



HANDONG  
UNITWIN  
FELLOWSHIP



School of  
Education

**Lecture 1**

Spring 2024

# C-EDUC2: Technology for Teaching and Learning 1

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# Lecture 1



# TEACHING and Learning with Technology: *An Introduction*

*Image 1: Tackling Math with Technology in the Philippines* (Source: Cirillo, 2014: Online)

## Getting started with the course



# Educational Technology in the context of the 21<sup>st</sup> century

## Educational Technology in the context of the 21<sup>st</sup> century



*Image 2: Educational Technology and Mobile Learning (Source: Rohini, 2021: Online)*

### **COURSE DESCRIPTION:**

This course provides pre-service teachers with an **understanding of educational technology's principles, theories, and practical applications** in traditional, flexible, and blended classroom setups.

## Educational Technology in the context of the 21<sup>st</sup> century



*Image 2: Educational Technology and Mobile Learning (Source: Rohini, 2021: Online)*

## **COURSE DESCRIPTION:**

**Emphasis will be placed on integrating technology effectively to enhance teaching and learning experiences in all educational circumstances.**

## Educational Technology in the context of the 21<sup>st</sup> century

### **COURSE DESCRIPTION:**

**Topics include digital tools, multimedia resources, learning management systems, and the ethical use of technology in education.**



*Image 2: Educational Technology and Mobile Learning (Source: Rohini, 2021: Online)*

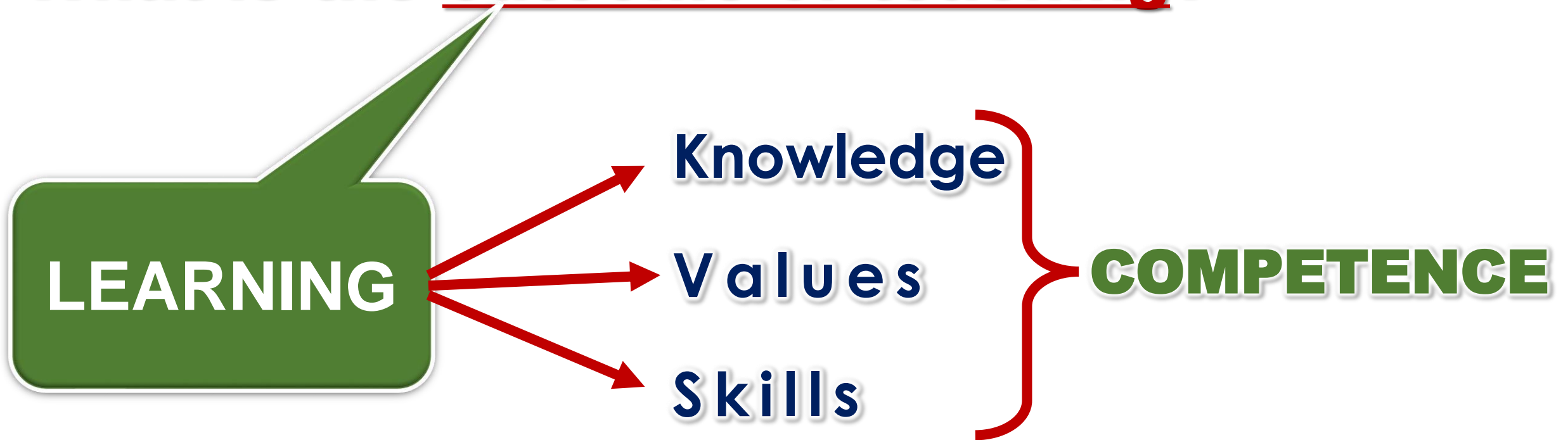


## Lecture Objectives

1. Identify the competency standards of ICT for teaching and learning in pre-service teacher education;
2. Unpack the basic concepts of ICT to provide a common understanding of integrating technology in teaching and learning; and,
3. Determine the significance of technology for teaching and learning in the 21st century and beyond.

## 1. Competency Standards of ICT in Education

What is the **outcome of teaching?**





## 1. Competency Standards of ICT in Education

How does it take to be  
**COMPETENT?**

## 1. Competency Standards of ICT in Education





## 1. Competency Standards of ICT in Education

- Domain 1: Understanding ICT in Education**
- Domain 2: Curriculum and Assessment**
- Domain 3: Pedagogy**
- Domain 4: Technology Tools**
- Domain 5: Organization and Administration**
- Domain 6: Teacher Professional Learning**
- Domain 7: Teacher Disposition**



## **Domain 1: Understanding ICT in Education**

- **The pros and cons of using ICT**
- **Appropriate ICT tools for learning**
- **Teaching reinforcement**



## **Domain 2: Curriculum and Assessment**

- **Performance tasks using ICT**
- **Practical assessment tools**
- **Creative learning resources**
- **Online and offline student engagement**



## **Domain 3: Pedagogy**

- **Facilitating learning with multimedia**
- **Collaborative learning tasks**
- **Enhancing critical thinking using technology**



## **Domain 4: Technology Tools**

- **Tools to create learning opportunities**
- **Flexibility and ingenuity**
- **Creativity and productivity**



## **Domain 5: Organization and Administration**

- **Inclusive learning environment**
- **Differentiated learning tasks**
- **ICT-assisted collaborative learning**
- **Ethical use of multimedia**



## **Domain 6: Teacher Professional Learning**

- **Continuous technology updating**
- **Collegial partnership and support**
- **Training on ICT-integrated teaching**



## **Domain 7: Teacher Disposition**

- **Social, ethical, and legal considerations**
- **Confidentiality, privacy, security measures**



## 2. Essential Technological Concepts and Terms

**What things make up  
EDUCATIONAL TECHNOLOGY  
in the 21<sup>st</sup> century?**

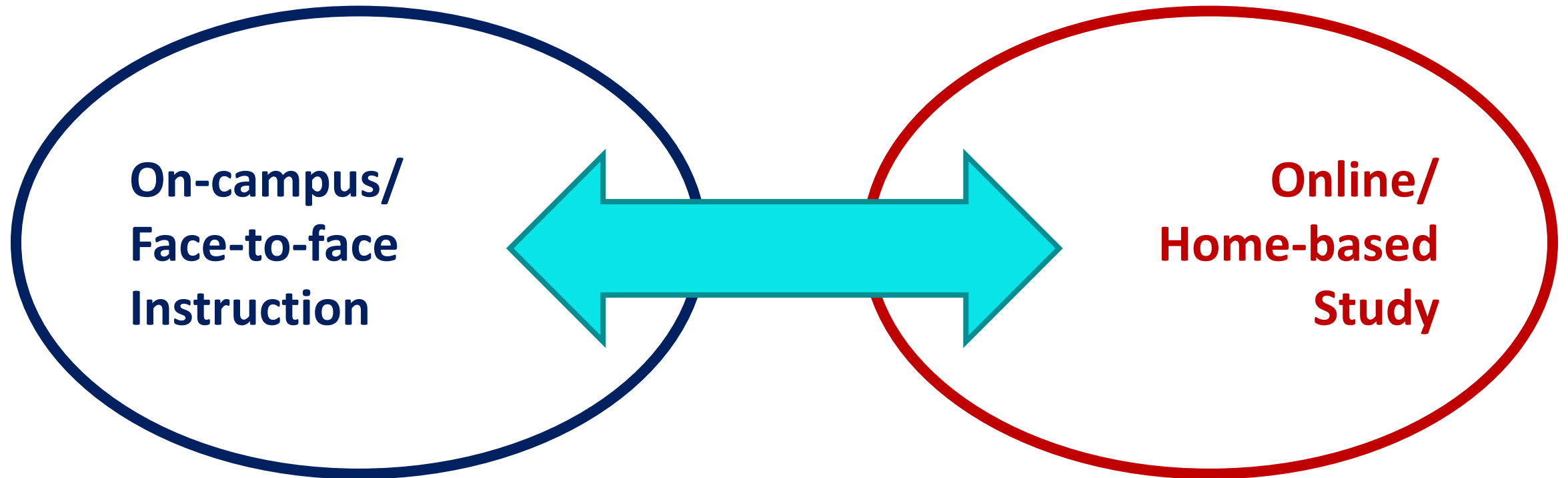


## 2. Essential Technological Concepts and Terms

**BLENDED LEARNING • DIGITAL LITERACY •  
LEARNING MANAGEMENT SYSTEM  
PERSONALIZED LEARNING • FLIPPED  
CLASSROOM • ASSISTIVE TECHNOLOGY •  
GAMIFICATION • AUGMENTED REALITY  
• VIRTUAL REALITY • DATA ANALYTICS**

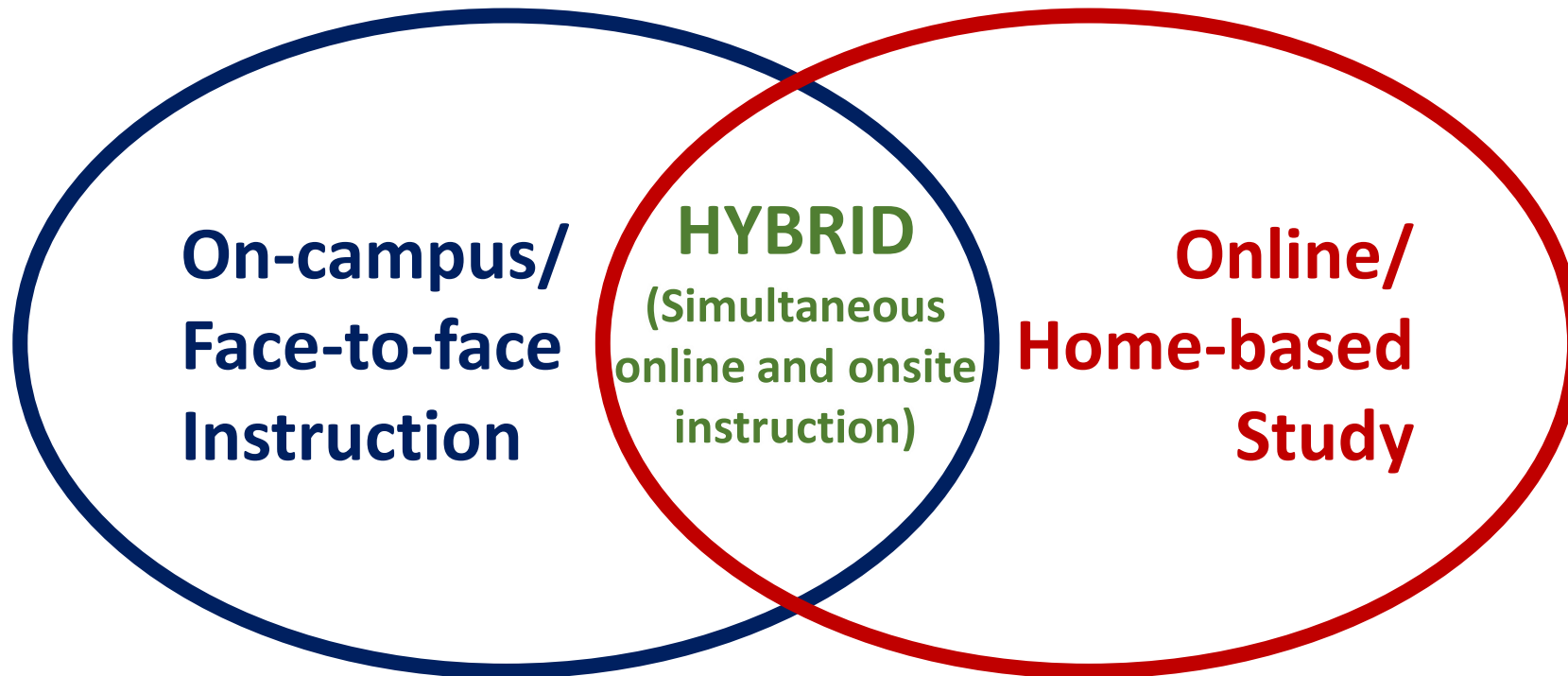
## 2. Essential Technological Concepts and Terms

# 1. BLENDED LEARNING



## 2. Essential Technological Concepts and Terms

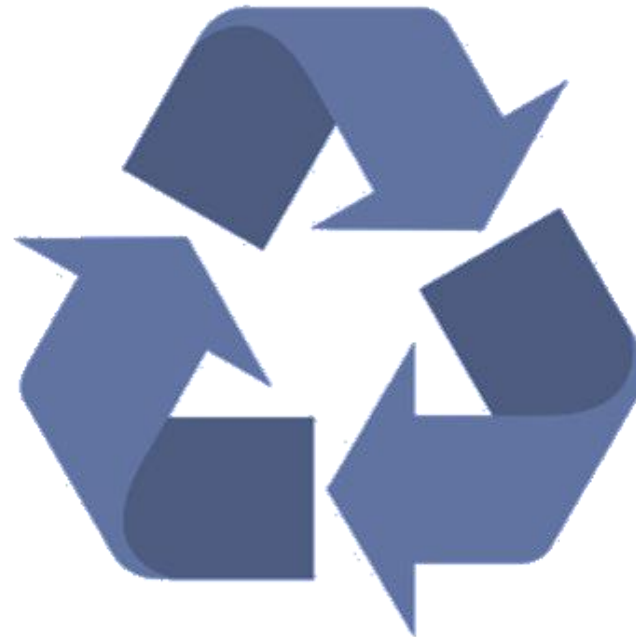
# 1. BLENDED LEARNING



## 2. Essential Technological Concepts and Terms

# 2. DIGITAL LITERACY

**Information**



**Innovation**

## 2. Essential Technological Concepts and Terms

# 3. PERSONALIZED LEARNING

# 4. ADAPTIVE LEARNING

- ❖ Also known as “Differentiated instruction”
- ❖ Learning tasks tailored to the child’s needs, interests, and capabilities



## 2. Essential Technological Concepts and Terms

# 5. FLIPPED CLASSROOM

**Pre-instruction**  
Asynchronous  
Exploratory

**Post-instruction**  
Asynchronous  
Evaluative

**Classroom  
instruction**  
Synchronous  
Explanatory

## 2. Essential Technological Concepts and Terms

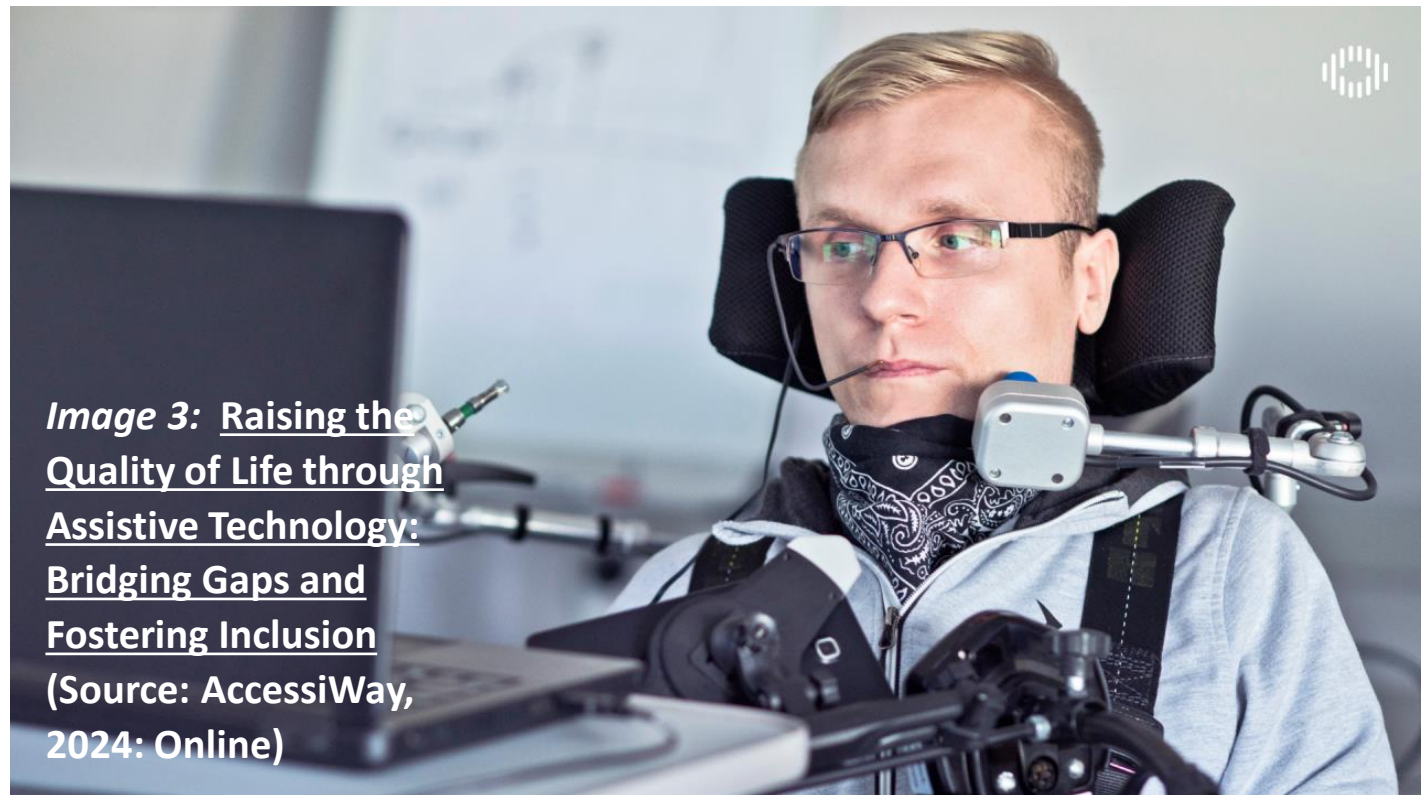
# 6. LEARNING MANAGEMENT SYSTEM (LMS)

- ❖ Teaching and learning portals
- ❖ Learning resource and output repository
- ❖ Alternative evaluation of learning
- ❖ Toolkit for teaching and learning

## 2. Essential Technological Concepts and Terms

# 7. ASSISTIVE TECHNOLOGY

Applications,  
devices, and  
software for  
specific and  
specialized  
purposes



*Image 3: Raising the Quality of Life through Assistive Technology: Bridging Gaps and Fostering Inclusion*  
(Source: AccessiWay, 2024: Online)

## 2. Essential Technological Concepts and Terms

# 8. GAMIFICATION

Game-based  
teaching and  
learning tasks



*Image 4: Game-Based Learning: How it Works (Source: Malhotra, 2017: Online)*

## 2. Essential Technological Concepts and Terms

# 9. AUGMENTED/VIRTUAL REALITY

Simulated  
environment



*Image 4: Virtual Reality in Education (Source: American University, 2019: Online)*

*Image 5: Game-Based Learning: How it Works (Source: Malhotra, 2017: Online)*

Digital material projected  
into the real world



## 2. Essential Technological Concepts and Terms

# 10. DATA/LEARNING ANALYTICS

**Information**



**Options/Solutions**



### 3. Significance of ICT in Teaching and Learning

as a tutor

**EDUCATIONAL  
TECHNOLOGY**

as a teaching tool

as a learning tool

### 3. Significance of ICT in Teaching and Learning

## Technology as a Tutor

- ❖ Real-time virtual and in -line interaction
- ❖ Learning resource and output repository
- ❖ Alternative evaluation of learning
- ❖ Toolkit for teaching and learning

## 3. Significance of ICT in Teaching and Learning

### Technology as a **Tutor**





### 3. Significance of ICT in Teaching and Learning

## Technology as a **Teaching Tool**

# **Curricular and Instructional devices**



### 3. Significance of ICT in Teaching and Learning

## Technology as a **Learning Tool**

**Self-directed and interactive  
learning environments**



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- AccessiWay (2024).** Raising the quality of life through assistive technology: Bridging gaps and fostering inclusion. [Online Image] [Accessed on March 17, 2024] [https://www.linkedin.com/pulse/raising-quality-life-through-assistive-technology-bridging-ne5bf/?trk=organization\\_guest\\_main-feed-card\\_feed-article-content](https://www.linkedin.com/pulse/raising-quality-life-through-assistive-technology-bridging-ne5bf/?trk=organization_guest_main-feed-card_feed-article-content)
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