facts and automatically perform tasks. Behaviourism does not examine the mind or cognitive processes.

In virtual learning behaviourism can be applied through step-by-step video tutorials, game-based activities, regular and constructive feedback, quizzes, gamification…

B.Cognitivism

Cognitivismfocusesontheroleofthemindandcognitiveprocessesinlearning.It explainshowthebrainisfunctioningtoformthefoundationoflearning.Studiesof cognitivism help educators understand how people learn and how to teach more effectively. In virtual learning, cognitivism can be applied through adaptive and personalized learning applications. It is important to provide content that is tailored to learners‟ cognitive abilities, such as text, images, multimedia, in which the learners can choose how lessons arepresented.

Constructivism.

Learners construct new ideas, structures, models and concepts and connect them to their prior knowledge and mental models. These instructional experiences need to be structured so that learners can easily adapt the information. The learner plays an active role and learning is goal-oriented. In virtual learning, activities focus on experience sharing, teamwork, and collaborative learning, group discussions, brainstorming, problem-based learning, and small group activities.

D.Connectivism

Connectivism[14]is the view that ***"learning can reside outside of ourselves"***(withinan organization or a database). It is focused on connecting specialized information sets, and the Connections that enable students to learn more.In virtual learning, learners are no longer individualistic, but rely more on learning through participation within communities of practice, making connections between people and technology.

[14][1]https://www.learning-theories.com/connectivism-siemens-downes

COURSE NOTES
Course 2: Fundamentals of E-learning

Introduction E-learning is the backbone of blended learning. This course explores its principles, technologies, and pedagogical strategies.

Objectives

- Define e-learning and its core principles.
- Examine delivery systems such as Learning Management Systems (LMS).
- Explore learner engagement strategies.
- Address accessibility and assessment.

Key Concepts

- **E-learning Definition:** Instruction delivered via digital platforms.
- **LMS:** Platforms like Moodle, Blackboard, and Canvas.
- **Engagement:** Interactivity, gamification, and multimedia integration.

Discussion Case studies include MOOCs (Massive Open Online Courses) and corporate e-learning initiatives.

Challenges & Considerations Digital divide, learner isolation, and quality assurance.

Conclusion & Outcomes Learners understand the foundations of e-learning, enabling them to evaluate its role within blended learning.

TEST YOUR UNDERSTANDING OF THE COURSE
Course 2: Fundamentals of E-learning

1. **E-learning primarily relies on:**
   - Digital platforms
   - Printed handouts
   - Face-to-face discussions
   - Group projects only
2. **Which of the following is NOT a feature of e-learning?**
   - Multimedia integration
   - Online assessments
   - Physical attendance
   - Flexibility in time
3. **What type of learning can e-learning support?**
   - Synchronous and asynchronous
   - Only synchronous
   - Only asynchronous
   - Neither
4. **Which tool is commonly used in e-learning?**
   - Learning Management Systems (LMS)
   - Chalkboards
   - Printed newspapers
   - Radio broadcasts
5. **A key advantage of e-learning is:**
   - Limited access to resources
   - Flexibility and scalability
   - Reduced interaction
   - Higher costs

Group Discussion: Communication Assignment

Here are some questions to reflect onas an extension of the course content (To be discussed in groups):

a) How much time do I have to spend in an online class?

b) What Internet skills would be helpful in an online class?

c) Is taking aclass online easier than a "regular" class?

d) How is online teaching different from traditional classroom teaching?

• Additional Improvement Resources

Download the paper on ***"Learning Theories"*** at:

- http://www.usask.ca/education/coursework/802papers/mergel/brenda.html

You can learn more on theories of learning on the following sites.

- http://tip.psychology.org/
- http://tip.psychology.org/theories.html

- Tips for Online Success (http://www.ion.uillinois.edu/resources/tutorials/pedagogy/tipsasp)
- Distance Learning History (http://iml.jou.ufl.edu/projects/Spring01/deClair/history.html)

Project Assignment: Classroom Presentation

1. Find out about computer-managed learning systems. One of the oldest is Plato (seehttp://www.plato.com),whilemorerecentdevelopmentshavesometimesbeencalled'integratedlearningsystems'.TheseincludetheSuccess MakerEnterprisesystemat**http://www.rm.com**and Compass Learning'sOdyssey system(**http://www.compasslearning.com/).**Compare thetypeoflearningapproachthesesystemsuse.
2. Check out the Skinner Foundation at**http://www.bfskinner.org/.** How do you feel about this approach to learning through computers? Can you identify a good purpose for programmed instruction in your learning context?

Course 3: Blended Learning Overview

- **Course Scope**: An extension to the general topic of e-learning "how people learn at distance" (this course is an overview of definition of blended learning. It explores how blended learning benefits students and examines a variety of blended learning approaches.)

- **Course Learning Objectives**

At the conclusion of this course, you should be able to:

- Learn about blended learning and how it benefits students
- Identify the range of blended learning implementation models
- Develop a plan to implement blended learning in your classroom.
- Examine methods for using online platforms to foster student communication and learning in a digital environment.
- Explore and select online resources and digital tools for blended learning.

Guiding Questions to the Course

1. What is blended learning?
2. What are its advantages?

Can you list the different types of eLearning?

- **Course Content**

Blended learning is an approach to learning that combines traditional training and online learning activities. The online part of training does not replace face-to-face training with a teacher; teachers incorporate technology to enhance the learning experience and broaden understanding of certain topics. For example, they can share a link to a video and offer students to watch it at home, email their review to a teacher, and then discuss in class

Blended learning Defined

Hybrid or blended learning refers to a combination of face-to-face learning, including but not confined to lectures, and online learning (Garrison & Kanuka, 2004).

- **Oxford Dictionary Definition of Blended Learning**: a style of education in which students learn via electronic and online media as well as traditional face-to-face teaching.

- Norm Friesen suggests that, in its current form, blended learning "designates the range of possibilities presented by combining Internet and digital media with established classroom forms that require the physical co-presence of teacher and students".

- Blended learning or **hybrid** learning, is an approach to education that combines online educational materials and opportunities for interaction online with physical place-based classroom methods[15].

Related terms

The terms ***"blended learning", "hybrid learning", "technology-mediated instruction", "web-enhanced instruction",*** and ***"mixed-mode instruction"*** are often used interchangeably in research literature.

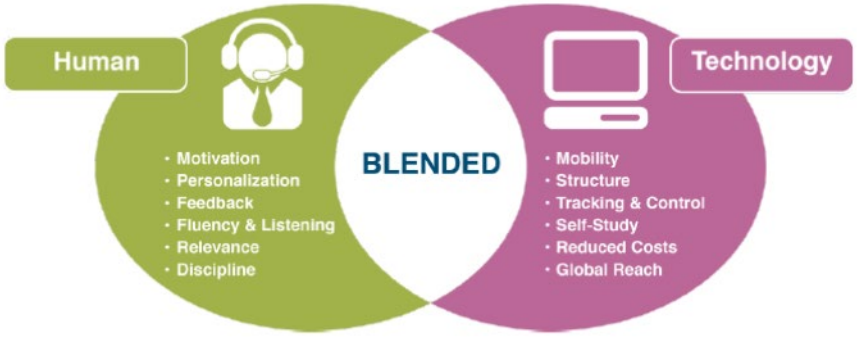

Fig 5: Blended learning[16]

Features of blended learning

Blended learning is a delivery system that is characterized by the following features

⊙ ***Combination of face-to-face and distance learning modalities***

Blended learning smartly combines in-person training with online courses. The in-person sessions enable direct interaction, teamwork, and hands-on practice, while the online parts focus on gaining theoretical knowledge and encouraging self-study.

⊙ ***Using digital tools to enrich training***

Blended learning enhances the learning experience through various tools and technologies, including LMS platforms, virtual classes, e-learning modules, videos, forums, and quizzes, making training more interactive and effective.

[15] .wikipedia.org/wiki/Blended_learning.
[16] https://www.icloudnews.net/uploadfile/20180810/20180810153303969.jpg

⊙ ***Learner-centred approach and experience***

Blended learning prioritizes the learner, offering an interactive and personalized experience that adapts to their pace and style. This active involvement enhances motivation and commitment.

⊙ ***Flexibility and modularity of the courses***

Blended learning offers flexible, modular training by combining in-person and online education, creating a tailored experience for each student. It empowers students to take control of their learning and skill development.

COURSE NOTES
Course 3: Blended Learning Overview

This course provides a comprehensive overview of blended learning models and applications.

Objectives

- Explain integration of face-to-face and online learning.
- Outline models of blended learning.
- Emphasize adaptability to diverse learner needs.

Key Concepts

- **Models:** Rotation, flex, enriched virtual, and flipped classroom.
- **Adaptability:** Tailoring approaches to learners and institutions.

Discussion Examples include flipped classrooms in secondary schools and hybrid seminars in universities.

Challenges & Considerations Balancing online and offline components, ensuring coherence, and managing workload.

Conclusion & Outcomes Learners acquire a holistic understanding of blended learning models and their practical applications.

TEST YOUR UNDERSTANDING OF THE COURSE
Course 3: Blended Learning Overview

1. **Blended learning combines:**
    - Online and face-to-face instruction
    - Only classroom lectures
    - Only online modules
    - Self-study exclusively
2. **Which is a common model of blended learning?**
    - Flipped classroom
    - Traditional lecture

- Distance-only learning
- Self-paced reading

3. **Blended learning aims to:**
   - Eliminate teacher involvement
   - Enhance flexibility and engagement
   - Reduce student responsibility
   - Focus only on technology
4. **Which element is NOT part of blended learning?**
   - Classroom interaction
   - Online resources
   - Printed-only materials
   - Digital collaboration
5. **Blended learning is best described as:**
   - A hybrid approach ✓
   - A purely digital method
   - A traditional-only method
   - A passive learning style

Group Discussion: Communication Assignment

Here are some questions to answer as an extension of the course content (To be discussed in groups):

a) In what ways can blended learning courses be considered the "best of both worlds" (i.e., face-to-face and online)?

b) What could make blended learning the "worst of both worlds?"

Additional Improvement Research

Readings

⊙ What Does Blended Learning look like:

http://hechingerreport.org/content/what-exactly-does-blended-learning-look-like-this-video-explains_13861/

⊙ The Basics of Blended Learning: at http://youtu.be/3xMqJmMcME0

video

The following YouTube video describes how blended learning combines classroom environments and face-to-face settings, with digital tools and environments

• Salman Khan Describes Future Classrooms with Blended Learning

http://www.youtube.com/v/vwyOv7PiC40%3Fversion%3D3%26amp%3Bhl%3Den_US%20

• The blended learning cycle

http://www.youtube.com/watch%3Ffeature%3Dplayer_embedded%26v%3D-apJDi7cx9o

- **Additional Improvement Resources**

1. **What is blended learning: Why it matters and how to apply it**
   https://www.learnworlds.com/blended-learning/
2. **What Is Blended Learning: Definition, Overview, Pros and Cons in 2024**
   https://research.com/education/blended-learning
3. **Guide to Blended Learning**
   https://openbooks.col.org/blendedlearning/

Course 4: Benefits and drawbacks of Blendedlearning

- **Course Scope**: An extension to the general topic of E learning "how people learn at distance" (this course is an overview of definition of blended learning. It explores how blended learning benefits students and examines a variety of blended learning approaches.)

Course Learning Objectives

At the end of this course, students will be able to:

- Identify the benefits of blended learning.
- Explore the disadvantages of blended learning.

Guiding Questions to the Course

1. What is blended learning?
2. How many blended learning models are there?
3. Who benefits the most from blended learning?
4. How does blended learning help students?

- **Course content**

Blended learning has gained popularity lately, especially in global education. It mixes in-person teaching with online classes, making learning more flexible and tailored to individual needs. This approach includes both live and self-paced learning, allowing students to progress at their own speed while still getting help from their teachers.

What are the benefits of blended learning?

Blended learning is the way of the future education Its major benefits are[17]:

- **More efficient--** Today, blended learning can help teachers to more accurately present their instructional activities, assess the students' knowledge, and help to teach concepts moreefficiently**.**
- **Makes education more accessible--** Within the traditional teaching strategies, instructional materials were exclusively available during classroom time. With new learning applications and other technological advances, they have more flexibility to access and engage knowledge fromhome**.**
- **Engage Students --** Blended learning allows students to engage the material at their

[17]https://www.trainingfolks.com/blog/the-advantages-of-a-blended-learning-approach

own pace. This helps to balance mixed-ability. Every student can practice and use new materials withease**.**

- **Engaged Teachers--** Blended learning enble students to connect with their teachers. They can connect via emailsor on message boards. This learning style promotes a number of effective means for teachers and students to interact effectively.
- **More fun** -- In a blended learninf environment, students find that learning can be fun. The new generation of learners can shape the future of education and have a positive experience withlearning**.**

Disadvantages of Blended Learning

Blended learning has its bright and dark sides. Among the disadvantages of blended Learningare[18]:

• **Challenging Technology--** One of the key issues is the Digital literacy, which can be a real challenge for teachers and learners. Not all digital resources are reliable and easy to use.

• **Overwork. ---** There is a great deal of additional work for teachers and learners involved in all stages of blended learning. They have to broaden their horizons and apply significantly more time and effort to find the right balance between online and face-to-facelearning.

• **Cognitive Load** -- With a great range of possibilities provided by the blended learning model, learners are faces with infinite educational activities and content.

• **Credibility of Sources and Plagiarism** --- Having a digital educational environment may cause learners to plagiarize from online resources. Moreover, there are a number of unreliable onlineresources.

Project Assignment

Some researchers state that blended learning can enhance students' learning outcomes, improve students' motivation, and it is an effective way for achieving learning objectives.

Read the blog : Blended Learning **at College: Advantages and** Disadvantages at https://elearningindustry.com/pros-cons-blended-learning-at-college

Make a report on the content of this article. Do you agree with the blogger?

[18]https://myelearningworld.com/6-disadvantages-of-blended-learning/

COURSE NOTES
Course 4: Benefits and Drawbacks of Blended Learning

This course critically evaluates the advantages and limitations of blended learning.

Objectives

- Identify benefits of blended learning.
- Recognize drawbacks and challenges.
- Develop critical perspectives on suitability.

Key Concepts

- **Benefits:** Flexibility, personalization, scalability, cost-effectiveness.
- **Drawbacks:** Technical issues, reduced social interaction, digital literacy requirements.

Discussion Examples include improved learner autonomy but challenges in maintaining motivation.

Challenges & Considerations Equity of access, institutional readiness, and pedagogical balance.

Conclusion & Outcomes Learners develop the ability to critically assess blended learning for different contexts.

TEST YOUR UNDERSTANDING OF THE COURSE
Course 4: Benefits and Drawbacks of Blended Learning

1. **One major benefit of blended learning is:**
    - Flexibility for learners
    - Reduced access to resources
    - Limited communication
    - Higher costs
2. **Which drawback is often associated with blended learning?**
    - Dependence on technology
    - Lack of flexibility
    - No student engagement
    - Excessive classroom time
3. **Blended learning can improve:**
    - Student motivation
    - Teacher isolation
    - Resource scarcity
    - Passive learning
4. **Which group may face challenges in blended learning?**
    - Learners without reliable internet
    - Students with strong tech skills
    - Teachers with digital training
    - Institutions with LMS access

5. **A balanced blended learning program should:**
    - Maximize both online and offline strengths
    - Eliminate classroom sessions
    - Focus only on technology
    - Avoid assessments

Group discussion

Here are some questions to reflect on as an extension of the course content

1. What are the pros and cons of blended learning?
2. What is blended learning in higher education?
3. How does blended learning affect educational development of students?

Additional Improvement Resources

Blended Learning Essentials - New Approaches

https://www.futurelearn.com/courses/blended-learning-getting-started

Advantages and Disadvantages of Blended Learning.

https://prezi.com/rnmez97bqy1-/advantages-and-disadvantages-of-blended-learning/ The Downsides of Implementing a Blended Classroom

https://study.com/blog/the-downsides-of-implementing-a-blended-classroom.html

Practical learning

The following web links give you more insights about Flipped classroom model:

Flipped classroom definition

1. https://www.easy-lms.com/knowledge-center/about-flipped-classroom/what-are-flipped-classrooms/item10609

Flipped Classroom Advantages and Disadvantages

2. https://www.easy-lms.com/knowledge-center/about-flipped-classroom/flipped-classroom-advantages-and-disadvantages/item10610

Project Assignment

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Make a report on the content of this article. Do you agree with the blogger?

Course 5: Learner Roles and Teacher Roles in Blended Environments

➢ Course Scope

This course explores how the roles of both learners and teachers evolve in blended learning environments. Unlike traditional classrooms where teachers dominate instruction and learners receive knowledge passively, blended learning promotes shared responsibility, autonomy, collaboration, and digital engagement. The course examines how learners become active participants and how teachers transform into facilitators, designers, and mentors in technology-supported education.

➢ Course Learning Objectives

At the conclusion of this course, you should be able to:

- Identify the changing roles of learners and teachers in blended learning contexts.
- Analyze learner autonomy and responsibility in digital environments.
- Explain the pedagogical shift from teacher-centered to learner-centered instruction.
- Apply strategies that promote engagement, collaboration, and self-regulated learning.
- Evaluate effective teacher practices in hybrid and online classrooms.

Guiding Questions to the Course

1. How does blended learning change the role of the learner?
2. What new responsibilities do teachers assume in hybrid environments?
3. How can interaction and autonomy be balanced in blended classes?
4. What challenges affect teachers and learners in digital settings?

➢ Course Content

Blended learning combines classroom teaching with online learning using digital tools and platforms. This type of learning changes not only how lessons are delivered, but also how teachers and students work together. In traditional classrooms, teachers usually explain the lesson and students listen. In blended environments, learning becomes more active and flexible.

Students in blended learning are expected to participate more in their learning. They use online resources, join discussions, work with classmates, organize their time, and take responsibility for completing tasks. This helps them become more independent and confident learners.Teachers, on the other hand, are no longer only presenters of information. They guide

students, organize activities, support learning, and use technology to make lessons more interactive. Teachers help students understand content, communicate with others, and improve their skills both in class and online.

Knowing these new roles helps both teachers and students succeed in blended learning. When learners are active and teachers are supportive, blended learning becomes more effective, motivating, and enjoyable.

Learner Roles in Blended Learning

In blended environments, learners are no longer passive recipients of information. They are expected to take responsibility for managing their learning process. This includes organizing time, accessing digital content, participating in online discussions, collaborating with peers, and reflecting on performance. Learners become researchers, problem solvers, and co-constructors of knowledge.

Key learner roles include:

- Self-directed learner
- Active participant
- Collaborator
- Digital communicator
- Reflective thinker

Blended learning promotes learner autonomy, motivation, and engagement by allowing students to control the pace, place, and mode of learning.

Teacher Roles in Blended Learning

The teacher's role shifts from information transmitter to learning facilitator. Teachers design learning experiences, guide interaction, provide feedback, and support learners' cognitive and emotional development. They must also manage technology and ensure accessibility.

Key teacher roles include:

- Instructional designer
- Facilitator and mentor
- Online moderator
- Assessor and feedback provider
- Technological guide

Teachers create meaningful activities, scaffold learning, encourage participation, and ensure alignment between objectives, tools, and assessment.

Interaction and Collaboration

Blended learning depends on interaction between learners, content, and teachers. Teachers foster communication through discussion forums, group projects, synchronous meetings, and peer feedback. Learners collaborate to solve problems, share ideas, and negotiate meaning across face-to-face and online spaces.

Types of interaction include: ***Learner–content, Learner–teacher Learner–learner***

Effective interaction improves engagement, critical thinking, and social presence.

Learner Autonomy and Self-Regulation

Blended learning supports autonomy by giving learners control over resources and activities. However, autonomy requires self-regulation: planning, monitoring, and evaluating one's own learning. Teachers help learners develop these skills through guidance, reflection tasks, and formative assessment.

Challenges in Role Transformation

Both teachers and learners face challenges in blended contexts, such as:

- ***Digital literacy gaps***
- ***Time management issues***
- ***Motivation and participation problems***
- ***Technological barriers***
- ***Resistance to new*** roles

Successful blended learning requires training, institutional support, and continuous evaluation of practices.

COURSE NOTES

Key Concepts

- **Learner Autonomy:** Take responsibility for your own learning.
- **Teacher Facilitation:** Teachers guide and support, not just explain.
- **Interaction:** Learning happens through communication with content, teachers, and peers.
- **Self-Regulated Learning:** Plan, monitor, and reflect on your learning.
- **Engagement:** Participate actively in both online and face-to-face activities.

Best Practices:

- Be active and involved.
- Follow clear instructions and guidance.
- Balance online and classroom learning.
- Use feedback to improve continuously.

- Develop your digital skills as a learner, and teachers should support technology use.

TEST YOUR UNDERSTANDING OF THE COURSE

1. In blended learning, the learner is mainly:
   o A passive listener
   o An active participant ✓
   o A content distributor
   o A classroom observer
2. The teacher's primary role in blended learning is:
   o Information transmitter
   o Discipline controller
   o Learning facilitator
   o Content memorizer
3. Learner autonomy refers to:
   o Ignoring the teacher
   o Managing one's own learning process
   o Studying only online
   o Avoiding collaboration
4. Which interaction type supports peer collaboration?
   o Learner–content
   o Learner–teacher
   o Learner–learner
   o Teacher–technology
5. One challenge in blended role transformation is:
   o Unlimited motivation
   o Perfect technology
   o Digital literacy gaps
   o No need for training

➢ Discussion: Classroom Assignment

Topic: Roles in a Blended Classroom

Students discuss:

1. How does blended learning change your responsibility as a learner?
2. What support do you expect from teachers in hybrid classes?
3. Which role is more challenging: learner autonomy or teacher facilitation?
4. How can interaction be improved in blended environments?

- **Project Assignment**

Topic: Redesigning Classroom Roles

Students prepare a short report or presentation including:

1. Description of traditional learner and teacher roles.
2. Analysis of new roles in blended learning.
3. Examples of activities that promote autonomy and collaboration.
4. Recommendations for successful role transformation.

- **Additional Improvement Resources**

• Anderson, T. (Ed.). (2008). *The Theory and Practice of Online Learning*.

• Garrison & Vaughan (2008). *Blended Learning in Higher Education*.

• Zimmerman (2002). Self-regulated learning and academic achievement.

• https://www.educause.edu

• https://www.edutopia.org

Course 6: Digital Literacy for Blended Learning

➢ Course Scope

This course builds on the foundations of blended learning by focusing on **digital literacy skills** required for effective participation in blended learning environments. It introduces learners to essential digital tools, online safety, information evaluation, and responsible technology use to support successful learning in both online and face-to-face contexts.

➢ Course Learning Objectives

At the end of this course, students will be able to:

- Define digital literacy in the context of blended learning
- Identify key digital skills required for blended learning success
- Use digital tools effectively for learning and communication
- Evaluate online information and digital resources critically
- Apply ethical and safe practices in digital learning environments

Guiding Questions to the Course

1. What is digital literacy?
2. Why is digital literacy important in blended learning?
3. What digital skills do students and teachers need?
4. How does digital literacy support effective learning outcomes?

➢ Course Content

Digital literacy is a core requirement for blended learning environments. It refers to the ability to use digital technologies confidently, responsibly, and critically. In blended learning, students interact with learning management systems, online resources, communication platforms, and digital assessments. Without adequate digital literacy, learners may struggle to engage fully and effectively.

Digital literacy includes technical skills, information evaluation, communication, collaboration, and digital ethics. Developing these skills empowers learners to become independent, motivated, and responsible participants in blended learning.

What are the Key Components of Digital Literacy?

The Key Components of Digital Literacy are:

- ***Technical Skills*** – Ability to use devices, software, and learning platforms such as LMS, email, and video conferencing tools.

  • ***Information Literacy –*** Finding, evaluating, and using credible online information.

  • ***Communication & Collaboration –*** Using digital tools to communicate clearly and work with others online.

  • ***Digital Safety*** – Understanding online privacy, security, and responsible behavior.

  • ***Ethical Use of Technology*** – Avoiding plagiarism, respecting copyright, and using digital content responsibly.

Benefits of Digital Literacy for Blended Learning

Digital literacy plays a crucial role in enhancing blended learning. Its major benefits include:

• ***Improved Learning Independence*** – Students can manage their learning tasks, schedules, and resources more effectively.

• ***Better Engagement*** – Digitally literate learners interact confidently with online materials and activities.

• ***Enhanced Communication*** – Learners can collaborate with peers and instructors through digital platforms.

• ***Critical Thinking Development*** – Students learn to analyze and evaluate online information critically.

• **Preparation for the Digital World** – Digital literacy equips learners with skills needed for academic and professional success.

Challenges of Digital Literacy in Blended Learning

Despite its benefits, digital literacy also presents challenges:

• ***Digital Divide*** – Not all learners have equal access to devices or reliable internet.

• ***Low Digital Skills*** – Some students and teachers lack basic technological competencies.

• ***Information*** **Overload** – Learners may struggle to filter and evaluate large amounts of online content.

• ***Online Safety Risks*** – Cybersecurity threats, privacy concerns, and misuse of digital tools.

• ***Plagiarism and Copyright Issues*** – Misunderstanding ethical use of online resources.

Project Assignment

Some educators argue that digital literacy is essential for the success of blended learning environments.

⊙ Task: Watch the video **"*Why Is Digital Literacy Crucial For Blended Learning?*" at https://www.bing.com/videos/riverview/relatedvideo?q=Why+Digital+Literacy+Matters+in+Blended+Learning&&mid=6B4E2CF1B563B2F4EAC16B4E2CF1B563B2F4EAC1&FORM=VCGVRP**

-Write a short report summarizing the main ideas.

-Do you agree that digital literacy is a key factor in blended learning success? Why or why not?

COURSE NOTES
Course 5: Digital Literacy for Blended Learning

- **Digital literacy** is the ability to use digital tools effectively, safely, and responsibly in blended learning environments.
- **Blended learning** combines face-to-face teaching with online learning activities.
- **Why Digital Literacy Is Important**
    - Helps students access online materials
    - Supports communication with teachers and peers
    - Encourages independent learning
    - Improves engagement and learning outcomes
- **Key Digital Literacy Skills**
    - Using digital devices and learning platforms
    - Finding and evaluating reliable online information
    - Communicating and collaborating online
    - Practicing online safety and digital ethics

Benefits	Challenges
• Greater learner independence	• Limited access to technology or internet
• Better motivation and participation	• Lack of digital skills
• Improved collaboration	• Information overload
• Preparation for academic and work life	• Online safety and plagiarism issues

Responsible Digital Behaviour

Students should:

- Use strong passwords and protect personal data
- Verify information before using or sharing it
- Respect copyright and cite sources correctly
- Communicate respectfully in online environments
- Follow institutional digital policies

Summary

Digital literacy is a key requirement for blended learning success. It empowers students to learn independently, engage actively, and use technology responsibly. Developing digital literacy skills helps students overcome challenges and achieve better learning outcomes in blended learning environments.

TEST YOUR UNDERSTANDING OF THE COURSE
Course 5: Digital Literacy for Blended Learning

1. Digital literacy mainly refers to:
   o Effective use of digital tools and information
   o Avoiding technology
   o Learning only in classrooms
   o Limiting online interaction
2. One benefit of digital literacy in blended learning is:
   o Improved learner independence
   o Reduced access to content
   o Increased confusion
   o Passive learning
3. A major challenge of digital literacy is:
   o Digital divide
   o High motivation
   o Strong collaboration
   o Easy access to technology
4. Which skill is part of digital literacy?
   o Evaluating online information
   o Memorizing content only
   o Avoiding collaboration
   o Ignoring digital ethics
5. Responsible digital behavior includes:
   o Respecting copyright and avoiding plagiarism
   o Sharing passwords
   o Using unreliable sources
   o Ignoring online safety

Group Discussion

Reflect on the following questions:

1. Why is digital literacy important in blended learning?
2. What digital skills do students need most today?
3. How can institutions improve digital literacy among learners?

Additional Improvement Resources

- Digital Literacy Skills for Online Learning
  https://www.futurelearn.com
- Information Literacy in the Digital Age
  https://www.edutopia.org
- Teaching Digital Citizenship
  https://www.commonsense.org/education

2

UNIT II: BLENDED LEARNINGIMPLEMENTATION

Course 7: Models of Blended Learning

Course 8: Blended Learning Framework

Course 9: Tools and Resources for Blended Learning

Course **10: Designing a Blended Course**

Course 11: Online Interaction and Engagement Strategies

Course 12: Integrating Multimedia and AI Tools

Course 7: Models of Blended Learning

- **Course Scope**: An extension to the general topic of e-learning "how people learn at distance" (this course is an overview of definition of blended learning. It explores how blended learning benefits students and examines a variety of blended learning approaches.)

- **Course Learning Objectives**

At the conclusion of this course, you should be able to:

- Learn about blended learning and how it benefits students.
- Identify the range of blended learning implementation models
- Examine methods for using online platforms to foster communication and learning in a digital environment.
- Explore and select online resources and digital tools for blended learning.

Guiding Questions to the Course

1. What is blended learning?
2. How many blended learning models are there?

- **Course Content**

Blended learning combines online and traditional classroom methods for students and teachers. Students can participate in online courses while also attending in-person classes. They have the flexibility to choose when and where to use lab time.

- **Models of Blended Learning**

There is a variety of of blended learning types. Each type presents unique strategies and benefits, offering ways to improve learning.

1. Face-to-face driver model

This model provides an experience close to a traditional classroom. Students participate in a live webinar or meeting (such as Zoom or Google Meet), get real-time teaching, and are assigned homework or tasks to finish before the next session.

✦ ***Benefits and drawbacks of the face-to-face driver learning model***

The *face-to-face driver learning model* takes more time and effort from instructors compared to other models. However, it can be very helpful for learners who need extra motivation or are just

starting in their careers. Since this model resembles a traditional classroom, it is also a suitable choice for those who may not be very skilled with technology.

2. Flipped model

The flipped model is similar to the *face-to-face driver* model, except that learners are provided with learning materials and resources (often distributed via an LMS) *before* each virtual classroom experience.

✦ ***Benefits and drawbacks of the flipped learning model***

The flipped model is another choice for a learning group that would gain from active, live teaching, which means it needs more time and effort from the instructor. Supporters of the flipped model value it because it can boost students' readiness and engagement.

3. Enriched virtual model

This model allows learners to set the pace of their learning, and complete most of their coursework virtually. Learners are given the opportunity to attend webinars with the instructor at their convenience, but ultimately it is the learner that determines how much of their learning includes live interaction with the instructor.

✦ ***Benefits and drawbacks of the enriched virtual learning model***

The enriched virtual learning model can be great for self-motivated learners that appreciate autonomous learning. In having the option to interface with the instructor, they enjoy the balance between feeling supported, without feeling hindered by mandatory live instruction at a set date and time.

4. Flex model

The *flex learning model* offers learners the opportunity to direct their learning according to what works best for them. They are able to jump between synchronous and asynchronous instruction, individual assignments, and even group learning. Instructors are available to answer questions and provide feedback, but it is up to each participant how and when they utilize instructor resources.

✦ ***Benefits and drawbacks of the flex learning model***

The flex learning model works well for learners who are self-driven and willing to explore how various teaching methods affect their education. However, a drawback is that teachers need to be available, even if they are not always actively teaching. Another issue is that students who lack motivation might choose the easiest or most familiar way of learning instead of taking advantage of the personalized options this model provides.

5. Rotation Model

The rotation-learning model is quite varied. Students are split into smaller groups and rotate through different types of learning. They experience individual instruction, usually through a pre-recorded webinar, live group instruction via Zoom or another platform, and self-guided tasks. While the flex learning model lets students choose their preferred learning methods, the rotation model provides a similar flexibility, but it is guided by the teacher.

✦ ***Benefits and drawbacks of the rotation learning model***

The rotation model works well for learners who like various ways of learning. It offers a mix of self-directed and teacher-led instruction, allowing participants to engage with their preferred style. However, this model can be challenging due to the need for strong organization. As a result, many teachers depend on a learning management system to create a clear and relevant learning experience.

6. Online Driver Model

Students complete an entire course through an online platform with possible teacher check-ins. All curriculum and teaching is delivered via a digital platform and face-to-face meetings are scheduled or made available if necessary. Although learners can reach out to trainers for help when needed, this is not necessary to finish the training.

✦ ***Benefits and drawbacks of the online driver learning model***

At the same time as the enriched virtual learning model can be effective for experienced, self-motivated learners, the online driver learning model takes this level of autonomy and turns it to the maximum level. Because of this, the online driver learning model requires the least amount of instructor time and energy. Unmotivated or tentative learners, however, might find themselves confused or simply going through the motions without achieving a deep understanding of the course material.

7. À la Carte Model

This blended learning empowers the learners to select their convenient time and modality either in-person or online offering flexibility, particularly beneficial for those with work or family commitments. This approach enables learners to learn and complete assignments at their convenience.

8. Gamification Model

The gamification model incorporates game-like features into non-gaming environments to enhance learning. It employs strategies such as rewards, competition, and mastery through

leaderboards. These components serve to inspire learners to actively participate in the content, find enjoyment in the learning experience, and effectively retain information.

COURSE NOTES
Course 5: Models of Blended Learning

Key Concept

- **Definition:** Different approaches to combining online and face-to-face instruction.
- **Purpose:** To adapt teaching strategies to learner needs, resources, and institutional goals.

Major Models

- **Rotation Model**
  - Learners rotate between online learning and classroom activities.
  - Subtypes: Station Rotation, Lab Rotation, Flipped Classroom.
- **Flex Model**
  - Online learning is the backbone; teachers provide support as needed.
- **A La Carte Model**
  - Students take some courses online and others face-to-face.
- **Enriched Virtual Model**
  - Combines required face-to-face sessions with significant online learning.

Advantages

- Flexibility in pacing and location.
- Personalized learning opportunities.
- Efficient use of resources.

Challenges

- Requires strong planning and technology access.
- Teacher training and student readiness are critica

TEST YOUR UNDERSTANDING OF THE COURSE
Course 5: Models of Blended Learning

1. **Which blended learning model involves students rotating between online and classroom activities?**
   - Station Rotation
   - Flex Model
   - A La Carte
   - Enriched Virtual
2. **In the Flex Model, what is the primary mode of instruction?**
   - Online learning

- Face-to-face lectures
- Group projects only
- Printed materials.

3. **Which model allows students to take some courses online and others in person?**
   - A La Carte
   - Rotation
   - Flex
   - Flipped Classroom
4. **The Enriched Virtual Model requires:**
   - Occasional face-to-face sessions
   - No classroom interaction
   - Only online modules
   - Printed textbooks .
5. **Which blended learning model is most similar to traditional distance learning but with added classroom support?**
   - Enriched Virtual
   - Flex
   - Rotation
   - A La Carte

- **Group Discussion: Communication Assignment**

Here are some questions to answer as an extension of the course content (To be discussed in groups):

a) Which model can suit your learning style?

b) Choose two models and summarize in your own words.

Additional Improvement Resources

Group Discussion: Communication Assignment

Here are some questions to answer as an extension of the course content (To be discussed in groups):

a) Which model can suit your learning style?

b) Choose two models and summarize in your own words.

Readings

- Blended Learning Models: https://www.blendedlearning.org/models/The Basics of Blended Learning: at http://youtu.be/3xMqJmMcME0

Video

The following YouTube video describes how blended learning combines classroom environments and face-to-face settings, with digital tools and environments

- Blended Learning Models Overview https://www.youtube.com/watch?v=r_4_3Jtofhg
- Challenges of Blended Learning Models

https://study.com/academy/lesson/video/challenges-of-blended-learning-models.html

• The blended learning cycle

Practical learning

- The following YouTube video presents the different challenges of blended learning models

- https://study.com/academy/lesson/challenges-of-blended-learning-models.htmlMake your own opinion on thesubject.

- Watch the video about the models of blended learning at: https://www.youtube.com/watch?v=woN80GiYsEM
- Make a report on the content of this talk

http://www.youtube.com/watch%3Ffeature%3Dplayer_embedded%26v%3D-apJDi7cx9o

Additional Improvement Resources

- **Blended Learning Definitions**
- https://www.christenseninstitute.org/blended-learning-definitions-and-models/**Understanding different blended learning models**https://www.raiseyourhandtexas.org/blended-learning/understanding-different-models-blended-learning
- **Blended Learning Models**
- https://elearningindustry.com/6-blended-learning-models-blended-learning-successful-students
- **Hybrid Learning vs Blended Learning: What's the Difference?**
- https://claned.com/hybrid-learning-vs-blended-learning/**What Is Blended Learnin**
- **Guide to Blended Learning**
    a. https://openbooks.col.org/blendedlearning/

2. **Blended Learning -European Commission**

https://ec.europa.eu/programmes/erasmus-plus/project-result-content/b0164a58-6dc7-4118-807e-2099a6dfe727/O2-A1-P1-UPB-GET-UP-Module%206-Neu.pdf

Course 8: Blended Learning Framework

- **Course Scope**: An extension to the general topic of E learning "how people learn at distance" (this course is an overview of a variety of blended learning approaches.)

Course Learning Objectives

At the end of this course, students will be able to:

- Identify the blended learning implementation plan.
- Explore the disadvantages of blended learning.

Guiding Questions to the Course

1. What is blended learning implementation plan?
2. What is the implementation of blended and online learning?
3. What is a challenge for implementing a blended learning environment?

- **Course content**

Starting blended learning is more than just changing instructional methodology; it is a strategic and transformative process. We will look into blended learning implementation and discuss ways to use its benefits for better engagement, personalization, and, most importantly, improved learning results.

Implementing blended learning requires thoughtful planning and careful execution.

How to Implement Blended Learning

Blended learning is becoming a new way to teach as education changes. It combines the benefits of in-person classes with the flexibility of online tools, making it a lively and effective way to learn.In this part, we will explore important steps and strategies for applying blended learning.

The main steps to implement successfully a blended learning model are as follows:

1. **Designing a Blended Strategy**: Implementing a blended learning model involves a strategic change that requires, in turn, to identify the best candidates and create a clear plan to combine in-person and online elements.

2. Take it gradually. Setting clear objectives and systematically implementing the plan allows learning quickly from any mistakes. In addition, small successes bring knowledge and motivation.

3. **Fostering a Collaborative Learning Environment:** Blended learning models provide an excellent opportunity to foster collaboration among students. Incorporate online forums, discussion boards, and collaborative projects to encourage interaction and shared learning experiences.

4. Design Engaging Online Content: The effectiveness of blended learning heavily relies on the quality of online content. Designing interactive and engaging courses can enhance the learning experience,ensuring that content is accessible and accommodates various learning styles**.**

5. Selecting the Right Tools: The materials for online teaching are different from those for face-to-face teaching. Attractive interactive content enhances the learning experience.

6. Adapting the technology to the needs. It is necessary to consider how technology can help teachers and students achieve the best possible learning.

7. Measuring and Monitoring Progress: Implement metrics and analytics tools to monitor the progress and performance of blended learning initiatives is the best way to know whether the objectives have been achieved or not..

8. Flexibility and Adaptation: Embracing the inherent flexibility of blended learning and making continuous improvement and agility are essential to optimizing the blended learning experience**.**

Blended Learning Structures in Education

O'Connell (2016)[19] describes seven sample configurations of blended learning activities. These examples of blended learning are drawn from higher education but can be shaped to fit any teaching and learning situation..

- **Blended face-to-face class:** The "face-to-face driver model" combines in-person and online teaching. Students are required to attend classes physically, but online activities improve the classroom experience. Homework, like readings and quizzes, is done at home, freeing up class time for deeper learning activities like discussions and group projects, which encourage valuable interactions between students and teachers.
- **The flipped classroom:** The flipped classroom changes the usual way of teaching. Instead of listening to a lecture in class and doing homework at home, students watch a short video

[19]O'Connell, A. (2016). Seven blended learning models used today in higher ed. at http://acrobati.com/seven-blended-learning-models-used-today-in-higher-ed/

lecture online. Then, they come to class to work on group projects, activities, or other tasks. This model is a type of blended learning that combines in-person and online education.

- **The rotation model:** In this model, students in a course switch between different learning methods, including online learning. There are several sub-models: station rotation, lab rotation, and individual rotation. For instance, station rotation has students move between different stations in the classroom as directed by the teacher. In the individual rotation model, each student follows a personalized schedule to rotate through different learning methods.
- **The self-blend model:** In this model, students are enrolled in a school and take online courses alongside their regular in-person classes. They have the freedom to select which courses to take online and which to attend in person, without guidance from a faculty member.
- **The blended MOOC:** The blended MOOC combines online learning with face-to-face classes. Students study MOOC content, which may come from various sources, before attending class. In class, they engage in discussions and activities related to the material.

- **Flexible-mode courses:** Flexible-mode courses provide instruction in various formats, both in-person and online, allowing students to select their preferred way to participate.

Common Challenges in Blended Learning implementation

The implementation of the Blended learning environment in any Institution is faced with some of challenges that could limit the effective application of this delivery system

- ***Ensuring Learner Engagement and Motivation***

  Maintaining motivation in a blended learning environment requires interactive content, gamification, peer collaboration, and consistent feedback mechanisms.

- ***Ensuring Quality***

It is important to keep content and instructional design consistent across different learning formats. This standard must also be upheld in blended learning.

- ***Lack of Resources***

Adequate resources, including technology, infrastructure, funding, and qualified trainers, are essential for effective blended learning. Shortcomings in any of these aspects can hinder advancement.

⊙ ***Technical Challenges***

Technical problems can make learning difficult. Issues like poor internet connections, platform compatibility, and students not being tech-savvy can get in the way.

⊙ ***Aligning Online and Offline Content***

Creating a smooth learning experience needs a good mix of online and offline content. Balancing these two formats can often be a big challenge.

Strategies for Effective Blended Learning Implementing

Here are methods to use blended learning in corporate training to improve learning performance and involvement.

➢ **Focus on learning goals**

A frequent error in blended learning is putting technology before performance goals and learning objectives. Technology helps achieve these goals smoothly, improving the training experience instead of just highlighting new tools.

➢ **Setting goals and expectations in advance**

Defining learning technologies and their goals by explaining how these technologies improve learners' performance.

➢ **Creating a flexible implementation strategy**

Effective blended learning strategies adjust to the needs of the learners. They include feedback from learners and use testing tools before starting, ensuring ongoing improvement.

➢ **Developing effective online assessments**

Assessments measure how well information is understood and what support is needed. Interactive tools, such as multiple-choice quizzes and simulations, help ensure that learners gain the skills they need.

➢ **Researchinglearners'needs and preferences**

Priority is set for the needs and preferences of learners while also considering structural objectives.

➢ **Cultivating a blended learning community**

Encouraging a teamwork-focused blended learning environment that enhances technology-based drill. Setting up online platforms where learners can ask questions, connect with classmates or teachers, and create a social media plan for sharing updates and gathering feedback. This helps to create a fostering learning community.

➢ **Offering online support resources**

Blended learning helps employees by giving them support when they need it, offering clear

guidance and policy details. Provide resources such as manuals, interactive presentations, and simulations that can be accessed on mobile devices or work computers. Set up a website with tool instructions and extra resources to enhance employees' skills and knowledge.

COURSE NOTES
Course 6: Blended Learning Framework

Introduction This course introduces structured frameworks for designing and implementing blended learning programs.

Objectives

- Present components of a blended learning framework.
- Align frameworks with institutional goals.
- Provide guidelines for effective implementation.

Key Concepts

- **Framework Components:** Objectives, content, delivery methods, assessment, feedback.
- **Alignment:** Ensuring coherence with learner outcomes.

Discussion Examples include curriculum design in higher education and corporate training frameworks.

Challenges & Considerations Sustainability, scalability, and continuous improvement.

Conclusion & Outcomes Learners acquire tools and frameworks to design, implement, and evaluate blended learning programs effectively.

- **Instructional Strategies**
  - Mix of lectures, discussions, online modules, and collaborative projects.
- **Technology Integration**
  - LMS, video conferencing, digital assessments.
- **Assessment Methods**
  - Continuous, varied, and aligned with objectives.
- **Support Systems**
  - Teacher facilitation, peer collaboration, technical support.

Implementation Steps

1. Identify learning goals.
2. Choose appropriate blended model.
3. Select tools and resources.
4. Design assessments.
5. Provide training and support.

TEST YOUR UNDERSTANDING OF THE COURSE
Course 7: Blended Learning Framework

1. **The blended learning framework emphasizes:**
   - Integration of online and offline strategies
   - Exclusive classroom lectures
   - Teacher-free learning
   - Self-study only
2. **Which component is central to the framework?**
   - Learning objectives
   - Entertainment content
   - Social media posts
   - Printed-only materials
3. **Assessment in blended learning should be:**
   - Continuous and varied
   - Limited to final exams
   - Avoided altogether
   - Based only on attendance
4. **Which role does technology play in the framework?**
   - Supporting delivery and interaction
   - Replacing teachers entirely
   - Limiting student access
   - Reducing collaboration
5. **A successful blended learning framework requires:**
   - Clear planning and alignment with goals ✓
   - Random resource selection
   - No student feedback
   - Exclusive reliance on textbooks
   -
6. **Group Discussion: Communication Assignment**

Here are some questions to answer as an extension of the course content (To be discussed in groups):

a) What tools are you using that can suit your learning style?

b) Choose two main interactive tools and describe them in your own words.

Additional Improvement Resources

Group Discussion: Communication Assignment

Here are some questions to answer as an extension of the course content (To be discussed in groups):

a) What tools are you using that can suit your learning style?

b) Choose two main interactive tools and describe them in your own words.

Readings

Top Blended Learning & Online Training Tools for 2024

https://time.ly/blog/top-blended-learning-online-training-tools/

Video

The following YouTube video describes how blended learning combines classroom environments and face-to-face settings, with digital tools and environments

- 7 Excellent Free Blended Learning Resources

https://www.youtube.com/watch?v=shPnBD9Qwjk

- Blended Learning: Making it Work in Your Classroom

  https://www.youtube.com/watch?v=auzwH1mK2TY&pp=ygUPI2JsZW5kZWRsZWFyb

Practical learning

The following YouTube video presents **Blended Learning in the classroom with Cambridge**

- https://www.youtube.com/watch?v=5OIRpu7GKwg

Make your own opinion on thesubject.

- Watch the video about Online Training Day 4: Technology Tools and Resources in Blended Learning at:

  https://www.youtube.com/watch?v=aYKXDm04rek
- Make a report on the content of this Training Day

Course 9: Blended Learning Tools and Resources

- **Course Scope**: An extension of the concept of e-learning "how people learn at distance": This course explores various e-learning tools and applications.
- **Course Learning Objectives:**

  At the conclusion of this course, you should be able to:

- Identify and classify different technologies, tools, and applications.
- Compare, contrast, an devaluate different technologies, tools, and applications.
- Choose appropriate technologies, tools, and applications to most effectively support instruction and achieve learning outcomes.

Guiding Questions to the Course

1. What are some e learning tools that you know?
2. How is e learning made interactive?
3. How do you evaluate e learning tools?

- **Course Content**

E-learning Tools

E-learning occurs in many contexts. It uses many different tools, alone or in combination. Electronic tools for e-learning can range from printed materials such as textbooks and handouts to simple audio material to the latest computer interactive technologies such as the World Wide Web, email, and video technologies. Most of the Web sites include tutorials and other support for new users.

In addition to an Internet connection, a Web browser (e.g., Google, Internet Explorer, Firefox, Safari) with add-ons (i.e., mini-applications or plug-ins) will help students listen to audio, see video, and compose and send email. Other tools that can be used during hybrid and online classes include the following.

Learning environments

Learning environments provide online or "virtual" places to interact and post course content. They typically include some pre-set features such as asynchronous threaded discussion, internal email, document and link posting, and synchronous chat capabilities.

Wikis, blogs and other free virtual spaces

Wikis, ***blogs*** (web logs), ***vlogs*** (video logs) and other spaces like those provided by Facebook, Twitter, and other social media forums can also function as learning environments

where students can go to practice what they learned face to face, interact with other students in different locations, or hold class meetings.

Free blogs for students can be found at

- edublogs (edublogs.org),
- kidblog (kidblog.org), and
- 21Classes (www.21classes.com).

- ***Web page/ Web site creators***

Weebly and **Wix** and many other free web site creators are available across the Web. These apps allow students to click and drag and make professional-looking pages. **Web page hosts.** All of the following Web sites host personal Web space for free, although some do require registration. Instructors and students in e-learning courses can create Web pages to share their ideas and work, whether they are in different locations or in the same classroom. There are many more providers across the Web than are listed here.

- Quia (www.quia.com/)
- FreeSite.com (www.thefreesite.com/Free_Web_Space/)
- Bravenet.com (www.bravenet.com)
- Blogger (www.blogger.com)
- TeacherWeb (http://teacherweb.com)
- SchoolNotes (www.schoolnotes.com/)
- Tripod (www.tripod.lycos.com)

- ***Quiz and assessment tools***

A large number of quiz and survey tools are available to conduct pre- and post-assessments with students both online and off. For example: Create quizzes and rubrics easily with these free tools.

- Quizstar and Rubistar (www.4teachers.org).
- SurveyMonkey (surveymonkey.com),
- Doodle (doodle.com)

- ***Video and audio conferencing tools and resources***

Conferencing tools allow students to meet and discuss as part of hybrid and completely online classes. Usually these resources provide some combination of video, audio, and/or text capabilities, and many are free. Telephony software, or software that allows the

user to make telephone calls over the Internet, is currently very popular. Examples of free conferencing and telephony software include:

- MSN Messenger with Video and/or Voice (imagine-msn.com)
- Yahoo Messenger (http://messenger.yahoo.com)
- iChat (www.apple.com)
- Skype (www.skype.com)

Videoconferencing systems such as Zoom, WebEx, and Adobe Connect permit classroom instructors to generate a classroom feed to which distant students can log on and participate in the class with both audio and video presence.

- ***Digital libraries***

Digital libraries can be used in both hybrid and online courses. These libraries contain everything from raw data to online texts. Examples include:

- Library of Congress (https://catalog.loc.gov/)
- NASA Astrophysics Data System (http://adswww.harvard.edu/)
- Project Gutenberg (www.gutenberg.org/)
- Visible Human Project (www.nlm.nih.gov/research/visible/visible_human.html)

- ***Content-based learning sites***

Content-based Web sites, along with content-based stand-alone software packages, can be integrated into both hybrid and online classes at all grade levels. Here are some useful sites:

- National Geographic Kids' Network (http://kids.nationalgeographic.com/)
- iearn Learning Circles (www.iearn.org/circles/lcguide/)
- PBS Kids (pbskids.org)
- Discovery Channel (www.discoveryeducation.com/)
- Library of Congress learning page (http://lcweb2.loc.gov/ammem/ndlpedu/)

- ***Software archives***

These online storage places for software offer free or very cheap downloads for education software that can be integrated into e-learning contexts.

- Tucows (www.tucows.com)
- WinSite (www.winsite.com)
- download.com (home and education; http://download.cnet.com/s/home-and-education/?cat=education)

One of the sources on the Internet for online learning resources is

- e-learning Centre's School e- Learning Showcase at :

  www.e-learningcentre.co.uk/resources.

1.1 Virtual Learning Environment Tools

The specific components of a virtual learning environment are likely to include the following:

- Bulletin board
- Course outline (containing a course structure, assignments, assessment dates)
- E-mail
- Conferencing tools (asynchronous conferencing or discussion groups)
- Student home pages
- Meta data (to index key wording resources)
- Assignments
- Assessments
- Synchronous collaboration tools (whiteboards, chat, video conferencing...)
- Multimedia resources
- A file upload area (so students can upload their resources to a shared area)
- Calendar (BECTA 2003).

1.2 E-learning Platforms Tools

•***Communication Tools***

– Discussion Forums, File Exchange, Internal Email, Online Journal/Notes, Real-time Chat, Video Services, Whiteboard

• ***Productivity Tools***

– Bookmarks, Calendar/Progress, Review, Orientation/Help, Searching, Within Course, Work Offline/Synchronize

• ***Student Involvement Tools***

– Group work, Self-assessment, Student Community Building, Student Portfolios

• ***Course Delivery Tools***

– Automated Testing and Scoring, Course Management, Instructor Helpdesk, Online Grading Tools, Student Tracking

• ***Curriculum Design Tools***

– Accessibility Compliance, Course Templates, Curriculum Management, Customized Look and Feel, Instructional Design Tools

COURSE NOTES
Course 7: Tools and Resources for Blended Learning

Key Concepts

- **Definition:** Digital and physical resources that support blended learning delivery.
- **Purpose:** To enhance engagement, accessibility, and effectiveness.

Digital Tools

- **Learning Management Systems (LMS):** Moodle, Canvas, Google Classroom.
- **Communication Tools:** Zoom, Microsoft Teams, Slack.
- **Content Creation Tools:** PowerPoint, Prezi, video editing software.
- **Assessment Tools:** Online quizzes, surveys, e-portfolios.

Physical Resources

- Classroom spaces with internet access.
- Projectors, smart boards, and lab equipment.

Best Practices

- Align tools with learning objectives.
- Ensure accessibility for all learners.
- Provide training for both teachers and students.
- Regularly evaluate effectiveness of tools.

TEST YOUR UNDERSTANDING OF THE COURSE
Course 7: Tools and Resources for Blended Learning

1. **Which tool is commonly used to manage online learning activities?**
    - Learning Management System (LMS)
    - Chalkboard
    - Printed newspapers
    - Radio broadcasts *Explanation:* LMS platforms like Moodle or Canvas organize and deliver content.
2. **Which communication tool is widely used in blended learning?**
    - Zoom
    - Typewriters
    - Bulletin boards
    - Fax machines *Explanation:* Zoom enables real-time interaction between teachers and learners.
3. **Which resource helps create engaging presentations?**
    - PowerPoint
    - Chalk
    - Whiteboard markers

- Printed novels *Explanation:* PowerPoint and similar tools support multimedia learning.

4. **Physical resources for blended learning include:**
   - Smart boards and projectors
   - Only printed textbooks
   - Radios
   - Typewriters *Explanation:* Classroom technology supports blended delivery.
5. **Best practice when selecting tools for blended learning is to:**
   - Align tools with learning objectives
   - Choose randomly
   - Focus only on entertainment
   - Avoid training teachers *Explanation:* Tools must support the intended learning outcomes.

Discussion: Classroom assignment -- e-learning FAQs

This FAQs section contains frequently asked questions about e-learning:

1. What type of computer will I need for online e-learning?
2. What type and version of browser will I need for online classes?
3. What computing accounts do I need to take online courses?
4. What email should I use? Can I use my own email account?
5. What are Blackboard, Moodle, or Vista? How can I access them?
6. Who can help me if have technical problems?
7. What kind of contact with professors and other online students will I have?

Project Assignment: Classroom Presentation

E-education vs. Traditional Education

Topic: You are to write a report about the future of e-learning. The purpose of the report is to compare electronic and traditional instructional methods.

Requirements – Your presentation should include answers about the following:

1. Do you think that e-learning is equivalent to traditional education in terms of results?
2. What are the most important challenges of switching from traditional to electronic learning?
3. How can these challenges be faced in light of the current crisis?
4. Will e-learning replace face-to-face learning anytime soon?

Additional ImprovementResources

- EduTools,**http://www.edutools.info/about/index.** jsp is an open resource for the worldwide higher education community and provides independently reviewed analyses of selected course management software tools.
- A brief list of useful educational web site creators at **https://globaldigitalcitizen.org/8-free-website-creator-tools.**
- To learn about the benefits of videoconferencing, see **https://www.eztalks.com/video-conference/benefits-of-video-conferencing-in-education.html.**
- Therearemanyapplicationsfortexttoaudio,suchaslisteningtoWebpageswhencarryingoutactivitiesorputtingintopracticeaseriesofinstructionsfromahelpmenuforexample.Testafewpagesofyourchoiceusing ReadPlease,afreetext-to-speechprogramthathighlightseachwordasitisbeingread.Youcandownloadthesoftwareandvoicesfortheprogramfromthefollowingwebsite:**http://www.readplease.com**

Course 10: Designing a Blended Course

➢ Course Scope

Designing a blended course goes beyond mixing online and face-to-face instruction. It involves pedagogical planning, alignment of objectives, selection of technologies, organization of learning activities, and assessment strategies that ensure coherence and effectiveness. This course introduces the principles and practical steps needed to design, structure, and implement a successful blended learning course.

➢ Course Learning Objectives

At the conclusion of this course, you should be able to:

- Understand the foundations of blended course design.
- Align learning objectives with activities and technologies.
- Structure a blended syllabus and learning pathway.
- Design engaging online and face-to-face components.
- Integrate assessment and feedback into blended environments.

Guiding Questions to the Course

1. What makes a blended course effective?
2. How do you organize face-to-face and online components?
3. How can learning objectives guide course design?
4. What role do activities and assessment play in blended learning?

➢ Course Content

➢ Foundations of Blended Course Design

Blended course design combines pedagogy, technology, and learner needs. The designer must decide what should happen in class and what should happen online. Effective blended design ensures that both environments complement each other rather than duplicate content.

➢ Defining Learning Objectives

Learning objectives clarify what students should know and be able to do. In blended learning, objectives guide:

- Content selection

- Teaching strategies
- Assessment methods
- Technology integration

Objectives should be specific, measurable, achievable, relevant, and time-bound (SMART).

➢ **Structuring the Course**

A blended course requires clear organization. Key elements include:

- ***Course syllabus***
- ***Weekly modules***
- ***Learning outcomes***
- ***Activities and tasks***
- ***Deadlines and assessments***

Students must easily understand the learning path between online and classroom sessions.

➢ **Designing Learning Activities**

Activities should promote interaction and autonomy.

Examples include:

- ***Face-to-face discussions and workshops***
- ***Online forums and blogs***
- ***Collaborative projects***
- ***Multimedia assignments***
- ***Virtual simulations***

Blended activities must encourage participation and critical thinking.

➢ **Integrating Technology**

Technology supports learning, not replaces pedagogy. Common tools include:

- ***LMS platforms (Moodle, Canvas, Google Classroom)***
- ***Communication tools (Zoom, Teams)***
- ***Content tools (videos, podcasts, slides)***
- ***Collaboration tools (wikis, shared documents)***

The choice of tools must match learning objectives.

➢ **Assessment and Feedback**

Assessment in blended courses includes:

- ***Online quizzes***

- ***Discussion participation***
- ***Projects and portfolios***
- ***Peer feedback***
- ***Classroom performance***

Feedback should be timely, constructive, and continuous to support learning progress.

➢ **Learner Support and Accessibility**

A well-designed blended course considers:

- ***Clear instructions***
- ***Technical guidance***
- ***Inclusive design***
- ***Flexible access***
- ***Student motivation***

Support structures increase engagement and success.

COURSE NOTES
Course 10: Designing a Blended Course

Key Concepts

Definition: Blended course design is the systematic planning of online and face-to-face learning experiences.

Purpose: To ensure coherence, engagement, and effective learning outcomes.

Design Principles

- Alignment between objectives, activities, and assessment.
- Balance between online and classroom instruction.
- Learner-centered planning.
- Use of technology as pedagogical support.
- Continuous evaluation and improvement.

TEST YOUR UNDERSTANDING OF THE COURSE
Course 10: Designing a Blended Course

1. What is the first step in designing a blended course?
   - Defining learning objectives
   - Choosing random tools
   - Writing exams only
   - Ignoring student needs

   Explanation: Objectives guide all instructional decisions.

2. What should blended activities promote?
    - Interaction and autonomy □
    - Memorization only
    - Teacher control
    - Isolation

    Explanation: Engagement and participation are essential in blended learning.
3. Technology in blended learning should:
    - Support pedagogy □
    - Replace teachers
    - Be used randomly
    - Focus only on entertainment

    Explanation: Tools serve learning goals, not the opposite.
4. Which element helps students follow the learning path?
    - Clear course structure □
    - Confusing instructions
    - No deadlines
    - Only lectures

    Explanation: Organization improves learner navigation and success.
5. Effective assessment in blended learning includes:
    - Continuous feedback □
    - Only final exams
    - No evaluation
    - Guessing performance

    Explanation: Feedback supports improvement and reflection.

6. Discussion: Classroom Assignment — Blended Course Design

Discuss the following questions:

- What challenges do teachers face when designing blended courses?
- How can online and face-to-face components complement each other?
- What role does student autonomy play in blended design?

Project Assignment: Course Blueprint

Topic: Designing Your Own Blended Course

Task: Create a mini-plan for a blended course.
Your project should include:

- Course title and objectives
- Weekly structure
- Face-to-face activities
- Online activities
- Assessment methods
- Technologies used

Course 11: Online Interaction and Engagement Strategies

➢ Course Scope

Online interaction is a core component of successful blended and online learning. It supports communication, collaboration, motivation, and knowledge construction. This course explores strategies and tools that enhance learner engagement in virtual environments. It focuses on designing interactive activities, fostering social presence, and maintaining meaningful participation in online and blended classrooms.

➢ Course Learning Objectives

At the conclusion of this course, you should be able to:

- Understand the role of interaction in online and blended learning.
- Identify different types of online interaction.
- Design engaging online learning activities.
- Apply strategies to motivate and support learners.
- Use digital tools to foster collaboration and participation.

Guiding Questions to the Course

1. Why is interaction essential in online learning?
2. What types of interaction exist in digital environments?
3. How can teachers engage learners online?
4. What strategies promote collaboration and motivation?

➢ Course Content

➢ Understanding Online Interaction

Online interaction refers to communication between learners, instructors, and content through digital platforms. It helps reduce isolation, increase motivation, and support deeper learning. Effective interaction transforms learners from passive receivers into active participants.

➢ Types of Interaction

There are three main forms of interaction:

- **Learner–Content Interaction:** engaging with videos, readings, quizzes, and simulations.
- **Learner–Instructor Interaction:** feedback, guidance, announcements, and virtual meetings.
- **Learner–Learner Interaction:** discussions, peer review, group projects, and forums.

Balanced interaction strengthens engagement.

- **Designing Engaging Activities**

Online engagement requires purposeful activities such as:

- Discussion forums with guiding questions.
- Collaborative documents and wikis.
- Online debates and problem-solving tasks.
- Multimedia assignments.
- Gamified learning tasks.

Activities should encourage critical thinking and participation.

- **Communication and Social Presence**

Social presence helps learners feel connected. Teachers can foster it by:

- Using welcoming messages and videos.
- Encouraging introductions and profiles.
- Maintaining regular feedback.
- Creating respectful communication rules.

A supportive online climate improves engagement.

- **Motivation and Support Strategies**

Engagement grows when learners feel supported. Strategies include:

- Clear expectations and deadlines.
- Prompt feedback.
- Recognition of participation.
- Scaffolding difficult tasks.
- Providing technical guidance.

Motivation sustains learner involveme

- **Tools for Interaction**

Common tools include:

- LMS discussion boards.
- Zoom and Teams for live sessions.
- Blogs and forums.
- Shared documents (Google Docs).
- Polling and quiz tools.

The selection of tools must serve interaction goals.

COURSE NOTES
Course 11: Online Interaction and Engagement Strategies

Key Concepts

Definition: Online interaction and engagement refer to the ways learners communicate, collaborate, and participate in digital learning environments.

Purpose: To enhance motivation, social presence, and meaningful learning.

Best Practices

- Design learner-centered activities.
- Balance synchronous and asynchronous interaction.
- Encourage collaboration.
- Provide timely feedback.
- Monitor participation and adjust strategies.

TEST YOUR UNDERSTANDING OF THE COURSE
Course 11: Online Interaction and Engagement Strategies

1. **Online interaction mainly helps to:**
   - Increase isolation
   - Reduce motivation
   - Support communication and learning
   - Replace teachers

2. **Which is a type of online interaction?**
   - Learner–Content
   - Chalk–Board
   - Paper–Pen
   - Radio–Student
3. **Which activity supports learner collaboration?**
   - Group projects online
   - Silent reading only
   - Copying notes
   - No tasks
4. **Social presence in online learning means:**
   - Feeling connected
   - Being isolated
   - Ignoring others
   - Studying alone
5. **Effective engagement requires:**
   - Random tasks
   - No feedback

- Continuous support and motivation Only exams

Discussion: Classroom Assignment — Online Engagement

Discuss the following:

- What difficulties do learners face in online interaction?
- How can teachers motivate students in virtual environments?
- What tools best support online collaboration?

➢ Project Assignment: Engagement Plan

Topic: Designing Online Interaction Strategies
Task: Create a short engagement plan for a blended or online course.
Include:

- Interaction types used
- Activities designed
- Tools selected
- Feedback strategies
- Motivation techniques

Course 12: Integrating Multimedia and AI Tools

➢ Course Scope

The integration of multimedia and artificial intelligence (AI) tools has transformed modern education. Multimedia enhances learning through visuals, audio, animation, and interactivity, while AI supports personalization, automation, and intelligent feedback. This course explores how to effectively integrate multimedia and AI tools into blended and online learning environments to improve engagement, accessibility, and learning outcomes.

➢ Course Learning Objectives

At the conclusion of this course, you should be able to:

- Understand the role of multimedia and AI in education.
- Identify different types of multimedia resources.
- Integrate AI tools into teaching and learning activities.
- Design multimedia-rich learning experiences.
- Use technology ethically and pedagogically.

Guiding Questions to the Course

1. How does multimedia enhance learning?
2. What roles can AI play in education?
3. How can teachers integrate AI tools responsibly?
4. What makes multimedia content pedagogically effective?

➢ Course Content

Understanding Multimedia in Education

Multimedia combines text, images, audio, video, and animation to support different learning styles. It increases learner engagement, improves comprehension, and allows complex ideas to be presented clearly in digital environments.

Types of Multimedia Resources

Common multimedia resources include:

- Instructional videos and screencasts
- Podcasts and audio lessons
- Infographics and animations
- Interactive presentations
- Simulations and virtual labs

These resources enhance both face-to-face and online instruction.

Introduction to AI Tools in Learning

AI tools support teaching through:

- Personalized learning paths
- Automated feedback and grading
- Chatbots and virtual assistants
- Learning analytics
- Content generation

AI helps teachers manage learning and support students effectively.

Designing Multimedia and AI-Based Activities

Effective integration includes:

- Interactive video lessons
- AI-supported quizzes
- Adaptive learning platforms
- Virtual tutoring systems
- Multimedia projects

Activities must align with learning objectives and student needs.

Ethical and Pedagogical Use of AI

Responsible use of AI requires attention to:

- ***Academic integrity***
- ***Data privacy***
- ***Transparency***
- ***Bias and fairness***
- ***Teacher supervision***

Ethical integration ensures trust and educational value.

Tools for Multimedia and AI Integration

Examples include:

- ***Video tools (Camtasia, YouTube Studio)***
- ***Presentation tools (PowerPoint, Prezi, Canva)***
- ***Audio tools (Audacity, podcasts)***
- ***AI tools (chatbots, adaptive LMS, anal***
- ***ytics tools)***

Technology should support pedagogy.

Key Concepts

Definition: Multimedia and AI integration refers to the pedagogical use of digital media and intelligent systems to enhance teaching and learning.

Purpose: To improve engagement, personalization, and learning effectiveness.

Best Practices

- Align tools with learning objectives.
- Balance multimedia with cognitive load.
- Use AI ethically and transparently.
- Support learner autonomy.
- Continuously evaluate tool effectiveness.

TEST YOUR UNDERSTANDING OF THE COURSE

Course 12: Integrating Multimedia and AI Tools

1. Multimedia supports learning by:
   - Reducing engagement
   - Presenting information in multiple formats □
   - Ignoring learner needs
   - Replacing teachers

   Explanation: Multimedia combines text, audio, visuals, and interaction.
2. AI in education helps mainly with:
   - Personalization and feedback □
   - Only entertainment
   - Replacing students
   - Avoiding assessment

   Explanation: AI supports adaptive learning and automated feedback.
3. Which is a multimedia resource?
   - Instructional video □
   - Chalk only
   - Paper textbook
   - Radio announcement

   Explanation: Videos integrate visual and audio learning.
4. Ethical AI use requires:
   - Ignoring privacy
   - Transparency and fairness □
   - No supervision
   - Hidden automation

   Explanation: Responsible use builds trust and integrity.
5. Effective integration means:
   - Using tools randomly
   - Aligning with objectives □
   - Avoiding evaluation
   - Focusing only on technology

   Explanation: Technology must serve pedagogy.

Discussion: Classroom Assignment — Multimedia and AI

Discuss:

- How can multimedia improve learner motivation?
- What risks accompany AI use in education?
- How can teachers balance innovation and ethics?

Project Assignment: Multimedia & AI Lesson Design

Topic: Designing a Multimedia-Enhanced Lesson

Task: Create a lesson plan integrating multimedia and AI tools.

Include:

- Learning objectives
- Multimedia resources
- AI tools used
- Learning activities
- Ethical considerations

Activities may include:

- Watching and analyzing videos
- Participating in online discussions
- Completing AI-supported exercises
- Collaborative multimedia projects
- Reflection and feedback tasks

KEY ANSWERS

TEST YOUR UNDERSTANDING OF THE COURSE

Course 1: Getting Started

1. **What is the first step in beginning blended learning?**
   - Identifying learning goals ✓
   - Designing advanced modules
   - Evaluating student outcomes
   - Choosing assessment tools
2. **Which skill is most important for learners at the start?**
   - Critical thinking
   - Familiarity with technology ✓
   - Advanced research skills
   - Public speaking
3. **Why is orientation important in blended learning?**
   - It reduces teacher workload
   - It helps learners understand expectations ✓
   - It eliminates the need for online tools
   - It replaces classroom sessions
4. **Which resource is commonly used in the 'Getting Started' phase?**
   - Printed textbooks only
   - Online tutorials and guides ✓
   - Peer-reviewed journals
   - Recorded lectures exclusively
5. **What is the role of the instructor in the initial stage?**
   - To provide technical support and guidance ✓
   - To grade assignments only
   - To avoid student interaction
   - To focus solely on classroom lectures

Course 2: Fundamentals of E-learning

1. **E-learning primarily relies on:**
   - Digital platforms ✓
   - Printed handouts
   - Face-to-face discussions
   - Group projects only
2. **Which of the following is NOT a feature of e-learning?**
   - Multimedia integration
   - Online assessments
   - Physical attendance ✓
   - Flexibility in time

3. **What types of learning can e-learning support?**
    - Synchronous and asynchronous ✓
    - Only synchronous
    - Only asynchronous
    - Neither
4. **Which tool is commonly used in e-learning?**
    - Learning Management Systems (LMS) ✓
    - Chalkboards
    - Printed newspapers
    - Radio broadcasts
5. **A key advantage of e-learning is:**
    - Limited access to resources
    - Flexibility and scalability ✓
    - Reduced interaction
    - Higher costs

Course 3: Blended Learning Overview

1. **Blended learning combines:**
    - Online and face-to-face instruction ✓
    - Only classroom lectures
    - Only online modules
    - Self-study exclusively
2. **Which is a common model of blended learning?**
    - Flipped classroom ✓
    - Traditional lecture
    - Distance-only learning
    - Self-paced reading
3. **Blended learning aims to:**
    - Eliminate teacher involvement
    - Enhance flexibility and engagement ✓
    - Reduce student responsibility
    - Focus only on technology
4. **Which element is NOT part of blended learning?**
    - Classroom interaction
    - Online resources
    - Printed-only materials ✓
    - Digital collaboration
5. **Blended learning is best described as:**
    - A hybrid approach ✓
    - A purely digital method
    - A traditional-only method
    - A passive learning style

Course 4: Benefits and Drawbacks of Blended Learning

1. **One major benefit of blended learning is:**
    - Flexibility for learners ✓

- Reduced access to resources
- Limited communication
- Higher costs

2. **Which drawback is often associated with blended learning?**
   - Dependence on technology ✓
   - Lack of flexibility
   - No student engagement
   - Excessive classroom time
3. **Blended learning can improve:**
   - Student motivation ✓
   - Teacher isolation
   - Resource scarcity
   - Passive learning
4. **Which group may face challenges in blended learning?**
   - Learners without reliable internet ✓
   - Students with strong tech skills
   - Teachers with digital training
   - Institutions with LMS access
5. **A balanced blended learning program should:**
   - Maximize both online and offline strengths ✓
   - Eliminate classroom sessions
   - Focus only on technology
   - Avoid assessments

Course 5: Learner Roles and Teacher Roles in Blended Environments

1. **In blended learning, the learner is mainly:**
   o A passive listener
   o An active participant ✓
   o A content distributor
   o A classroom observer

Explanation: Learners engage actively with content and peers.

2. **The teacher's primary role in blended learning is:**
   o Information transmitter
   o Discipline controller
   o Learning facilitator ✓
   o Content memorizer

Explanation: Teachers guide, design, and support learning.

3. **Learner autonomy refers to:**
   o Ignoring the teacher
   o Managing one's own learning process ✓
   o Studying only online
   o Avoiding collaboration

Explanation: Autonomy involves responsibility and self-regulation.

4. **Which interaction type supports peer collaboration?**
   o Learner–content
   o Learner–teacher

o Learner–learner ✓
o Teacher–technology

Explanation: Peer interaction builds social and cognitive engagement.

5. **One challenge in blended role transformation is:**
   o Unlimited motivation
   o Perfect technology
   o Digital literacy gaps ✓
   o No need for training

   Explanation: Skills and access affect participation

Course 6: Blended Learning Framework

1. **The blended learning framework emphasizes:**
   - Integration of online and offline strategies ✓
   - Exclusive classroom lectures
   - Teacher-free learning
   - Self-study only
2. **Which component is central to the framework?**
   - Learning objectives ✓
   - Entertainment content
   - Social media posts
   - Printed-only materials
3. **Assessment in blended learning should be:**
   - Continuous and varied ✓
   - Limited to final exams
   - Avoided altogether
   - Based only on attendance
4. **Which role does technology play in the framework?**
   - Supporting delivery and interaction ✓
   - Replacing teachers entirely
   - Limiting student access
   - Reducing collaboration

5. **A successful blended learning framework requires:**
   - Clear planning and alignment with goals ✓
   - Random resource selection
   - No student feedback
   - Exclusive reliance on textbooks

Course 7: Models of Blended Learning

1. **Which blended learning model involves students rotating between online and classroom activities?**
   a) Station Rotation ✓
   b) Flex Model
   c) A La Carte
   d) Enriched Virtual
2. **In the Flex Model, what is the primary mode of instruction?**
   a) Online learning ✓
   b) Face-to-face lectures

c) Group projects only
d) Printed materials.

3. **Which model allows students to take some courses online and others in person?**
    a) A La Carte ✓
    b) Rotation
    c) Flex
    d) Flipped Classroom
4. **The Enriched Virtual Model requires:**
    a) Occasional face-to-face sessions ✓
    b) No classroom interaction
    c) Only online modules
    d) Printed textbooks .
5. **Which blended learning model is most similar to traditional distance learning but with added classroom support?**
    a) Enriched Virtual ✓
    b) Flex
    c) Rotation
    d) A La Carte

Course 8: Tools and Resources for Blended Learning

1. **Which tool is commonly used to manage online learning activities?**
    - Learning Management System (LMS) ✓
    - Chalkboard
    - Printed newspapers
    - Radio broadcasts *Explanation:* LMS platforms like Moodle or Canvas organize and deliver content.

    Explanation: LMS platforms such as Moodle, Canvas, or Google Classroom organize content, track progress, manage communication, and deliver assessments.

2. **Which communication tool is widely used in blended learning?**
    - Zoom ✓
    - Typewriters
    - Bulletin boards
    - Fax machines
    - **Explanation:** Zoom enables real-time interaction between teachers and learners. **Explanation:** Zoom enables real-time interaction through video, audio, chat, and screen sharing between teachers and learners.
3. **Which resource helps create engaging presentations?**
    - PowerPoint ✓
    - Chalk
    - Whiteboard markers
    - Printed novels

    Explanation*:* PowerPoint and similar tools support multimedia learning. **Explanation:** PowerPoint and similar tools integrate text, visuals, audio, and video to support multimedia learning.

4. **Physical resources for blended learning include:**

- Smart boards and projectors ✓
- Only printed textbooks
- Radios
- Typewriters *Explanation:* Classroom technology supports blended delivery.

Explanation: Classroom technologies such as smart boards and projectors support the integration of digital content in face-to-face sessions

5. **Best practice when selecting tools for blended learning is to:**
   - Align tools with learning objectives ✓
   - Choose randomly
   - Focus only on entertainment
   - Avoid training teachers *Explanation:* Tools must support the intended learning outcomes

     Explanation: Tools must serve pedagogical goals and support the intended learning outcomes rather than being chosen randomly or for entertainment only.

Course 9: Tools and Resources for Blended Learning

Course 11: Online Interaction and Engagement Strategies

1. Online interaction mainly helps to:
   - Increase isolation
   - Reduce motivation
   - Support communication and learning □
   - Replace teachers

     Explanation: Interaction promotes engagement, understanding, and participation.
2. Which is a type of online interaction?
   - Learner–Content □
   - Chalk–Board
   - Paper–Pen
   - Radio–Student

     Explanation: Learners interact with content, instructors, and peers online.
3. Which activity supports learner collaboration?
   - Group projects online □
   - Silent reading only
   - Copying notes
   - No tasks

     Explanation: Collaboration encourages social learning and engagement.
4. Social presence in online learning means:
   - Feeling connected □
   - Being isolated
   - Ignoring others
   - Studying alone

     Explanation: Social presence builds a sense of community.
5. Effective engagement requires:
   - Random tasks
   - No feedback
   - Continuous support and motivation □

- Only exams
  Explanation: Support and feedback sustain participation

Course 12: Integrating Multimedia and AI Tools

1. **Multimedia supports learning by:**
   - Reducing engagement
   - Presenting information in multiple formats □
   - Ignoring learner needs
   - Replacing teachers
     Explanation: Multimedia combines text, audio, visuals, and interaction.
2. AI in education helps mainly with:
   - Personalization and feedback □
   - Only entertainment
   - Replacing students
   - Avoiding assessment
     Explanation: AI supports adaptive learning and automated feedback.
3. Which is a multimedia resource?
   - Instructional video □
   - Chalk only
   - Paper textbook
   - Radio announcement
     Explanation: Videos integrate visual and audio learning.
4. Ethical AI use requires:
   - Ignoring privacy
   - Transparency and fairness □
   - No supervision
   - Hidden automation
     Explanation: Responsible use builds trust and integrity.
5. Effective integration means:
   - Using tools randomly
   - Aligning with objectives □
   - Avoiding evaluation
   - Focusing only on technology
     Explanation: Technology must serve pedagogy.

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KEY COURSE TAKEAWAYS

Course one: Education in the Digital Age

Introduction: The digital age has revolutionized nearly every aspect of human life, and education is no exception. With the rapid advancement of technology, traditional teaching methods have evolved, giving rise to new forms of learning that are more flexible, personalized, and accessible than ever before.

1. Accessibility and Inclusivity

- Digital platforms have broken down geographical and financial barriers. Students in remote areas now have access to the same content as those in urban centers.
- Online courses, MOOCs (Massive Open Online Courses), and open educational resources (OERs) provide free or affordable learning opportunities worldwide.
- Assistive technologies (like screen readers and voice-to-text tools) help students with disabilities engage more effectively with educational content.

2. Personalized Learning

- AI and data analytics are used to tailor education to individual needs, allowing learners to progress at their own pace.
- Adaptive learning systems assess student performance and adjust content accordingly, offering a more customized experience.
- Gamification and interactive platforms increase engagement and motivation, especially among younger students.

3. New Teaching Methodologies

- The flipped classroom model, where students study theory at home and practice in class, is now more feasible with video lectures and online resources.
- Blended learning combines traditional face-to-face instruction with digital tools, creating a more dynamic classroom environment.
- Project-based and collaborative learning thrive through platforms like Google Workspace, Microsoft Teams, and educational forums.

4. Lifelong Learning and Microcredentials

- The digital era has redefined education as a lifelong journey. People continuously upskill through online workshops, webinars, and certification programs.
- Microcredentials and digital badges validate specific skills, offering alternatives to traditional degrees and making education more modular and flexible.

5. Challenges an Considerations

- **Digital divide**: Not all students have equal access to technology or stable internet, which can widen educational inequalities.
- **Screen fatigue**: Extended screen time can affect concentration and health.
- **Quality control**: With the rise of online learning, ensuring the credibility and effectiveness of digital content is crucial.
- **Privacy and security**: Managing student data responsibly is a growing concern.

Conclusion

Education in the digital age offers incredible opportunities to democratize knowledge, innovate teaching, and foster lifelong learning. However, it also brings challenges that must be addressed through inclusive policies, infrastructure development, and ongoing adaptation. The future of education lies in finding the right balance between technology and human interaction.

Course Two: Fundamentals of E-learning – Key Takeaways:

1. **Definition**:
   E-learning refers to the use of digital technologies (internet, computers, mobile devices) to deliver educational content remotely.
2. **Core Components**:
   - **Content Delivery**: Multimedia lessons (videos, readings, interactive modules).
   - **Assessment Tools**: Quizzes, assignments, discussion boards.
   - **Learning Management Systems (LMS)**: Platforms like Moodle, Blackboard, Canvas for managing content and tracking learner progress.
3. **Types of E-learning**:
   - **Synchronous**: Real-time (e.g., Zoom classes).
   - **Asynchronous**: Self-paced (e.g., recorded lectures).
   - **Blended Learning**: Mix of online and in-person learning.
4. **Benefits**:
   - Flexibility in time and location.
   - Scalability and cost-effectiveness.
   - Personalized learning paths.
5. **Challenges**:
   - Requires self-discipline and motivation.
   - Digital divide (access to technology).
   - Limited hands-on experience for practical subjects.
6. **Best Practices**:
   - Clear goals and outcomes.
   - Engaging and interactive content.
   - Regular feedback and communication.
7. **Trends**:
   - Mobile learning (m-learning).
   - Microlearning (bite-sized content).
   - Gamification and AI integration.

Course Three: Fundamentals of Blended learning – Key Takeaways:

At its core, blended learning is about strategically combining in-person and online learning experiences. It's not just about using technology in the classroom; it's about thoughtfully integrating the strengths of both environments to create a more effective and engaging learning journey.

- **Flexibility and Access:** Blended learning offers greater flexibility for both educators and learners. Online components can provide access to resources and learning activities anytime, anywhere, catering to different schedules and learning paces.
- **Personalization:** By leveraging technology, blended learning can facilitate more personalized learning experiences. Students can often work through content at their own speed, focus on areas where they need more support, and engage with materials in ways that suit their learning styles.
- **Engagement and Motivation:** The variety of activities and resources available in a blended model can boost student engagement and motivation. Interactive online tools, multimedia content, and collaborative online projects can complement traditional classroom activities.
- **Enhanced Instruction:** Blended learning allows educators to utilize class time for more active learning strategies, deeper discussions, and individualized support. Online platforms can handle content delivery and basic practice, freeing up valuable face-to-face time.
- **Development of Digital Literacy:** Integrating online learning naturally helps students develop essential digital literacy skills, which are increasingly important in today's world.
- **Data-Driven Insights:** Online learning platforms often provide valuable data on student progress and performance, allowing educators to identify areas of difficulty and adjust their instruction accordingly.
- **It's not one-size-fits-all:** Blended learning models can vary significantly depending on the context, subject matter, and learning objectives. The key is to find the right blend that works best for the specific situation.

Think of it this way: Blended learning aims to take the best aspects of traditional teaching and combine them with the power and flexibility of technology to create a richer, more effective, and more engaging educational experience. It's about finding the sweet spot where online and in-person learning work together harmoniously.

Course four: The benefits and drawbacks of blended learning – Key Takeaways

Blended learning offers a compelling mix of advantages, but it's also important to be aware of potential challenges. It's not a perfect solution for every situation, and successful implementation requires careful planning and execution.

Key Benefits:

- **Increased Flexibility and Accessibility:** This is a major plus. Students can access materials and engage in learning activities outside of scheduled class times, accommodating different learning paces and schedules. This can be particularly beneficial for students with diverse needs or those in remote locations.
- **Personalized Learning Experiences:** Blended models allow for more tailored instruction. Online platforms can provide adaptive learning paths, individualized feedback, and resources that cater to specific student needs and learning styles. Students can often have more control over the pace and path of their learning.
- **Enhanced Engagement and Motivation:** The integration of technology, multimedia resources, and interactive online activities can make learning more engaging and motivating for students. The variety of learning experiences can cater to different preferences and keep learners interested.
- **Development of Digital Skills:** Naturally, blended learning fosters the development of essential digital literacy skills in both students and educators. This is a crucial benefit in our increasingly digital world.
- **Improved Learning Outcomes:** When implemented effectively, blended learning can lead to improved student understanding and retention. The combination of direct instruction, online resources, and interactive activities can cater to a wider range of learning styles and provide more opportunities for practice and application.
- **Efficient Use of Class Time:** Face-to-face time can be used more strategically for activities that require direct interaction, collaboration, and in-depth discussion, while online components handle content delivery and basic practice.
- **Data-Driven Instruction:** Online platforms often provide valuable data on student progress, allowing educators to identify areas where students are struggling and adjust their teaching strategies accordingly.

Potential Drawbacks:

- **Increased Preparation Time and Effort for Educators:** Designing and implementing effective blended learning experiences can require significant time and effort for educators in terms of curriculum development, technology integration, and ongoing management.
- **Technology Requirements and Access:** Equitable access to reliable internet and appropriate devices is crucial for successful blended learning. Disparities in access can create a "digital divide" and disadvantage some students.
- **Technical Issues and Support:** Technical glitches and the need for ongoing technical support for both students and educators can be a challenge.

- **Potential for Isolation and Reduced Social Interaction:** If not designed thoughtfully, the online components of blended learning could lead to feelings of isolation among students and reduced opportunities for face-to-face social interaction.
- **Need for Self-Discipline and Time Management Skills:** Students in blended learning environments often need strong self-discipline and time management skills to navigate online learning activities effectively.
- **Ensuring Quality and Engagement in Online Components:** It can be challenging to design online learning experiences that are as engaging and effective as in-person instruction. Poorly designed online content can lead to disengagement and poor learning outcomes.
- **Teacher Training and Professional Development:** Educators need adequate training and ongoing professional development to effectively design, deliver, and manage blended learning environments.

In essence: Blended learning holds significant promise for enhancing education, but its success hinges on careful planning, adequate resources, effective implementation strategies, and ongoing support for both educators and learners. Weighing these benefits and drawbacks in the specific context is crucial.

Course five: Models of Blended Learning – Key Takeaways

Blended learning isn't a monolithic approach; it encompasses various models that strategically combine online and in-person learning. Here's a takeaway overview of some common models:

The Rotation Model: This model involves students rotating between different learning modalities, with at least one station being online learning. This can include:

- **Station Rotation:** Students rotate through various stations in a classroom on a fixed schedule. One station typically involves online learning, while others might focus on teacher-led instruction, group work, or independent practice. This is common in elementary schools.
- **Lab Rotation:** Similar to station rotation, but the online learning component takes place in a dedicated computer lab.
- **Flipped Classroom:** This model reverses traditional instruction. Students engage with learning materials (videos, readings) online at home, and class time is used for active learning, discussions, problem-solving, and teacher-guided practice.
- **Individual Rotation:** Students rotate through stations on a personalized schedule determined by the teacher or software, based on their individual needs and progress. They may not visit all stations.

The Flex Model: Online learning is the central component, and students have significant control over their learning pace and path. Teachers provide on-demand, flexible support and instruction as needed. Learning often takes place through online platforms with teachers acting as facilitators.

The A La Carte Model: Students choose to take some courses entirely online to supplement their traditional face-to-face coursework. This offers flexibility and allows students to pursue specific interests or needs not met by the regular curriculum.

The Enriched Virtual Model: Students complete the majority of their coursework online, often at home, but have required face-to-face learning sessions with a teacher for support, tutoring, or specific learning activities. This model is an alternative to full-time online schooling.

The Face-to-Face Driver Model: The majority of instruction happens in a traditional classroom setting, but online learning is integrated to supplement or remediate learning. Teachers might use online platforms for assignments, resources, or individualized practice for students who need extra support or more challenging work.

The Online Driver Model: Online learning is the primary mode of instruction, with optional or required face-to-face check-ins, tutoring, or activities. This model offers significant flexibility and autonomy for learners.

Key Takeaway: The choice of blended learning model depends on various factors, including learning objectives, student needs, available resources, and pedagogical philosophy. Each model offers a unique way to integrate technology and in-person interaction to create effective learning experiences.

Course six : Blended Learning Framework

A Blended Learning Framework provides a structured approach to integrating online and face-to-face learning methods. Here are some key components often included in such frameworks:

1. **Theoretical Foundations**: Grounded in educational theories like the Cognitive Theory of Multimedia Learning and Connectivism, which emphasize how technology can enhance learning experiences2.
2. **Models of Blended Learning**:
    - **Rotation Model**: Students rotate between online and in-person activities.
    - **Flex Model**: Online learning is the primary mode, with in-person support as needed.
    - **Enriched Virtual Model**: Combines online coursework with occasional in-person sessions.
3. **Community of Inquiry (COI) Framework**: Focuses on creating a collaborative learning environment through social, cognitive, and teaching presence.
4. **Teacher Competencies**: Frameworks like the iNACOL Blended Learning Teacher Competency Framework outline the skills educators need to succeed in blended environments.

Here's a more detailed exploration of **Teacher Competencies**:

A successful blended learning environment relies heavily on the educator's ability to integrate technology and manage both online and face-to-face interactions effectively. The **iNACOL Blended Learning Teacher Competency Framework** outlines key areas where teachers need to excel:

1. **Mindsets**:
    - Teachers should be open to innovation and willing to adapt their teaching styles to fit a blended learning model.
    - They need to embrace collaboration, not only with students but also with peers, administrators, and technology experts.
2. **Teaching Strategies**:
    - Design personalized learning experiences that leverage online tools.
    - Balance active, collaborative group activities in-person with individual self-paced learning online.
3. **Technology Proficiency**:
    - Be adept at using digital tools like learning management systems (e.g., Google Classroom or Canvas).
    - Ensure students can access resources effectively, guiding them through technical challenges as needed.

4. **Assessment Skills**:
    - Utilize data and analytics from digital platforms to assess learner progress.
    - Provide timely feedback and adapt teaching methods based on insights from both online and face-to-face interactions.
5. **Professional Development**:
    - Continuously engage with training and resources to stay updated on evolving technologies and methodologies.
    - Build a community of practice for shared learning and collective problem-solving

Course seven: Tools and Resources for Blended Learning":

The success of blended learning relies on choosing the right tools and resources that empower both educators and learners. By leveraging digital platforms, interactive content, and communication technologies, educators can create flexible, engaging, and inclusive learning environments that cater to diverse needs. The key lies in thoughtful integration—balancing technology with face-to-face interaction to enhance collaboration, critical thinking, and real-world application.

Here are some examples of successful blended learning programs:

1. **Flipped Classroom**: Students watch recorded lectures or tutorials online before attending class. In-class time is then dedicated to interactive activities like discussions, problem-solving, and group work.
2. **Gamification**: Incorporating gaming elements such as points, badges, and leaderboards into the learning process. This approach makes learning engaging and promotes healthy competition among students.
3. **Skill Development Training**: For corporate environments, introductory topics are delivered online, while hands-on training is conducted face-to-face. This method balances flexibility with practical application.
4. **Medical Training**: Concepts like anatomy are taught using visual graphics and online modules, while practical skills like CPR are learned under direct supervision.

These programs demonstrate how blending online and offline methods can cater to diverse learning needs effectively.

KEY CONCEPTS AND DEFINITIONS

Adaptive learning: A form of online learning that customizes lessons for each individual student to focus on areas they are struggling with. Each learner's experience is typically adjusted in real time based on his or her progress.

Asynchronous learning Teaching-learning interaction that does not take place in real-time or in-person, allowing users to access the information at their own pace and at their own convenience.**1**

Authoring tool: A software program that can be used by non-programmers to develop e-learning materials. Web-based content is generally developed and deployed using Flash or Shockwave players.

Blended Learning: an instructional mind set in which online tools are leveraged to enhance the face-to-face learning that already exists within a classroom

Collaborative Learning: Learning that takes place in a peer-oriented environment. The development and use of collaborative tools such as web conferencing, instant messaging, e-mail, blogs, etc **.**Students' learning together in a group, sharing resources and skills and exchanging ideas to improve learning.

Collaborative Tools: Tools that allow geographically dispersed groups and individuals to work in real-time on learning assignments. Examples of tools include: web conferencing, online discussion forums, and instant messaging

Content Management System (CMS): A centralized software application or set of applications that facilitates and streamlines the process of designing, testing, approving, and posting e-learning content, usually on webpages

Course Management Systems: Technology designed primarily to support academic classroom courses. It is an efficient tool for posting materials such as syllabi and course readings, and for facilitating discussion between students

Digital Learning/eLearning indicates any potential use of technology within an education context but typically refers to computer-based activities. This does not specifically imply a location for education so could represent in-person computer-based activities both independent and collaborative, or activities intended to be completed away from the classroom either synchronously or asynchronously.

Digital Literacy refers to an individual's capacity and ability to use digital information and technologies to find, evaluate, create and communicate effectively. Required digital literacy will vary depending on role (in the case of staff) and course or subject (in the case of students). Where increased literacy is required for study or as part of a role, there should always be relevant support provided either by Department, College, or Central Services.

Distance Education or **Distance Learning**: a type of learning that is delivered over the internet. The learning happens outside of a traditional classroom, by using an LMS to deliver learning materials and webinar services to replace a face-to-face communication.

Face-to-face Learning: refers to an environment in which both teacher and learner are physically present and able to converse naturally with no need for digital intervention. This is a traditional method and retains merit through ease of discussion, adaptability and engagement. However, face-to-face learning requires physical resources and can only be delivered on a small scale.

Flipped classroom: A method of blended learning in which students use online resources to acquire knowledge outside of school and use class time to participate in discussions, group work or other interactive activities.

Hybrid Audience is a more passive learning experience in which students are required to observe and consider delivered materials with little to no interactive engagement.

Hybrid Teaching & Learning is an interactive and participation focused session with a higher demand for technology and resources to facilitate effective engagement and presence.

Instructional Design: a practice of analysing, designing and developing instructional materials and transferring them into an online curriculum.

Learning Content Management System (LCMS): Software that can be used to track and input learning content and course material. Some of these systems allow for multiple uses of the content including online courses, printable PDF manuals, or help files.

Learning Management System (LMS): A program that manages the administration of training. It provides an electronic shell for learning resources and modules for individual learners and groups of learners. This web-based system allows for the addition, deployment, and tracking of learning content. It can be used for interaction (discussion boards and chat), monitoring individual and group performance, and collecting assessment data and transferring it for reporting and recording purposes.3 Blackboard is an example of a LMS system. See definition for Blackboard.

Learning platform: Internal or external sites often organized around tightly focused topics, which contain technologies that enable users to submit and retrieve information.

Massive Open Online Course (MOOC): An online course delivered to large numbers of users at any one time, MOOCs can be applied for both corporate training and the delivery of educational content. In addition to the delivery of content, MOOCs often facilitate collaborative discussion and interactions between students and teachers, or instructors and learners.

Media: Text, graphic, audio, video, or human element used to teach. Also the physical material, such as paper or CD used for storing computer-based information.

Mobile learning: Refers to the usage of training programs on mobile devices such as handheld computers, MP3 players, notebooks, and mobile phones

Synchronous learning: An online communication tool, instructor-to-student or student-to-student that occurs at the same time but not necessarily in the same place.

Virtual Classroom: an online classroom where learning and collaboration happen. There is a chat, whiteboard, video and audio capabilities enabled.

Virtual Learning Environment (VLE): A software tool that brings together resources or the components of a Managed Learning Environment (MLE).[20]

Webinars are online learning or training activities using video conferencing tools such as Microsoft Teams to provide an interactive workshop or seminar. They are typically synchronous to maximise engagement and augment the experience beyond simple information delivery. Webinars can easily be recorded and made available for reference after the live session.

[20] For more e-learning terms refer to http://www.cybermediacreations.com/e-learning/glossary.html

VR/AR/MR GLOSSARY KEYCONCEPTS

BASICTERMS

Augmented reality (AR) – the overlay of digital information over the physical world which can be experienced with the help of camera-equipped devices, such as a smartphone or a tablet.

Extended reality (XR) – the environments that permit the interaction of computers and people and which enable the appearance of mixed reality, virtual reality, and augmentedreality.

Mixed reality (MR) – the most controversial concept of XR. The reality which, apart from the overlay of digital data on the real world, includes the adaptation of this data to the physical world and interaction with this information.

Virtual Reality (VR) – computer-simulated environment that can be accessed with the help of a special headset. For now, 3 out of 3 senses are often simulated in VR (vision, hearing, touch), yet in some virtual reality arcades, users receive full immersion (along with taste andtouch).

TECHNOLOGY

3D graphics – the field of computer graphics which embraces 3D objects modeling, texturing, and utilization of special effects for creation of 3Dcontent.

3D modeling – creation of virtual objects of existing physical objects that can be viewed from all the angles.

360 video – a spherical video that allows viewing the environment in every possible direction. Is used for real estate VR tours, museum tours in VR.

3D tour (a virtual reality tour) is the tour in which a customer can preview the environment he/she is about to attend.