MODERN DIGITAL SKILLS

The University of Jordan

King Abdullah II School of
Information Technology

CHAPTER 4 : KEY DIGITAL TECHNOLOGIES
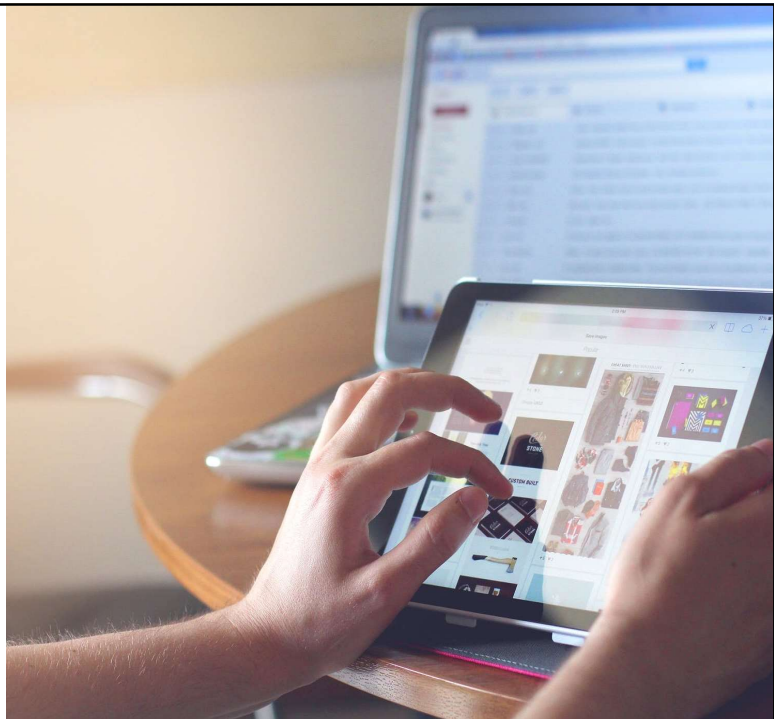
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TOPICS

1. **Gamification**
   • Applications
   • Benefits
   • Examples (Kahoot)

2. **3D printing**

3. **AI platforms:** Using Gen AI chatbots
   • *POE assistant (Anthropic),*

4. **Gen AI:** Using Gen AI to Generate Audios and Sounds
   • *Elevenlabs (Elevenlabs)*

5. **Gen AI**: Using Gen AI to Generate Videos from images

Gamification

It is a strategy that integrates entertaining gaming elements into nongame contexts

It is when you add elements from games—like scores, levels, or prizes—to everyday activities to make them more interesting and motivating.

Successful gamification requires understanding the audiences and the context.

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Applications of Gamification

Educational gamification

Business gamification

Gamification in social networks

Gamification in health and wellness

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Applications of Gamification

Educational Gamification
Using game-like elements to <u>enhance learning experiences</u>, making education more engaging, interactive, and motivating.

Examples:
1) H5P tasks in JUExams and Elearning
2) Learning languages using Duolingo for example.
3) Education games on tablets for kids and adults, like in Kahoot

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Applications of Gamification

Business Gamification
The use of game-like elements (such as points, rewards, competition, and levels) in non-game <u>business environments</u> to <u>motivate employees and engage customers.</u>

Examples:
1) A company creates a sales leaderboard where sales representatives earn points for each sale. They can track their progress and compete with others to reach milestones or win prizes.
 2) Getting reward points every time you make a purchase.
3)**Pizza Hero**: a gamified app that allowed users to virtually make pizzas in a fun, interactive way. The app used game-like elements to <u>engage customers</u> and <u>raise pizza sales</u>.

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Applications of Gamification

Gamification in Social Networks

The integration of game-like elements—such as points, badges, challenges, rewards, or levels—into social media platforms to encourage user interaction and participation.

Example :LinkedIn Endorsement

Is a feature that allows users to recognize the skills of their connections on LinkedIn. When someone endorses you, they confirm that you have a particular skill or expertise, which can strengthen your professional profile and credibility.

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Applications of Gamification

Gamification in Health and Wellness

Applying game-like elements to <u>encourage healthier behaviors</u> and <u>motivate individuals to engage in fitness activities, nutrition</u> tracking, and overall well-being.

Examples :

1) Fitness Apps
   incorporate challenges, levels, and rewards. Users earn points for completing workouts or achieving milestones.
2) Nutrition Apps
   provide daily challenges to log your food and keep track of your meals. Users earn rewards and get reminders for regularly logging their meals and staying within their calorie or nutrient targets.

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Benefits of Gamification

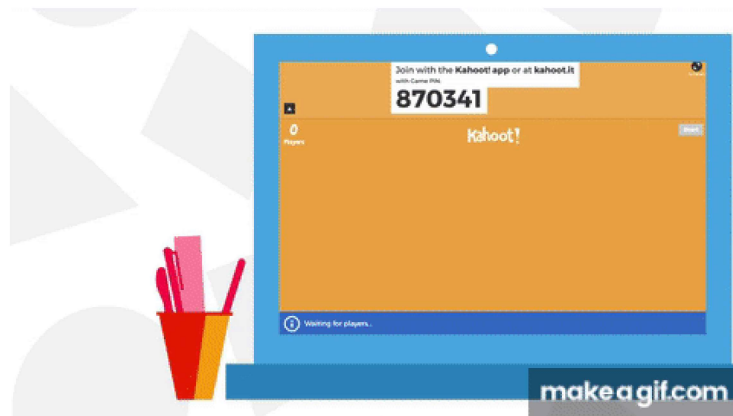| 1	2	3	4	5
Encourage creativity	Develop skills and innovation	Improve motivation and make tasks more fun and enjoyable.	Improve productivity	Encourage active participation and communication

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Example of Gamification (Kahoot)

Kahoot! is an online game-based learning platform. It has learning games, which are user-generated multiple-choice quizzes that can be accessed via a web browser or the Kahoot! app.

https://kahoot.com/

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Kahoot Example

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Kahoot Example

Click here

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Kahoot Example

Start typing your questions and answers

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Kahoot Example

Create a Kahoot Named Let's Play that contains the following questions :
Question 1 : The Color of the Apple in the following Picture is :   a. Yellow   b. Green   c. White   d. Red
Question 2 : The Maximum number is: a. 30   b. -60   c. 20   d. -120
Question 3 : The Cat in the Picture is taller than the Dog   a.   True   b.   False
Question 4 : When we Mix Red Color with Blue Color we make :   a. Green   b. Yellow   c. Orange   d. Purple

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Kahoot Example

Question1:

Kahoot Example

Question2:

Kahoot Example

Question3:

Kahoot Example

Question4:

Click **save**

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Kahoot Example

The following dialog box appears
Write a title for your Kahoot in the box. (i.e. **Lets Play**)
then click **continue**

Click **Done**

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Kahoot Example

The following picture shows the kahoots you have created , click the (**Lets Play**) kahoot to see all the questions and answers you wrote

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Kahoot Example

Click **Assign** then choose the date then click **create**

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Kahoot Example

Copy the **Game PIN (**0666628)

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Kahoot Example

Use the QR:

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Kahoot Example

To check the players : click **players**

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Kahoot Example

Now we are going to start the game:
Use the link: Kahoot.com then click Join game
Enter the pin code

Copy the **Game PIN (**0666628)
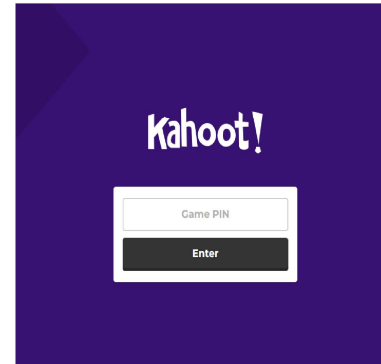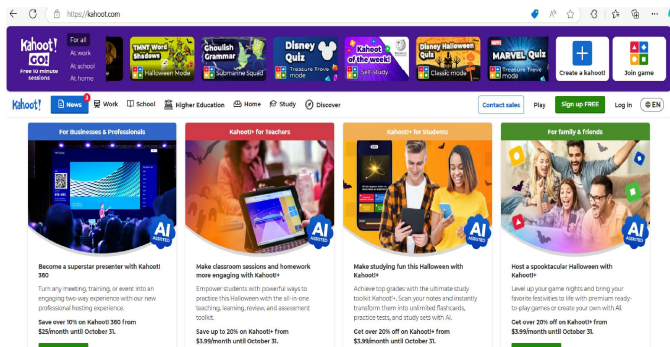
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3D Printing

Three-dimensional (3D) printing is a process that builds objects layer by layer using materials like plastic, metal, or even food, based on a digital design
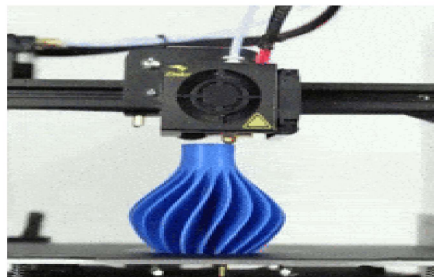
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Examples - 3D Printing

Toys: A 3D printer can make custom toy figures or puzzle pieces.
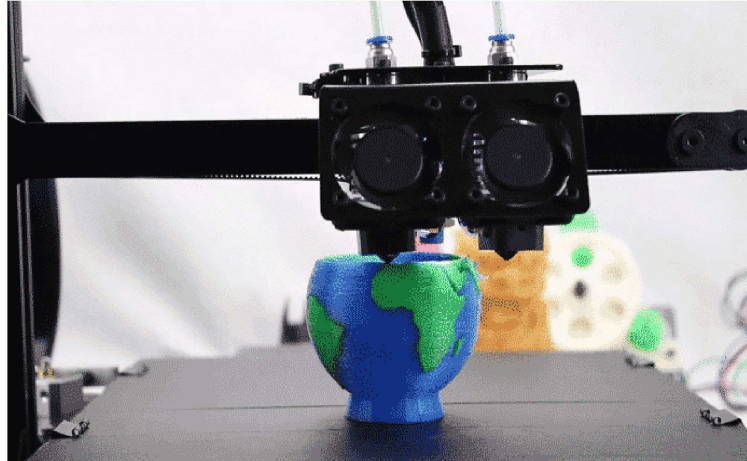
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Examples- 3D Printing

Medical Uses: Doctors can print prosthetic limbs or models of organs for surgeries.
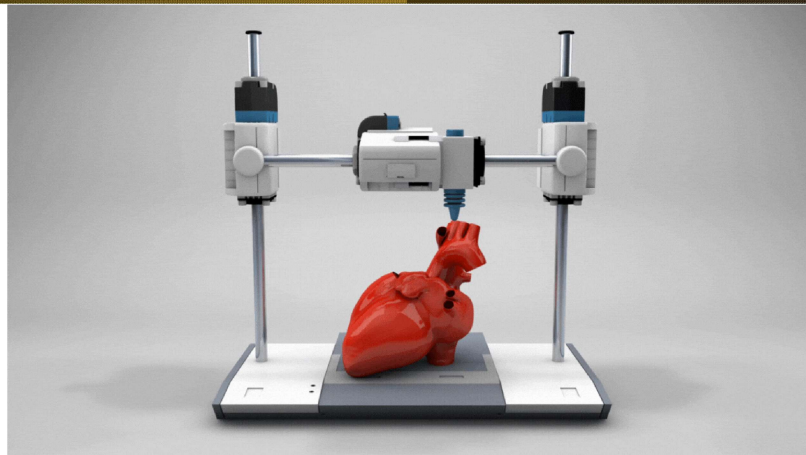
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Examples - 3D Printing

Cake: Special 3D printers can create cake designs or print with chocolate.

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Examples - 3D Printing

House: large 3D printers can Fastly print houses by layering concrete

This 3D-printed house only took one week to build.

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AI platforms: Using Gen AI chatbots
POE assistant (Anthropic)

Poe

POE is an AI platform from Anthropic (a hub for various AI models and chatbots),
https://poe.com/

Let's try to use it with the following examples (prompts) :

1. **Text to image (Image generation bots)**: "create an image of four children playing in the backyard of their school (Using Playground).
2. **Create diagrams** : Visualize water cycle in nature **(Using Playground).**

•**Both POE (Anthropic)and Playground(Open AI) are platforms that allow users to interact with AI models (e.g., OpenAI's GPT series) for generating responses.**

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Gen AI: Using Gen AI to Generate Audios and Sounds
Elevenlabs (Elevenlabs)

Elevenlabs: a generative AI application that generates audio and sounds
- Developed by Elevenlabs.
- Founded in 2022
- creates Sounds, sound effects, voices.
- Text→ audio

https://elevenlabs.io/

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Elevenlabs Example: (Text to Speech)

Let's try to use it with the following examples (prompts) :

1. **Text to speech**: "*Deep learning is a subset of machine learning that uses neural networks with many layers (hence "deep") to model and understand complex patterns in large datasets.*"

CREATE
- Text to Speech
- Voice Changer
- Voices
- Sound Effects

WORKFLOWS

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Elevenlabs Example: (Text to Speech)

Speech Synthesis
Unleash the power of our cutting-edge technology to generate realistic, captivating speech in a wide range of languages.

SIMPLE ADVANCED

GENERATE HISTORY

1

Type your Text Here

"Deep learning is a subset of machine learning that uses neural networks with many layers (hence "deep") to model and understand complex patterns in large datasets."

2

You can change the Voice

Amelia ⬦ Settings 0 / 8,542 Regenerate speech

3 **Click Here to generate the Speech**

You can download the
4 **generated Speech**

professional/Amelia, 10/23/24, 11:35
0:00 / 0:10

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Elevenlabs Example: (Sound Effects)

2- **Sound Effects** : you describe the sound you want to hear ,and you will have multiple uniquely generated samples to choose from in seconds .

1. Open ElevenLabs ,then go to the **Sound effects** Tab.
2. Write down the Description of the sound effects such as any of the following :

> a sound of people chatting in the bus stop
>
> a sound of students working in a lab
>
> a sound of babies laughing
>
> a lion roaring

CREATE

- Text to Speech
- Voice Changer
- Voices
- **Sound Effects**

WORKFLOWS

3. Click on Generate Sound Effects

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Elevenlabs Example: (Sound effects)

Sound Effects
Imagine a sound and bring it to life, or explore a selection of the best sound effects generated by the community

GENERATE   EXPLORE   HISTORY

1

Type the sound effect description

a lion roaring

2

Settings   320 / 6,879   Generate Sound Effects

Click Here to generate the Sound effects

4   **Play the Sound effect**

▶ Generation 1   ⬇

3

⚗ Generation 2   ⬇

5

The generated Sound effects

⚗ Generation 3   ⬇

You can download as MP3 sound file

⚗ Generation 4
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Gen AI : Using Gen AI to Generate Videos from images
Luma Dream machine(Luma)
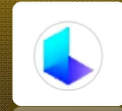
Luma dream machine is a Video Generator.
   It is an AI model that makes high quality, realistic videos and 3D images from text and images

https://lumalabs.ai/dream-machine

Let's try to use it with the following examples (prompts) :

1. **(Luma dream machine) :** Animate an image of the baby to smile and clap his hands (you have to give it an image of a baby)

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