Postgraduate Diploma

Video Game Gamification and Devices

tech technological university

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Postgraduate Diploma
Video Game Gamification and Devices

- Modality: **online**
- Duration: **6 months**
- Certificate: **TECH Technological University**
- Dedication: **16h/week**
- Schedule: **at your own pace**
- Exams: **online**

Website: www.techtitute.com/us/videogames/postgraduate-diploma/postgraduate-diploma-video-game-gamification-devices

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01

Introduction

Video games have undergone an impressive evolution in recent years. Long gone are those early days of the Arcade. Now, video games have become a recreational and common activity for users of all ages. Therefore, within this niche, companies have found an opportunity to achieve success. In order to reach this success, the most commonly used tool is gamification, which uses elements of video games to influence and enhance motivation, improve productivity and encourage users to achieve objectives. With this in mind, the present syllabus has been developed to understand this process and its application in other fields, such as education and research.

Gamification has a simple mechanic: by winning a battle, the player gets a prize and occupies a place on the leaderboard"

The advance of technology has led to a rapid increase in the number of video games worldwide. During its early years, the dynamics of a game were simple, only one opponent was needed to compete. Today this has changed, thanks to new inventions such as Virtual Reality, allowing players to enjoy an immersive experience with greater ability to feel, see, experience and be more connected to the game's story. But none of this would be possible if it were not possible to motivate users to participate in these adventures.

For all these reasons, this Postgraduate Diploma will help students learn the guidelines used by developers when creating addictive and stimulating games. The program will begin with an understanding of the importance of application usability and the interaction of people with computers. This will help programmers to adapt the interface of a game to the users' needs.

Then, the importance of gamification will be analyzed, understanding the rewards and incentives that drive people to play every day. Finally, the architecture of networks and multiplayer systems to develop online games will be described.

This **Postgraduate Diploma in Video Game Gamification and Devices** contains the most complete and up-to-date academic program on the market. Its most notable features are:

- Practical cases presented by experts in Video Game Narrative
- The graphic, schematic, and practical contents with which they are created, provide scientific and practical information on the disciplines that are essential for professional practice
- Practical exercises where self-assessment can be used to improve learning
- Special emphasis on innovative methodologies
- Theoretical lessons, questions to the expert, debate forums on controversial topics, and individual reflection assignments
- Content that is accessible from any fixed or portable device with an Internet connection

The idea of gamification in video games has been extended to the educational sector to motivate children to learn by following a method of rewards"

A game with good challenges and tasks will keep users' attention and motivate them to play for more hours"

Game challenges help social cooperation and civic participation on a large scale.

A good game is fun and opens the door to participate, learn and communicate in a different way.

The teaching staff of this program includes professionals from the industry, who contribute the experience of their work to this program, in addition to recognized specialists from reference societies and prestigious universities.

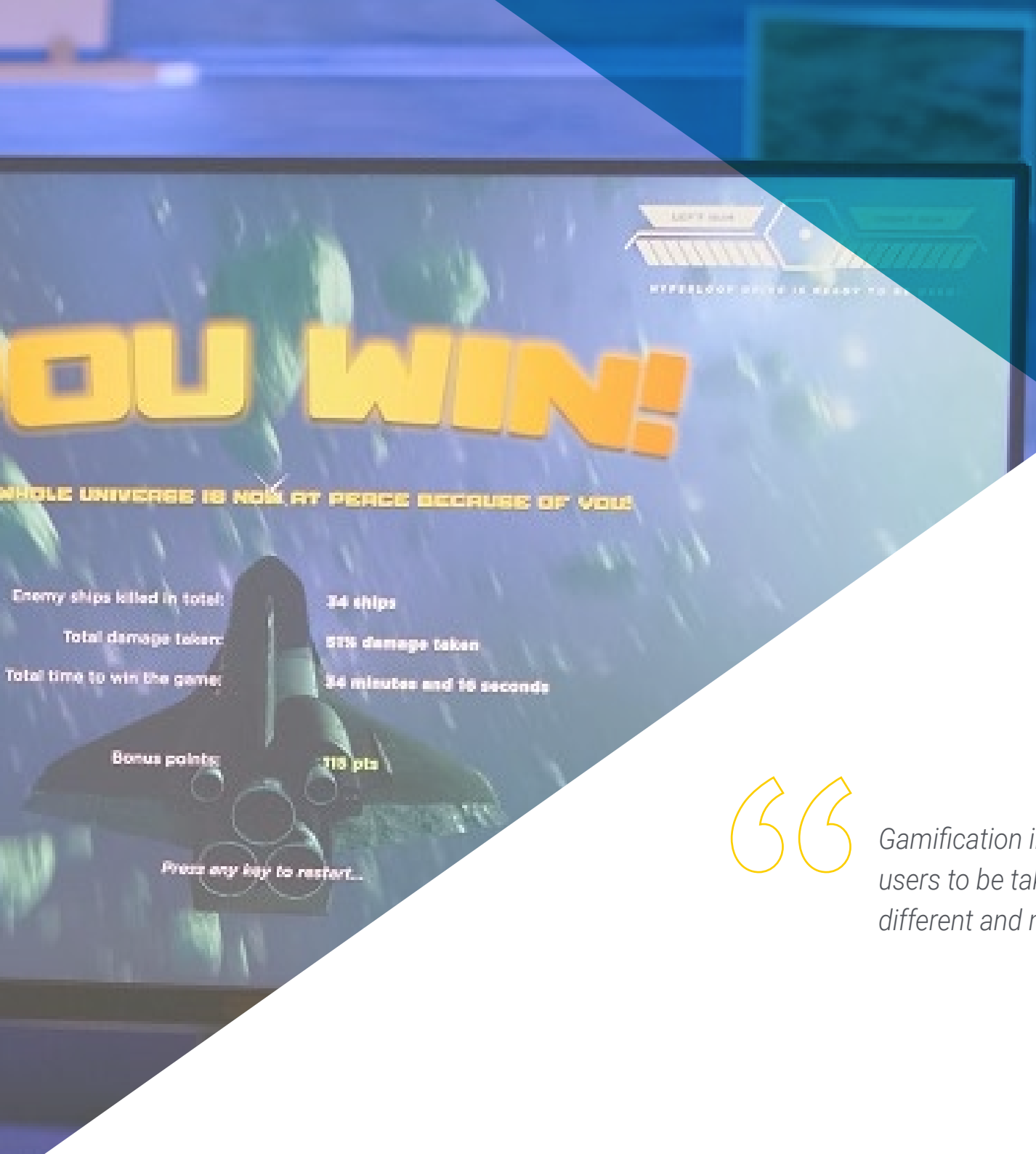
The multimedia content, developed with the latest educational technology, will provide the professional with situated and contextual learning, i.e., a simulated environment that will provide immersive learning programmed to learn in real situations.

This program is designed around Problem-Based Learning, whereby the professional must try to solve the different professional practice situations that arise throughout the program. For this purpose, the student will be assisted by an innovative interactive video system created by renowned and experienced experts.

02

Objectives

The Postgraduate Diploma in Video Game Gamification and Devices will offer its students the opportunity to access current knowledge in the area, as well as an in-depth study of the impact it has had on the field of education and research. In this way, the student will create collaborative and educational games that encourage social cooperation among users, motivating them to complete the levels and solve the puzzles.



Gamification in video games allows users to be taken through a completely different and motivating experience"

General Objectives

- Understand the different elements that make up a story
- Apply narrative structure to the video game format
- Explore, in depth, the process of script writing and storyboard for a video game, differentiating between all the stages involved
- Analyze the key components and concepts that should be found in a script
- Study the narrative fundamentals and the hero's journey as one of the main forms of narration
- Examine storyboarding and animatics, highlighting their importance within the scripting process
- Know the different genres and existing narratives in the world of video games
- Learn to develop effective dialogue through the script

With this Postgraduate Diploma you will be able to create and program different challenges in each level of the game, achieving the loyalty of your users to play again"

Specific Objectives

Module 1. Human-Computer Interaction

- Explore the different accessibility guidelines, the standards that establish them and the tools to evaluate them, as well as the different methods of interaction with the computer, through peripherals and devices
- Understand the importance of application usability and the different types of human diversity, the limitations they imply and how to adapt interfaces according to the specific needs of each of them
- Learn the process of interface design, from requirements analysis to evaluation
- Go through the various intermediate steps necessary to make a proper interface

Module 2. Video Games and Simulation for Research and Education

- Examine the main characteristics of representative serious games in the fields of education and research
- Understanding how video games can affect people's emotional state
- Obtain the ability to evaluate video games from different approaches

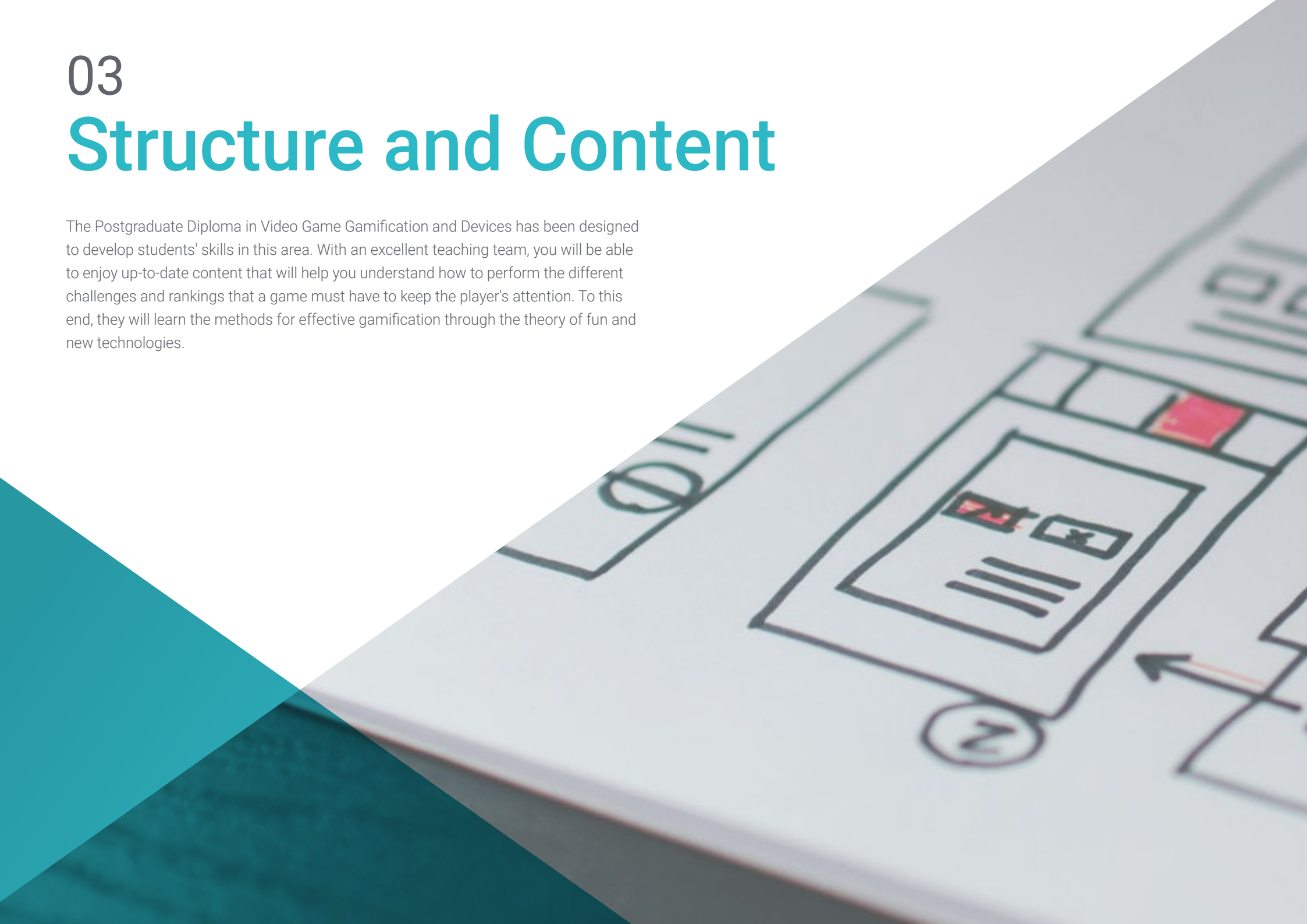
Module 3. Multiplayer Networks and Systems

- Describe the Transmission Control Protocol/Internet Protocol (TCP/IP) architecture and the basic operation of wireless networks
- Analyze video game security
- Acquire the ability to develop online games for multiple players

03

Structure and Content

The Postgraduate Diploma in Video Game Gamification and Devices has been designed to develop students' skills in this area. With an excellent teaching team, you will be able to enjoy up-to-date content that will help you understand how to perform the different challenges and rankings that a game must have to keep the player's attention. To this end, they will learn the methods for effective gamification through the theory of fun and new technologies.



In this Postgraduate Diploma you will be able to develop a fun multiplayer game using Unreal or Unity tools"

Module 1. Human-Computer Interaction

1.1. Introduction to Human-Computer Interaction
- 1.1.1. What is Human-Computer Interaction?
- 1.1.2. Relationship Between Human-Computer Interaction and Other Disciplines
- 1.1.3. User Interface
- 1.1.4. Usability and Accessibility
- 1.1.5. User Experience and User-Focused Design Methodology

1.2. Computer and Interaction: User Interface and Interaction Paradigms
- 1.2.1. Interaction
- 1.2.2. Paradigms and Styles of Interaction
- 1.2.3. Evolution of User Interfaces
- 1.2.4. Classic User Interfaces: WIMP/GUI, Commands, Voice, Virtual Reality
- 1.2.5. Innovative User Interfaces: Mobiles, Laptops, Collaborative, BCI

1.3. The Human Factor: Psychological and Cognitive Aspects
- 1.3.1. The Importance of the Human Factor in Interaction
- 1.3.2. Human Information Processing
- 1.3.3. The Input and Output of Information: Visual, Audio and Tactile
- 1.3.4. Perception and Attention
- 1.3.5. Knowledge and Mental Models: Representation, Organization and Acquisition

1.4. The Human Factor: Sensory and Physical Limitations
- 1.4.1. Functional Diversity, Disability and Deficiency
- 1.4.2. Visual Diversity
- 1.4.3. Audio Diversity
- 1.4.4. Cognitive Diversity
- 1.4.5. Motor Diversity
- 1.4.6. The Case of Digital Immigrants

1.5. Design Process (I): Requirements Analysis for the User Interface Design
- 1.5.1. User-Centered Design
- 1.5.2. What is Requirements Analysis?
- 1.5.3. Collection of Information
- 1.5.4. Analysis and Interpretation of Information
- 1.5.5. Usability and Accessibility Analysis

1.6. Design Process (II): Prototype and Task Analysis
- 1.6.1. Conceptual Design
- 1.6.2. Prototyping
- 1.6.3. Hierarchic Task Analysis

1.7. Design Process (III): The Evaluation
- 1.7.1. Evaluation in the Design Process: Objectives and Methods
- 1.7.2. Evaluation Methods Without Users
- 1.7.3. Evaluation Methods With Users
- 1.7.4. Evaluation Standards and Rules

1.8. Accessibility: Definition and Steps
- 1.8.1. Universal Accessibility and Design
- 1.8.2. WAI Initiative and WCAG Steps
- 1.8.3. WCAG 2.0 and 2.1

1.9. Accessibility: Evaluation and Functional Diversity
- 1.9.1. Web Site Accessibility Evaluation Tools
- 1.9.2. Accessibility and Functional Diversity

1.10. The Computer and Interaction: Peripherals and Devices
- 1.10.1. Traditional Peripherals and Devices
- 1.10.2. Alternative Peripherals and Devices
- 1.10.3. Mobiles and Tablets
- 1.10.4. Functional Diversity, Interaction and Peripherals

Module 2. Video Games and Simulation for Research and Education

2.1. Introduction to Serious Video Games
- 2.1.1. What Does a Serious Game Involve?
- 2.1.2. Features
- 2.1.3. Highlights
- 2.1.4. Advantages of Serious Games

2.2. Motivation and Objectives of Serious Games
- 2.2.1. Creation of Serious Games
- 2.2.2. Motivation of Serious Games
- 2.2.3. Objectives of Serious Games
- 2.2.4. Conclusions

2.3. Simulation Games
- 2.3.1. Introduction
- 2.3.2. Game- Simulation
- 2.3.3. Video Games and ICT
- 2.3.4. Games, Simulations and Management

2.4. Training-Oriented Design
- 2.4.1. Gamification Model
- 2.4.2. Rewards
- 2.4.3. Incentives
- 2.4.4. Gamification Applied to Work

2.5. How to Carry Out Effective Gamification
- 2.5.1. The Theory of Diversion
- 2.5.2. Gamification and Willpower
- 2.5.3. Gamification and New Technologies
- 2.5.4. Famous Examples

2.6. Learning: Game Flow and Progress
- 2.6.1. Game Flows
- 2.6.2. Feeling of Progress
- 2.6.3. Feedback
- 2.6.4. Degree of Completion

2.7. Learning Process: Game-Based Evaluation
- 2.7.1. Kahoot!
- 2.7.2. Methodology
- 2.7.3. Results
- 2.7.4. Conclusions Extracted

2.8. Fields of Study: Educational Application
- 2.8.1. Case Study: Application of Gamification Techniques in Class
- 2.8.2. Step 1: User and Context Analysis
- 2.8.3. Step 2: Learning Objectives Definition
- 2.8.4. Step 3: Designing the Experience
- 2.8.5. Step 4: Identifying Resources
- 2.8.6. Step 5: Application of Gamification Elements

2.9. Field of Study: Simulation and Mastery of Skills
- 2.9.1. Gamification, Simulators and Orientation Towards the Entrepreneurial Attitude
- 2.9.2. Sample
- 2.9.3. Data Collection
- 2.9.4. Data Analysis and Results
- 2.9.5. Conclusions

2.10. Field of Study: Therapy Tools (Real Cases)
- 2.10.1. Therapeutic Gamification: Main Objectives
- 2.10.2. Virtual Reality Therapies
- 2.10.3. Therapies with Adapted Peripherals
- 2.10.4. Conclusions Extracted

Module 3. Multiplayer Networks and Systems

3.1. History and Evolution of Multiplayer Video Games
- 3.1.1. The 1970s: First Multiplayer Games
- 3.1.2. The 90s: Duke Nuke, Doom and Quake
- 3.1.3. Rise of Multiplayer Video Games
- 3.1.4. Local and Online Multiplayer
- 3.1.5. Party Games

3.2. Multiplayer Business Games
- 3.2.1. Origin and Function of Emerging Business Models
- 3.2.2. Online Sales Services
- 3.2.3. Free to Play
- 3.2.4. Microtransactions
- 3.2.5. Advertising
- 3.2.6. Monthly Payment Subscription
- 3.2.7. Pay to Play
- 3.2.8. Try before You Buy

3.3. Local and Network Games
- 3.3.1. Local Games: Beginnings
- 3.3.2. Party Games: Nintendo and Family Union
- 3.3.3. Networks Games: Beginnings
- 3.3.4. Network Games Evolution

3.4. OSI Model: Layers I
- 3.4.1. OSI Model: Introduction
- 3.4.2. Physical Layer
- 3.4.3. Data Link Layer
- 3.4.4. Network Layer

3.5. OSI Model: Layers II
- 3.5.1. Transport Layer
- 3.5.2. Session Layer
- 3.5.3. Presentation Layer
- 3.5.4. Application Layer

3.6. Computer Networks and the Internet
- 3.6.1. What Are Computer Networks?
- 3.6.2. Software
- 3.6.3. Hardware
- 3.6.4. Servers
- 3.6.5. Network Storage
- 3.6.6. Network Protocols

3.7. Mobile and Wireless Networks
- 3.7.1. Mobile Networks
- 3.7.2. Wireless Networks
- 3.7.3. How Mobile Networks Work
- 3.7.4. Digital Technology

3.8. Confidence
- 3.8.1. Personal Security
- 3.8.2. Video Game Hacks and Cheats
- 3.8.3. Anti-Cheating Safety
- 3.8.4. Anti-Cheating Security Systems Analysis

3.9. Multiplayer Systems: Servers
- 3.9.1. Server Hosting
- 3.9.2. Massively Multiplayer Online (MMO) Video Games
- 3.9.3. Dedicated Video Game Servers
- 3.9.4. Local Area Network (LAN) Parties
- 3.10. Multiplayer Video Game Design and Programming

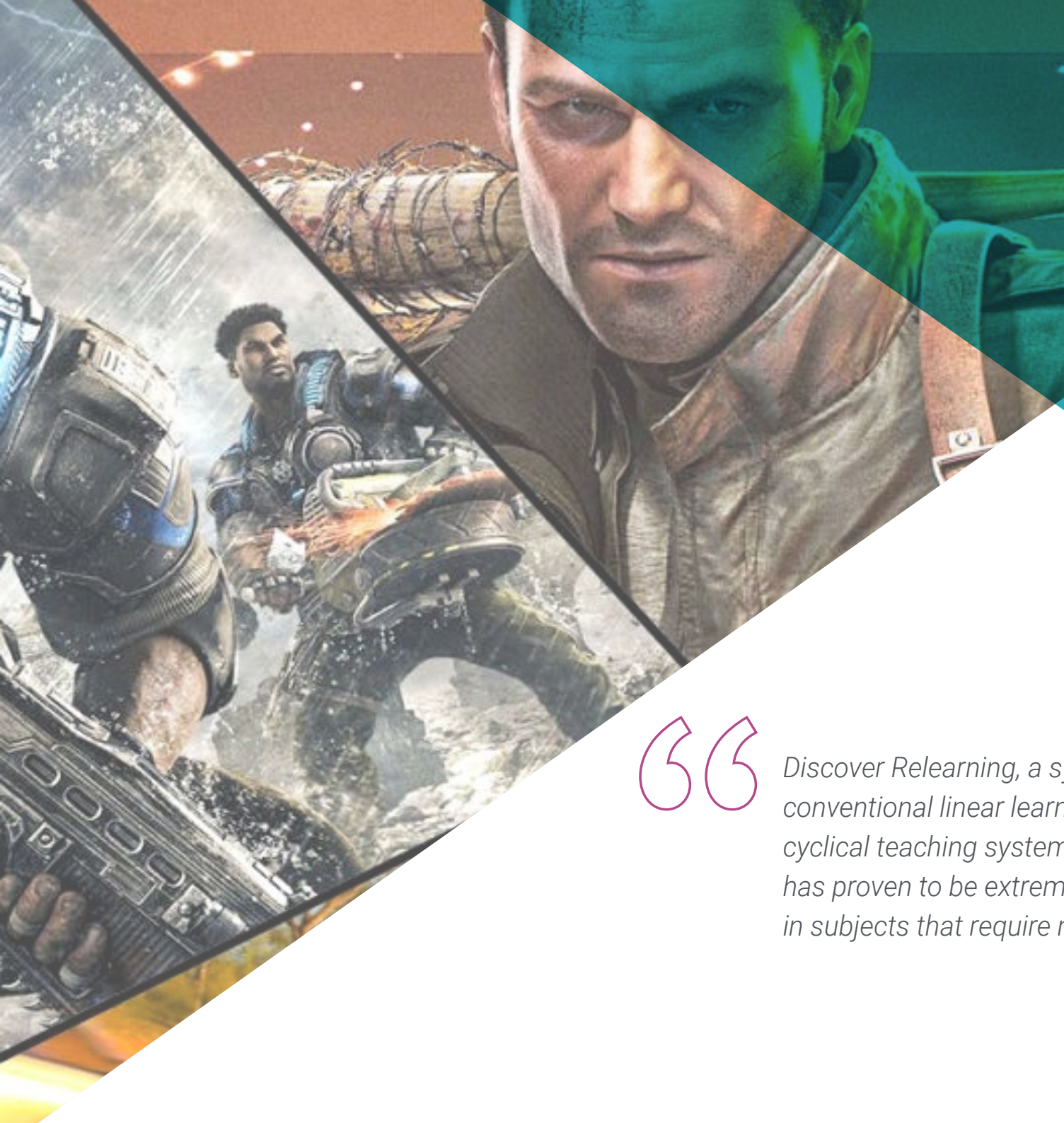
3.10.1. Multiplayer Video Game Design Basics in Unreal
- 3.10.2. Multiplayer Video Game Design Basics in Unity
- 3.10.3. How to Make a Multiplayer Game Fun
- 3.10.4. Beyond a Controller: Innovation in Multiplayer Controls

04

Methodology

This academic program offers students a different way of learning. Our methodology uses a cyclical learning approach: **Relearning**.

This teaching system is used, for example, in the most prestigious medical schools in the world, and major publications such as the **New England Journal of Medicine** have considered it to be one of the most effective.



Discover Relearning, a system that abandons conventional linear learning, to take you through cyclical teaching systems: a way of learning that has proven to be extremely effective, especially in subjects that require memorization"

Case Study to contextualize all content

Our program offers a revolutionary approach to developing skills and knowledge. Our goal is to strengthen skills in a changing, competitive, and highly demanding environment.

At TECH, you will experience a learning methodology that is shaking the foundations of traditional universities around the world"

You will have access to a learning system based on repetition, with natural and progressive teaching throughout the entire syllabus.

The student will learn to solve complex situations in real business environments through collaborative activities and real cases.

A learning method that is different and innovative

This TECH program is an intensive educational program, created from scratch, which presents the most demanding challenges and decisions in this field, both nationally and internationally. This methodology promotes personal and professional growth, representing a significant step towards success. The case method, a technique that lays the foundation for this content, ensures that the most current economic, social and professional reality is taken into account.

> *Our program prepares you to face new challenges in uncertain environments and achieve success in your career"*

The case method has been the most widely used learning system among the world's leading business schools for as long as they have existed. The case method was developed in 1912 so that law students would not only learn the law based on theoretical content. It consisted of presenting students with real-life, complex situations for them to make informed decisions and value judgments on how to resolve them. In 1924, Harvard adopted it as a standard teaching method.

What should a professional do in a given situation? This is the question that you are presented with in the case method, an action-oriented learning method. Over the course of 4 years, you will be presented with multiple practical case studies. You will have to combine all your knowledge, and research, argue, and defend your ideas and decisions.

Relearning Methodology

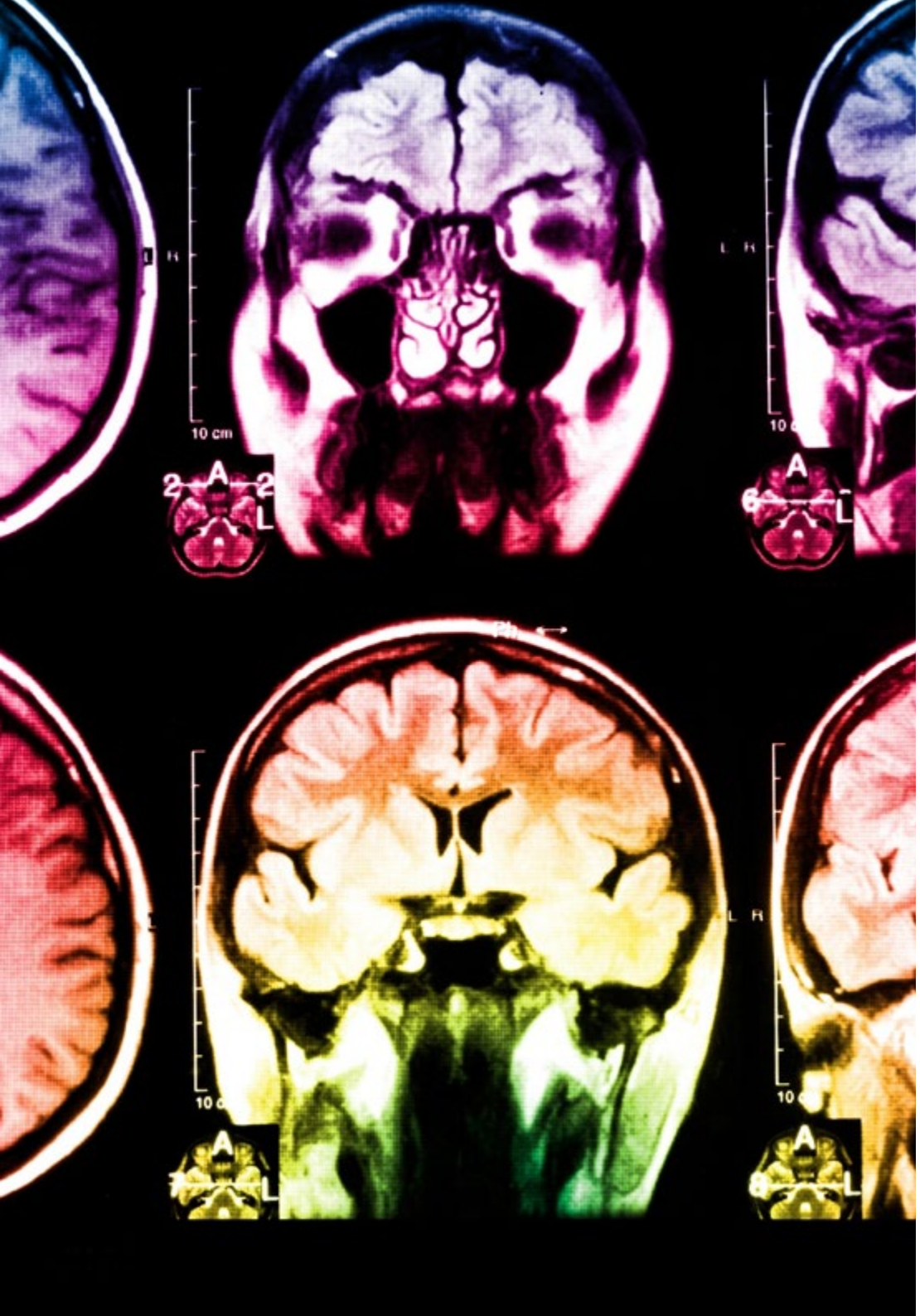
TECH effectively combines the Case Study methodology with a 100% online learning system based on repetition, which combines 8 different teaching elements in each lesson.

We enhance the Case Study with the best 100% online teaching method: Relearning.

In 2019, we obtained the best learning results of all online universities in the world.

At TECH you will learn using a cutting-edge methodology designed to train the executives of the future. This method, at the forefront of international teaching, is called Relearning.

Our university is the only one in the world authorized to employ this successful method. In 2019, we managed to improve our students' overall satisfaction levels (teaching quality, quality of materials, course structure, objectives...) based on the best online university indicators.



In our program, learning is not a linear process, but rather a spiral (learn, unlearn, forget, and re-learn). Therefore, we combine each of these elements concentrically. This methodology has trained more than 650,000 university graduates with unprecedented success in fields as diverse as biochemistry, genetics, surgery, international law, management skills, sports science, philosophy, law, engineering, journalism, history, and financial markets and instruments. All this in a highly demanding environment, where the students have a strong socio-economic profile and an average age of 43.5 years.

Relearning will allow you to learn with less effort and better performance, involving you more in your training, developing a critical mindset, defending arguments, and contrasting opinions: a direct equation for success.

From the latest scientific evidence in the field of neuroscience, not only do we know how to organize information, ideas, images and memories, but we know that the place and context where we have learned something is fundamental for us to be able to remember it and store it in the hippocampus, to retain it in our long-term memory.

In this way, and in what is called neurocognitive context-dependent e-learning, the different elements in our program are connected to the context where the individual carries out their professional activity.

This program offers the best educational material, prepared with professionals in mind:

Study Material

All teaching material is produced by the specialists who teach the course, specifically for the course, so that the teaching content is highly specific and precise.

These contents are then applied to the audiovisual format, to create the TECH online working method. All this, with the latest techniques that offer high quality pieces in each and every one of the materials that are made available to the student.

Classes

There is scientific evidence suggesting that observing third-party experts can be useful.

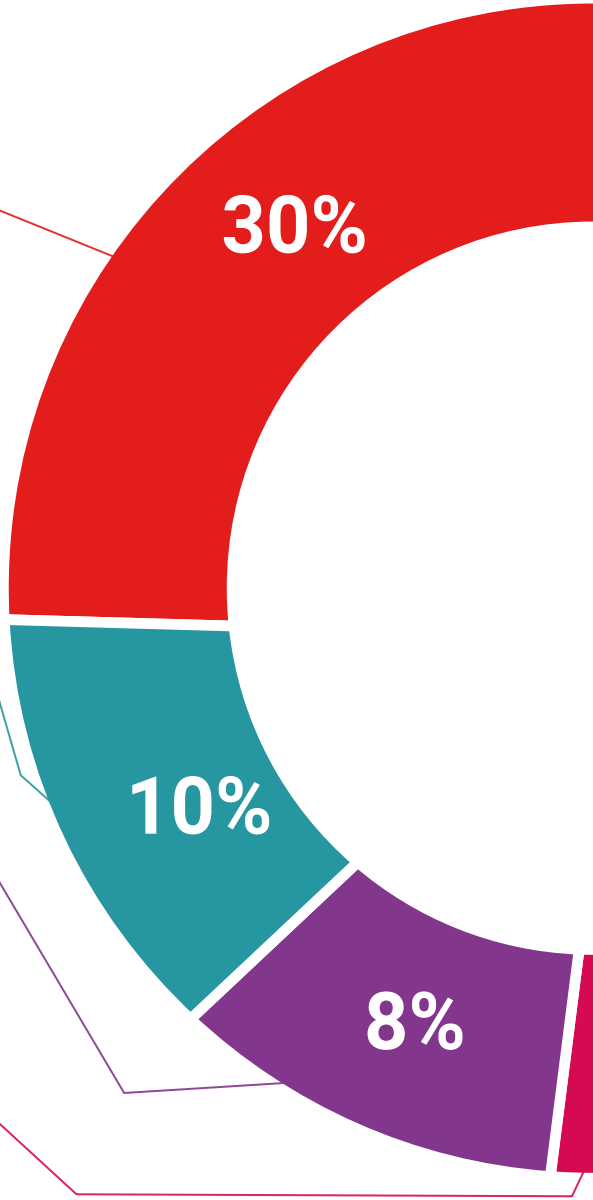
Learning from an Expert strengthens knowledge and memory, and generates confidence in future difficult decisions.

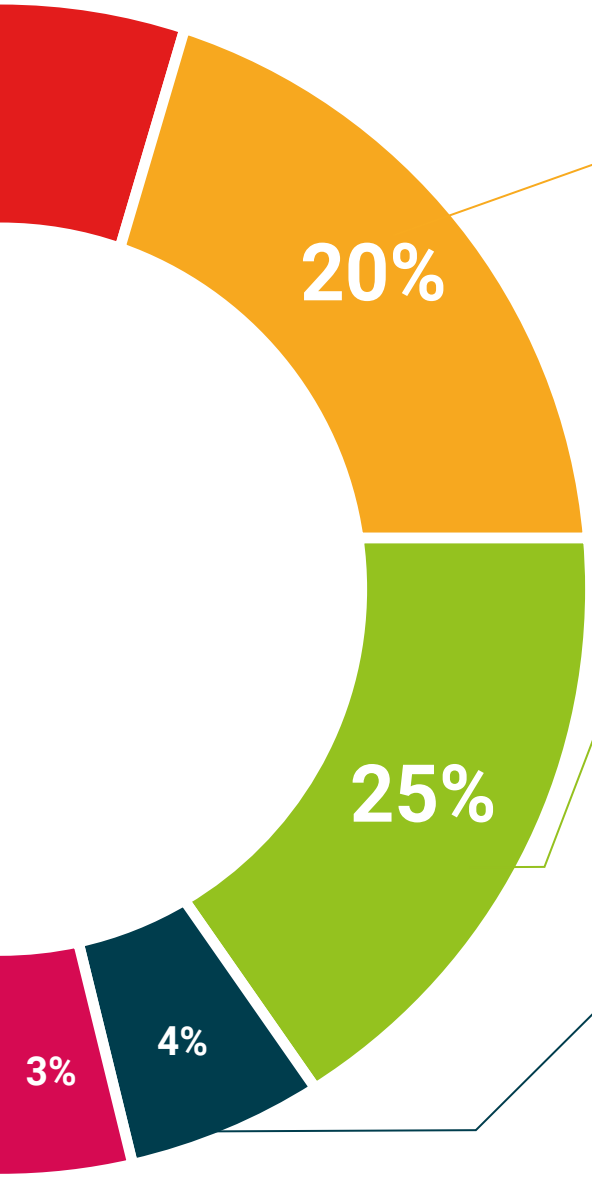
Practising Skills and Abilities

They will carry out activities to develop specific skills and abilities in each subject area. Exercises and activities to acquire and develop the skills and abilities that a specialist needs to develop in the context of the globalization we live in.

Additional Reading

Recent articles, consensus documents and international guidelines, among others. In TECH's virtual library, students will have access to everything they need to complete their course.





Case Studies

Students will complete a selection of the best case studies chosen specifically for this program. Cases that are presented, analyzed, and supervised by the best specialists in the world.

Interactive Summaries

The TECH team presents the contents attractively and dynamically in multimedia lessons that include audio, videos, images, diagrams, and concept maps in order to reinforce knowledge.

This exclusive educational system for presenting multimedia content was awarded by Microsoft as a "European Success Story".

Testing & Retesting

We periodically evaluate and re-evaluate students' knowledge throughout the program, through assessment and self-assessment activities and exercises, so that they can see how they are achieving their goals.

05

Certificate

The Postgraduate Diploma in Video Game Gamification and Devices guarantees students, in addition to the most rigorous and up-to-date education, access to a Postgraduate Diploma issued by TECH Technological University.

Successfully complete this program and receive your university qualification without having to travel or fill out laborious paperwork"

This **Postgraduate Diploma in Video Game Gamification and Devices** contains the most complete and up-to-date academic program on the market.

After the student has passed the assessments, they will receive their corresponding **Postgraduate Diploma** issued by **TECH Technological University** via tracked delivery*.

The diploma issued by **TECH Technological University** will reflect the qualification obtained in the Postgraduate Diploma, and meets the requirements commonly required by labor exchanges, competitive examinations, and professional career evaluation committees.

Title: **Postgraduate Diploma in Video Game Gamification and Devices**

Official Nº of Hours: **450 h.**


tech technological university

Awards the following

DIPLOMA

to

Mr./Ms. _____, with identification number _____.

For having passed and accredited the following program

POSTGRADUATE DIPLOMA

in

Video Game Gamification and Devices

This is a qualification awarded by this University, equivalent to 450 hours, with a start date of dd/mm/yyyy and an end date of dd/mm/yyyy.

TECH is a Private Institution of Higher Education recognized by the Ministry of Public Education as of June 28, 2018.

June 17, 2020

Tere Guevara Navarro

Dean

This qualification must always be accompanied by the university degree issued by the competent authority to practice professionally in each country. Unique TECH Code: AFWORD23S techtitute.com/certificates

*Apostille Convention. In the event that the student wishes to have their paper diploma issued with an apostille, TECH EDUCATION will make the necessary arrangements to obtain it, at an additional cost.

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Video Game Gamification and Devices

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Postgraduate Diploma

Video Game Gamification and Devices

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