

# Advanced Master's Degree Implementation of Educational Projects, Robotics and 3D Printing





## Advanced Master's Degree Implementation of Educational Projects, Robotics and 3D Printing

- » Modality: online
- » Duration: 2 years
- » Certificate: TECH Technological University
- » Dedication: 16h/week
- » Schedule: at your own pace
- » Exams: online

Website: [www.techtitute.com/pk/education/advanced-master-degree/advanced-master-degree-implementation-educational-projects-robotics-3d-printing](http://www.techtitute.com/pk/education/advanced-master-degree/advanced-master-degree-implementation-educational-projects-robotics-3d-printing)

# Index

01

Introduction

---

*p. 4*

02

Objectives

---

*p. 8*

03

Skills

---

*p. 18*

04

Course Management

---

*p. 24*

05

Structure and Content

---

*p. 30*

06

Methodology

---

*p. 58*

07

Certificate

---

*p. 66*

# 01

# Introduction

The main objective of the educational centers is to enhance the skills and abilities of the students. The educational projects developed in these institutions are designed to bring out the best in each student and, of course, in today's world, new technologies are immersed in these projects. Teachers are the main actors working in this field and, therefore, must be trained to advance their profession with specializations such as this one, which focus on the implementation of educational projects, robotics and 3D printing.



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*Teachers must update their competencies and skills to advance in their profession. In this Advanced Master's Degree we give you the keys to the Implementation of Educational Projects, Robotics and 3D Printing, in an intensive and complete program"*

An educational center that wants to be a reference and aims to obtain quality and efficiency in its practices, must be an expert in the programming and implementation of educational projects. In recent times, one of the most innovative and attractive areas of such projects are robotics and 3D printing. In this sense, robotics is considered one of the best learning tools to introduce in the classroom, as it allows the development of innovative projects with which students can develop their skills and competencies.

This Advanced Master's Degree promotes an overall vision that will enable the implementation, or transformation, of educational projects that are intended to constitute the essence of the center, whatever their nature. Thanks to this specialization, educational centers will be able to build, from the appropriate scientific knowledge, the fundamental pillars of the educational project taking into account each and every one of the factors that must be addressed in the process of programming and implementation of the same. Otherwise, schools are doomed to the vagaries of fashion, to fruitless waste of time and money, and most importantly, to fail to achieve a sufficiently stable path for students to walk on and develop their full capabilities and potential.

This program is unique because it manages to offer the necessary tools to build this core of the educational center so that it can last over time, be viable and, of course, be efficient. In addition to being a means that provides the teacher with various tools to help the student's motivation and learning, in order to generate a new profile of the teacher of the 21st century.

Throughout this specialization, the student will learn all of the current approaches to the different challenges posed by their profession. A high level step that will become a process of improvement, not only on a professional level, but also on a personal level.

This challenge is one of TECH's social commitments: to help highly qualified professionals specialize and develop their personal, social and work skills during the course of their studies.

We will not only take you through the theoretical knowledge we offer, but we will implement it to study another way of studying and learning, one which is simpler, more organic, and efficient. We will work to maintain you motivated and to develop your passion for learning, helping you to think and develop critical thinking skills. We will encourage you to think and develop critical thinking.

The **Advanced Master's Degree in Implementation of Educational Projects, Robotics and 3D Printing** contains the most complete and up-to-date educational program on the market.

The most important features include:

- ◆ The latest technology in online teaching software
- ◆ A highly visual teaching system, supported by graphic and schematic contents that are easy to assimilate and understand
- ◆ Practical cases presented by practising experts
- ◆ State-of-the-art interactive video systems
- ◆ Teaching supported by remote training
- ◆ Continuous updating and retraining systems
- ◆ Autonomous learning: full compatibility with other occupations
- ◆ Practical exercises for self assessment and learning verification
- ◆ Support groups and educational synergies: questions to the expert, debate and knowledge forums
- ◆ Communication with the teacher and individual reflection work
- ◆ Content that is accessible from any fixed or portable device with an Internet connection
- ◆ The complementary documentation databanks are permanently available, even after the course



*A high level scientific program, supported by advanced technological development and the teaching experience of the best professionals"*

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*A program created for professionals who aspire to excellence that will allow you to acquire new skills and strategies in a smooth and effective way"*

The teaching staff is made up of working professionals. In this way TECH ensures that it delivers the educational update objective it is aiming for. A multidisciplinary team of qualified and experienced professionals in different environments, who will develop the theoretical knowledge efficiently, but above all, they will put at the service of the program the practical knowledge derived from their own experience: one of the differential qualities of this Advanced Master's Degree.

This mastery of the subject is complemented by the effectiveness of the methodological design of this Advanced Master's Degree. Developed by a multidisciplinary team of e-learning experts, it integrates the latest advances in educational technology. In this way, the students will have access to a range of comfortable and versatile multimedia tools that will give them the operability they need in their training.

The design of this program is based on Problem-Based Learning: an approach that views learning as a highly practical process. To achieve this remotely, telepractice is used. With the help of an innovative interactive video system, and learning from an expert, the students will be able to acquire the knowledge as if they were actually facing the scenario they are learning at that moment. A concept that will allow students to integrate and memorize what they have learnt in a more realistic and permanent way.

*A deep and complete immersion in the strategies and approaches in Implementation of Educational Projects, Robotics and 3D Printing.*

*A unique specialization program that will allow you to acquire advanced training in this field.*



# 02 Objectives

The objective is to train highly qualified professionals for work experience. An objective that is complemented, moreover, in a global manner, by promoting human development that lays the foundations for a better society. This objective is focused on helping professionals reach a much higher level of expertise and control. A goal that you can take for granted, with a high intensity and high precision program.

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## CHAPTER TH

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*If your goal is to improve in your profession, to acquire a qualification that will enable you to compete among the best, look no further: welcome to TECH”*



## General objectives

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- ◆ Gain knowledge about the most important elements of the educational project
- ◆ Train people in the educational field in order to improve the educational projects they use, or to develop an innovative project of their own creation or based on evidence
- ◆ Study each of the phases of programming and implementation of an educational project
- ◆ Analyze the essential factors to be taken into account in the programming and implementation of an educational project
- ◆ Get a global view of the whole process and not just a biased position
- ◆ Understand the role of each of the educational agents in each phase of the programming and implementation of the educational project
- ◆ Delve into the essential success factors of the educational project
- ◆ Become an expert to lead or participate in a quality educational project
- ◆ Train teachers at the pre-school, primary and secondary levels in materials and methodologies that enhance motivation, creativity and innovation through educational robotics, programming and 3D printing
- ◆ Learn how to plan in a transversal and curricular way in all educational stages, where education professionals can incorporate new technologies and methodologies in the classroom
- ◆ Raise teacher's awareness of the importance of a transformation in education, motivated by the new generations
- ◆ Learn about new learning models and the application of educational robotics to motivate students towards technological careers
- ◆ Hands-on learning about 3D design and 3D Printing
- ◆ Facilitate relationship skills and abilities for the new classrooms of the future





## Specific objectives

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- ◆ Understand the concept of educational project
- ◆ Study the most popular approaches to educational projects
- ◆ Understand the start up of innovative educational projects
- ◆ Analyze the purpose of educational projects
- ◆ Determine the learning objectives and the process to reach them
- ◆ Evaluate possible centers where to implement the educational project
- ◆ Understand which factors are key in the programming and implementation of educational projects
- ◆ Learn which agents are involved in the process of programming and implementing educational projects
- ◆ Understand the contents of the educational project
- ◆ Develop the objectives pursued by the centers with the development of the educational project
- ◆ Analyze the results to be obtained with the educational project
- ◆ Understand all key aspects of programming development and implementation of an educational project
- ◆ Gain knowledge about the most common types of educational projects in schools
- ◆ Discover the most innovative educational projects of the moment
- ◆ Understand the variety of possibilities of programming and implementation of educational projects
- ◆ Analyze the most common and innovative educational projects in the technological field
- ◆ Study educational projects based on the most innovative methodologies
- ◆ Understand value-centered educational projects that improve various factors of the teaching-learning process
- ◆ Determine the concept of evidence-based projects
- ◆ Learn how to develop an evidence-based project in all its phases
- ◆ Learn about the most important and innovative artistic educational projects
- ◆ Discover the most necessary educational projects in the health field in an educational center
- ◆ Analyze educational sports projects that may be of interest to the centers
- ◆ Understand the types of educational language learning projects
- ◆ Understand the types of educational projects to generate excellence in the center
- ◆ Analyze the most important factors and measures to be taken by the center to achieve significant excellence
- ◆ Discover other possible innovative educational projects that are on the rise internationally
- ◆ Know the benefits of implementing an educational project
- ◆ Study the benefits generated in the center as an institution
- ◆ Analyze the improvement of the school's identity, style and presence
- ◆ Discover the benefits for students and their families
- ◆ Understand the benefits for educators and other educational agents
- ◆ Learn about the positivity of the school climate in the implementation of an educational project
- ◆ Understand the benefits of the educational project as a driving force for the center
- ◆ Highlight the improvement of the center's management style
- ◆ Investigate the process of generating leaders as a benefit of the educational project

- ♦ Study the improvement of the alignment of the mission, vision and values promoted by the school
- ♦ Analyze the educational progress that promotes the implementation of a quality educational project
- ♦ Discover the benefits of adaptation to the environment in the implementation of an educational project
- ♦ Learn about the improvement of the coexistence, learning and work environment developed in the implementation of an educational project
- ♦ Expand knowledge in the area of improving relations with the environment and with other educational centers
- ♦ Develop a study on the benefits of deepening the ideology and style of the educational center through the implementation of an educational project
- ♦ Know all the factors and circumstances that influence the process of programming and implementation of educational projects
- ♦ Understand the obstacles that the educational project will have to overcome
- ♦ Study the scope of the educational project
- ♦ Understand the personal resources necessary for the programming and implementation of a quality educational project
- ♦ Determine the economic factors necessary for the viability of the educational project
- ♦ Consider the importance of transparency in an educational project
- ♦ Investigate the necessary involvement of each of the educational agents
- ♦ Examine the quality factors necessary for the creation of an educational project
- ♦ Analyze possible situations of difficulty in the programming and implementation of educational projects
- ♦ Know the types of analysis of educational project results
- ♦ Analyze the most important factors in the programming phase of the educational project
- ♦ Study in a holistic manner the circumstances to be taken into account in the programming phase of the educational project
- ♦ Research the necessary social environment prior to the implementation of the educational project
- ♦ Determine the most important psychological aspects for the adequate programming of the educational project
- ♦ Understand the cultural factors that determine the effectiveness of the programming of an educational project
- ♦ Develop the field of new technologies related to the programming of an educational project
- ♦ Delve into the ethical framework to be taken into account in the programming of educational projects
- ♦ Understand the business environment necessary for programming educational projects
- ♦ Appreciate the need for cohesion between the goals and objectives of the center and the programming of the educational project
- ♦ Consider the family and student field as a fundamental factor in the programming of educational projects
- ♦ Analyze the educational agents involved in the programming of an educational project
- ♦ Determine the steps for an efficient SWOT analysis to guide the educational project programming process
- ♦ Know the regulatory framework applicable to the integration of the educational project in the center
- ♦ Consider the essential factors for the integration of the educational project in the center
- ♦ Analyze the integration of the educational project in the center's tutorial action plan
- ♦ Study the integration of the educational project in the school's truancy plan

- ◆ Determine how to integrate the educational project into the center's educational inclusion plan
- ◆ Investigate the process of integration of the educational project in the center's coexistence and equality plan
- ◆ Investigate the steps for the integration of the educational project in the center's transition plan between stages
- ◆ Develop ways to integrate the educational project into the center's reading promotion plan
- ◆ Consider the development of a school reception plan that integrates the school's educational project
- ◆ Reach a consensus on the process of assimilation of the educational project by each of the center's educational agents
- ◆ Understand the method of integrating the educational project into the center's internal rules and regulations
- ◆ Study other possible areas of integration of the educational project in various fields within the structure of the center
- ◆ Gain knowledge about the fundamental steps for the implementation of an efficient and effective educational project
- ◆ Determine the key factors for the adequate and quality implementation of the educational project
- ◆ Understand the necessary scope of leadership within the implementation phase of the educational project
- ◆ Analyze the essential preparation for the implementation of the educational project in the center
- ◆ Study the situation in the implementation phase of the educational project
- ◆ Investigate the importance of awareness raising in the implementation phase of the educational project
- ◆ Learn how to elaborate the steps in the implementation phase of the educational project
- ◆ Learn about different ways of implementing the educational project in the center
- ◆ Investigate the follow-ups and evaluations necessary for the successful implementation of a quality educational project
- ◆ Determine the redesign of the educational project after its implementation
- ◆ Delve into the coordination necessary for the satisfactory implementation of the educational project
- ◆ Address the need for participation of the various educational agents in the implementation phase of the educational project
- ◆ Analyze the most important terms and roles in the fields of Management, Administration and Leadership
- ◆ Gain knowledge about the important coaching elements in the programming and implementation of educational projects
- ◆ Understand the most important coaching elements in team leadership
- ◆ Work on the procedure to encourage the participation of all stakeholders in the implementation of an educational project
- ◆ Study the transformation process of the center through leadership
- ◆ Investigate the importance of language and communication in the process
- ◆ Inquire into the most important leadership structures
- ◆ Develop a procedure to lead the project based on values
- ◆ Learn the process of election, training and accompaniment of leaders in the educational center
- ◆ Know the system of delegation of functions and roles in the leadership of an educational project
- ◆ Analyze the procedure for the standardization of the center's educational project
- ◆ Understand the importance of theoretical and practical training in the basics of the project
- ◆ Investigate the management, leadership and direction of the educational project in all its phases

- ♦ Study the most efficient way to face possible obstacles in the field of leadership and management of an educational project
- ♦ Learn the risk factors to take into account throughout the process
- ♦ Develop a process for evaluating the leadership and management of the educational project
- ♦ Gain knowledge about all the necessary aspects of planning and economic-financial management required for the programming and implementation of educational projects
- ♦ Study the process of situational analysis of the center
- ♦ Inquire about the economic aspect depending on the type of project
- ♦ Learn the terms and processes necessary to conduct an efficient and realistic educational market study
- ♦ Develop a commercial strategy in line with the project's programming objectives
- ♦ Research on the most appropriate project projection and cost estimation techniques
- ♦ Discover the importance of the economic background of the technical study
- ♦ Know the steps for determining and optimizing project size
- ♦ Learn the localization decision making process
- ♦ Understand the organizational economic effects that influence the programming and implementation of educational projects
- ♦ Investigate the role of the legal framework and investments related to the project
- ♦ Analyze the benefits of the project and the need for cash flow construction
- ♦ Inquire about the most important evaluation criteria for an educational project
- ♦ Assimilate the process of risk and sensitivity analysis in the programming and implementation of educational projects
- ♦ Understand the most important educational marketing terms
- ♦ Gain knowledge about the basic aspects necessary for efficient advertising of an educational project
- ♦ Discover the need for marketing in the implementation of an educational project in a center
- ♦ Analyze the commercial planning process
- ♦ Learn the necessary phases for the analysis, establishment of objectives, design of strategies and evaluation related to the marketing area of the educational project
- ♦ Research market and customer segmentation
- ♦ Identify customer needs to design an effective and realistic marketing plan
- ♦ Develop the appropriate techniques for positioning and building the personal brand
- ♦ Inquire about advertising creativity in educational projects
- ♦ Learn how to create advertisements in the digital environment
- ♦ Analyze all necessary areas in the field of marketing and advertising as they relate to educational offerings
- ♦ Discover the most important social networks to be used in the marketing and advertising of the educational project
- ♦ Gain knowledge about the process of using each one of them to reach optimum efficiency
- ♦ Investigate the phases of development of advertising campaigns of the educational project
- ♦ Learn how to create and manage marketing strategies for service companies
- ♦ Understand all the necessary areas related to marketing strategies
- ♦ Analyze the process of evaluating the profitability of campaigns
- ♦ Raise teacher's awareness of new educational trends and the direction of their role in education
- ♦ Provide knowledge of new information and communication technology skills
- ♦ Train teachers to promote educational change within the classroom to create environments that improve student achievement
- ♦ Introduce learning theories related to Educational Robotics
- ♦ Substantiate the application of robotics pedagogy in the classroom

- ◆ Gain knowledge about the legal and ethical aspects of robotics and 3D printing
- ◆ Teach STEAM competencies as a learning model
- ◆ Transfer the teacher to new physical environments that improve the educational practice
- ◆ Gain knowledge about computational thinking skills
- ◆ Turn classrooms into workspaces for their own learning
- ◆ Provide teachers with knowledge related to the brain's functioning
- ◆ Train the teacher to transform the traditional methodology into a playful methodology
- ◆ Understand what a robot is, types and elements that make it up
- ◆ Understand the laws of robotics
- ◆ Learn Do it Yourself techniques, to develop students' creativity
- ◆ Know the aspects of Robotics and educational robotics
- ◆ Support the different pedagogical applications in educational intervention
- ◆ Know the fundamentals of computational thinking and use it as a problem-solving skill
- ◆ Analyze algorithmic thinking
- ◆ Acquire the methodology of work in educational robotics
- ◆ Learn to balance the flow state between the difficulty of the challenge and the learner's abilities
- ◆ Assess the evolution of new technologies in the first cycles
- ◆ Know the importance of the digital competence of teachers
- ◆ Learn the impact between Emotional Intelligence and Educational Robotics
- ◆ Explain the introduction of Robotics in Pre-School education
- ◆ Integrate Robotics as a learning resource in the first cycles
- ◆ Distinguish different complementary tools
- ◆ Learn about different robotic resources as alternatives in the classroom
- ◆ Work with softwares to initiate students in programming
- ◆ Work with Beebot as a Robot for beginners
- ◆ Learn about BeeBot's contributions to education
- ◆ Analyze the operation of BeeBot
- ◆ Set up sessions with BeeBot
- ◆ Learn about other BeeBot resources for teachers
- ◆ Learn to relate content to Robotics
- ◆ Learn to develop Robotics activities in the primary school stage
- ◆ Develop teamwork skills in teachers
- ◆ Transfer a new learning method to motivate students to research and entrepreneurship
- ◆ Gain knowledge about the relationship between Educational Robotics and the curriculum
- ◆ Identify scientific technological principles to apply in the classroom
- ◆ Incorporate the use of robotic tools in the classroom
- ◆ Learn about Lego Robotic Kits and their electronic components
- ◆ Acquire first notions mechanics by building a robot
- ◆ Understand the different Sensors and applications for Robot motion
- ◆ Get to know the mBot Robot Mobile App
- ◆ Learn different problem-solving strategies to boost the student's investigative instinct
- ◆ Design different didactic materials for the classroom
- ◆ Introduce teachers to the use of advanced robotics to help students overcome challenges
- ◆ Work with Robotics as a motivating and focusing element in the careers of the future
- ◆ Apply Educational Robotics as a curricular subject in secondary school classrooms
- ◆ Know the technological resources that we can work with in the classroom
- ◆ Identify the different Arduino components
- ◆ Understand the importance of Free Software in Education and how to use it

- ◆ Learn about Arduino software and other online applications
- ◆ Learn to work by challenges for classroom application
- ◆ Discover the different international contests in order to encourage students' participation and learning
- ◆ Apply Educational Robotics in the secondary school stage and how to carry it out
- ◆ Recognize the origins of programming
- ◆ Analyze the impact of programming in the classroom
- ◆ Show the importance of teaching programming in the classroom. Where to start, what to teach and how to teach it?
- ◆ Raise awareness of the need for educational change and the contributions of programming in the teaching of experimentation
- ◆ Know different programming tools for the application in different educational cycles
- ◆ Discover the Code Org platform to introduce it in kindergarten and elementary school
- ◆ Discover Kodu Software as an alternative for 3D videogame programming
- ◆ Discover advanced programming with JavaScript language, C+, Python for secondary schools
- ◆ Learn about Scratch Software to learn programming in a simple way
- ◆ Manage the Scratch interface and differentiate the elements that appear in it
- ◆ Learn to identify and correct programming errors
- ◆ Recognize the different movement blocks and learn how to use them
- ◆ Choose the desired appearance of the chosen object or scenario
- ◆ Animate our programs by using sounds
- ◆ Identify and understand the concept of variables for their use
- ◆ Recognize and differentiate event blocks to enhance a program
- ◆ Understand the concept of loop and conditional as basic concepts to start programming
- ◆ Know how to export, import and share a Scratch project
- ◆ Know the origins and evolution of 3D printing
- ◆ Differentiate the types of materials that exist for 3D printers
- ◆ Describe the different models of 3D printers to understand which ones are best suited to educational needs
- ◆ Raise awareness of the applications of 3D design and 3D printing in different professional fields
- ◆ Recognize the benefits of working with 3D design and 3D printing
- ◆ Provide teachers with tools for later use with their students
- ◆ Demonstrate the importance of the development of spatial intelligence
- ◆ Encourage creativity and teamwork in students
- ◆ Awake interest and motivation for the application of new technologies
- ◆ Handle TinkerCad software for learning 3D design
- ◆ Get to know the TinkerCad Interface
- ◆ Create new projects and modify their properties
- ◆ Control the different display modes
- ◆ Recognize and identify polyhedra, prisms, pyramids and their basic elements, vertices, faces and edges
- ◆ Recognize and identify round bodies, cones, cylinders, spheres, and their basic elements
- ◆ Move objects from the objects tab to the work plane
- ◆ Learn to use basic operations such as grouping and ungrouping
- ◆ Understand the use and operation of the "Hole" command
- ◆ Learn how to copy, duplicate and delete objects
- ◆ Test the different object modification techniques





- ◆ Adjust objects using the Aling and mirror commands
- ◆ Learn how to import designs to modify subsequent designs
- ◆ Understand the process for generating a printable file
- ◆ Gain knowledge about what is meant by children with Special Educational Needs
- ◆ Value Educational Robotics as a resource for children with Special Educational Needs
- ◆ Apply Educational Robotics as a tool for student inclusion
- ◆ Convey the importance of the educator's role in dealing with children with SEN
- ◆ Identify the difference between ASD and aspergers
- ◆ Gain knowledge about Robotics as a therapy
- ◆ Understand the benefits of educational robotics for children with SEN
- ◆ Create content to be applied in SEN classrooms

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*Make the most of this opportunity to learn about the latest advances in this subject to apply it to your daily practice"*

# 03 Skills

Once all the contents have been studied and the objectives of the Advanced Master's Degree in Educational Project Implementation, Robotics and 3D Printing have been achieved, the professional will have superior competence and performance in this area. A very complete approach, in a high level Advanced Master's Degree, which makes the difference.





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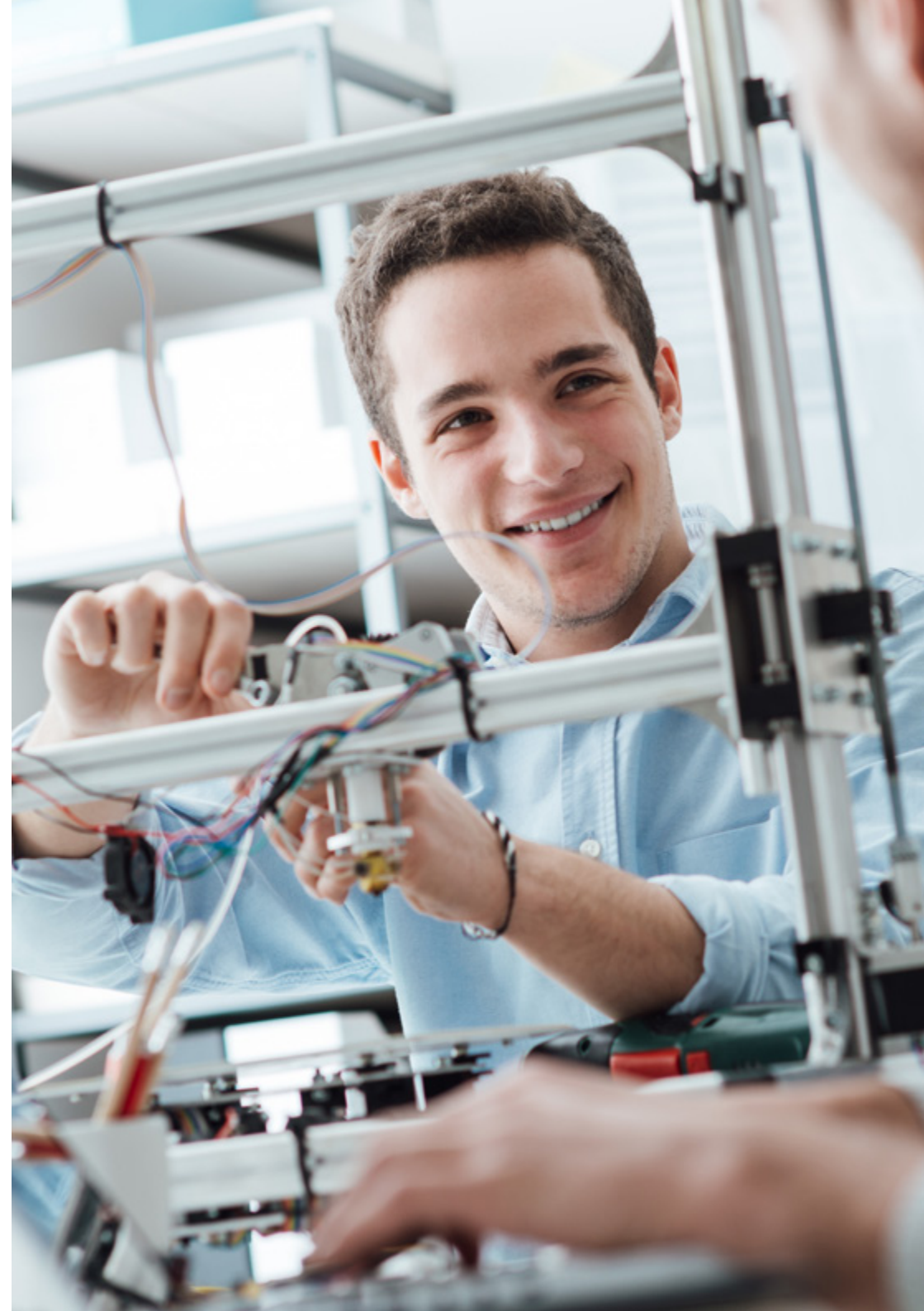
*Achieving excellence in any profession requires effort and perseverance. But, above all, the support of professionals, who will give you the boost you need, with the necessary means and assistance. At TECH, we offer you everything you need”*



## General skills

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- ◆ Gain knowledge about the most important elements of the educational project
- ◆ Improve the educational projects in use, or develop an innovative project of your own creation or based on evidence
- ◆ Gain knowledge about all the phases of programming and implementation of an educational project
- ◆ Analyze the essential factors to be taken into account in the programming and implementation of an educational project
- ◆ Acquire a global view of the whole process and not just a biased position
- ◆ Understand the role of each of the educational agents in each phase of the programming and implementation of the educational project
- ◆ Delve into the essential success factors of the educational project
- ◆ Become an expert to lead or participate in a quality educational project
- ◆ Develop didactic contents for courses based on Robotics, Programming and 3D Printing in primary and secondary schools
- ◆ Develop cross-cutting content to enrich curricular subjects
- ◆ Develop extracurricular activities related to Robotics, Programming and 3D Printing
- ◆ Teach students where the use of these technologies is required
- ◆ Overcome daily challenges by putting into practice concepts and cognitive skills related to the different curricular areas and computational thinking





## Specific skills

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- ♦ Understand the concept of educational project
- ♦ Study the most popular approaches to educational projects
- ♦ Analyze the purpose of educational projects
- ♦ Determine the learning objectives and the process to reach them
- ♦ Understand the contents of the educational project
- ♦ Develop the objectives pursued by the centers with the development of the educational project
- ♦ Analyze the results to be obtained with the educational project
- ♦ Discover the most innovative educational projects of the moment
- ♦ Understand the variety of possibilities of programming and implementation of educational projects
- ♦ Analyze the most common and innovative educational projects in the technological field
- ♦ Understand value centered educational projects that improve various factors of ETN teaching learning process
- ♦ Determine the concept of Evidence-Based Projects
- ♦ Learn how to develop an evidence-based project in all its phases
- ♦ Discover the most necessary educational projects in the health field in an educational center
- ♦ Analyze educational sports projects that may be of interest to the centers
- ♦ Understand the types of educational projects to generate excellence in the center
- ♦ Analyze the most important factors and measures to be taken by the center to achieve significant excellence
- ♦ Discover other possible innovative educational projects that are on the rise internationally
- ♦ Analyze the improvement of the school's identity, style and presence
- ♦ Discover the benefits for students and their families
- ♦ Understand the benefits for educators and other educational agents
- ♦ Learn about the positivity of the school climate in the implementation of an educational project
- ♦ Understand the benefits of the educational project as a driving force for the center
- ♦ Investigate the process of generating leaders as a benefit of the educational project
- ♦ Study the improvement of the alignment of the mission, vision and values promoted by the school
- ♦ Analyze the educational progress that promotes the implementation of a quality educational project
- ♦ Discover the benefits of adaptation to the environment in the implementation of an educational project
- ♦ Develop a study on the benefits of deepening the ideology and style of the educational center through the implementation of an educational project
- ♦ Analyze the scope of the administrations and institutional support necessary for the implementation of an educational project, at the national, regional, provincial and local levels
- ♦ Determine the economic factors necessary for the viability of the educational project
- ♦ Consider the importance of transparency in an educational project
- ♦ Investigate the necessary involvement of each of the educational agents

- ♦ Examine the quality factors necessary for the creation of an educational project
- ♦ Analyze possible situations of difficulty in the programming and implementation of educational projects
- ♦ Analyze the most important factors in the programming phase of the educational project
- ♦ Research the necessary social environment prior to the implementation of the educational project
- ♦ Determine the most important psychological aspects for the adequate programming of the educational project
- ♦ Consider the family and student field as a fundamental factor in the programming of educational projects
- ♦ Analyze the educational agents involved in the programming of an educational project
- ♦ Determine the steps for an efficient SWOT analysis to guide the educational project programming process
- ♦ Analyze the integration of the educational project in the center's tutorial action plan
- ♦ Investigate the process of integration of the educational project in the center's coexistence and equality plan
- ♦ Investigate the steps for the integration of the educational project in the center's transition plan between stages
- ♦ Develop ways to integrate the educational project into the center's reading promotion plan
- ♦ Study other possible areas of integration of the educational project in various fields within the structure of the center
- ♦ Analyze the essential preparation for the implementation of the educational project in the center
- ♦ Investigate the importance of awareness raising in the implementation phase of the educational project
- ♦ Determine the redesign of the educational project after its implementation
- ♦ Delve into the coordination necessary for the satisfactory implementation of the educational project
- ♦ Work on the procedure to encourage the participation of all stakeholders in the implementation of an educational project
- ♦ Investigate the importance of language and communication in the process
- ♦ Inquire into the most important leadership structures
- ♦ Analyze the procedure for the standardization of the center's educational project
- ♦ Investigate the management, leadership and direction of the educational project in all its phases
- ♦ Develop a process for evaluating the leadership and management of the educational project
- ♦ Inquire about the economic aspect depending on the type of project
- ♦ Develop a commercial strategy in line with the project's programming objectives
- ♦ Research on the most appropriate project projection and cost estimation techniques
- ♦ Discover the importance of the economic background of the technical study
- ♦ Investigate the role of the legal framework and investments related to the project
- ♦ Analyze the benefits of the project and the need for cash flow construction
- ♦ Inquire about the most important evaluation criteria for an educational project
- ♦ Assimilate the process of risk and sensitivity analysis in the programming and implementation of educational projects

- ◆ Discover the need for marketing in the implementation of an educational project in a center
  - ◆ Analyze the commercial planning process
  - ◆ Learn the necessary phases for the analysis, establishment of objectives, design of strategies and evaluation related to the marketing area of the educational project
  - ◆ Inquire about advertising creativity in educational projects
  - ◆ Analyze all necessary areas in the field of marketing and advertising as they relate to educational offerings
  - ◆ Discover the most important social networks to be used in the marketing and advertising of the educational project
  - ◆ Investigate the phases of development of advertising campaigns of the educational project
  - ◆ Learn how to create and manage marketing strategies for service companies
  - ◆ Analyze the process of evaluating the profitability of campaigns
  - ◆ Identify the evolution of technology applied to education and the different learning models to train future professionals
  - ◆ Learn about the beginnings of Educational Robotics, as well as the importance of transmitting computational thinking to students as a resource to promote Education in the 21st Century
  - ◆ Carry out a first approach about Robotics in Pre-School education and its use as a resource to work on entrepreneurial thinking with students
  - ◆ Introduce Robotics knowledge to convey the importance of teamwork and methods that encourage learning in Primary Education, as well as the use and knowledge of Robots and their parts to be applied in the classroom through the development of didactic materials
- ◆ Work on Educational Robotics as a resource to orient students towards technological careers, as well as learning the didactic application of the subject
  - ◆ Learn about a new resource such as programming, its evolution over time, and the acquisition of teaching tools for its application
  - ◆ Immerse yourself in a powerful, free to use tool for teachers and learners
  - ◆ Understand 3D printing development and evolution, as well as the importance of its application in different professional areas, highlighting Education
  - ◆ Introduce knowledge about 3D Design and 3D Printing through software that will allow them to incorporate it into their classes for student learning
  - ◆ Gain knowledge about the importance of the resource of Specialized Educational Robotics for students with Special Educational Needs and to learn how to develop it in order to work with it as a resource that favors inclusion



*Our objective is very simple: to offer you quality specialized training, with the best teaching methods currently, so that you can reach new heights of excellence in your profession"*

04

# Course Management

For our Advanced Master's Degree to be of the highest quality, we are proud to work with a teaching staff of the highest level, chosen for their proven track record in the field of education. Professionals from different areas and fields of expertise that make up a complete, multidisciplinary team. A unique opportunity to learn from the best.







“

*Our professors bring their vast experience and their teaching skills to offer you a stimulating and creative specialized training program”*

## Management



### Mr. Pattier Bocos, Daniel

- ◆ Specialist in educational innovation
- ◆ Researcher and university lecturer at the Faculty of Education at Complutense University of Madrid
- ◆ Finalist for Best Teacher in Spain 2018 at the Educa Abanca Awards



### Ms. Muñoz Gambín, Marina

- ◆ Degree in Pre-School Education Teaching from CEU Cardenal Herrera University
- ◆ Educational Coach certified by the Alicante Chamber of Commerce
- ◆ Expert in Neurolinguistic Programming certified by Richard Bandler
- ◆ Head of Educational Robotics and Programming at Robotuxc Academy for Kindergarten and Primary School
- ◆ Certified in Lego Education© methodology
- ◆ Emotional Intelligence in the Classroom Trainer
- ◆ Neuroscience Teacher Training
- ◆ Certified trainer of trainers
- ◆ Certified in Music Education as therapy

## Coordination

### Mr. Coccaro Quereda, Alejandro

- ◆ Expert in Educational Robotics, Design and 3D Printing
- ◆ Certified in Lego Education© methodology
- ◆ Head of Educational Robotics, Design and 3D Printing for Primary and Secondary Education at Robotuxc Academy
- ◆ Robotuxc Academy Robotics National Competition Challenges Specialist
- ◆ Certified trainer of trainers

### Ms. Gambín Pallarés, María del Carmen

- ◆ Systemic Family Therapist
- ◆ Social Worker
- ◆ Founder and Director of "EducaDiferente" Positive Discipline, Alicante
- ◆ Family and teacher educator in Positive Discipline
- ◆ Lego Serious Play methodology facilitator
- ◆ Coaching training for professionals
- ◆ Member of the Positive Discipline Association Spain

## Professors

### Mr. Boulind, Andrew

- ◆ Specialist in new technologies
- ◆ Digital Learning Coordinator in the United Kingdom
- ◆ Teaching collaborator at CEU Cardenal Herrera University

### Dr. Elvira-Valdés, María Antonieta

- ◆ Doctor in Social Sciences and Humanities
- ◆ University professor
- ◆ Specialist in social dynamics
- ◆ Psychologist and educational consultant

### Ms. Hidalgo Pérez, Miriam

- ◆ Specialist in management of educational centers
- ◆ Teacher with expertise in special educational needs and guidance counselor
- ◆ Member of the management team of an educational center in the Community of Madrid

### Ms. Lozano Morote, María

- ◆ Lawyer, MBA, mediator and expert in educational project management
- ◆ She currently works as an educational project manager for a Spanish educational foundation

**Dr. Muñoz Hevia, Juan Carlos**

- ◆ Doctor in Marketing, MBA
- ◆ Specialist in economics and business
- ◆ Expert in Commercial Management
- ◆ University Lecturer

**Mr. Ortiz Gómez, Juan Saunier**

- ◆ Specialist in educational leadership in centers undergoing change and innovation
- ◆ Expert in management and direction of educational centers
- ◆ Secondary and high school teacher, with experience as general director of an educational center

**Dr. Paredes Giménez, Jorge**

- ◆ PhD in Education
- ◆ Specialist in management and direction of educational centers
- ◆ Teacher and director of an educational center in the Valencian Community

**Mr. Sánchez García, Fernando**

- ◆ Social Media Marketing Expert
- ◆ Project manager and coordinator
- ◆ Organizer and manager of socio-educational programs, with experience in Administration, Marketing and Human Resources, and teacher of Primary Education





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*Learning that draws on the real world experience of practicing professionals. Learning is the best way to achieve quality in your profession"*

# 05

# Structure and Content

The contents of this program have been developed by the different teachers of this Advanced Master's Degree, with a clear purpose: to ensure that our students acquire each and every one of the necessary skills to become true experts in this field. The content of this course will allow you to learn all aspects of the different disciplines involved in this area. A very complete and well structured program that will lead the student to the highest standards of quality and success.





“

*Through a very well compartmentalized development, you will be able to access the most advanced knowledge of the moment in Implementation of Educational Projects, Robotics and 3D Printing"*

## Module 1. Introduction to the Educational Project

- 1.1. What is an Educational Project?
  - 1.1.1. Description
    - 1.1.1.1. Plan the Process to Achieve the Goal
    - 1.1.1.2. Implications of the Process
    - 1.1.1.3. Presentation of Results
  - 1.1.2. Identify the Problem
  - 1.1.3. Address their Cause and Consequences
    - 1.1.3.1. DAFO Analysis
    - 1.1.3.2. Formulation of Actions
  - 1.1.4. Diagnosis of the Problematic Situation
    - 1.1.4.1. Project Location and Situation
    - 1.1.4.2. Time Management
    - 1.1.4.3. Pre-established Objectives and Goals
  - 1.1.5. Innovative Educational Projects: Where to Start?
    - 1.1.5.1. The Best Alternative
    - 1.1.5.2. Study or Diagnosis of the Problematic Situation
- 1.2. What is it for?
  - 1.2.1. Generate Changes in the Environments
    - 1.2.1.1. Change Management
    - 1.2.1.2. Verification of the Problem and its Solution
    - 1.2.1.3. Institutional Support
    - 1.2.1.4. Verification of Progress
    - 1.2.1.5. What Specific Student Population is Served?
  - 1.2.2. Transform and Enable
    - 1.2.2.1. Social Dynamics
    - 1.2.2.2. Delimiting the Problem
    - 1.2.2.3. Topics of Common Interest
  - 1.2.3. Modifying Reality
    - 1.2.3.1. The Operating Unit
  - 1.2.4. Collective Action
    - 1.2.4.1. Implementation of Collective Actions and Activities
    - 1.2.4.2. Spontaneous Activities
    - 1.2.4.3. Structured Activities
    - 1.2.4.4. Collective Action and Socialization
    - 1.2.4.5. Collective Action and Stigmatization
    - 1.2.4.6. Collective Action, Transition and Trust
- 1.3. Origin
  - 1.3.1. Planning the Process to Achieve an Educational Goal
    - 1.3.1.1. Definition of Objectives
    - 1.3.1.2. Project Justification
    - 1.3.1.3. Relevance of the Project
    - 1.3.1.4. Contribution to the Educational Community
    - 1.3.1.5. Feasibility of Implementation
    - 1.3.1.6. Limitations
  - 1.3.2. Learning Objectives
    - 1.3.2.1. Viable and measurable
    - 1.3.2.2. Relationship Between the Objectives and the Problem Posed
- 1.4. Recipients
  - 1.4.1. Educational Projects Implemented in a Specific Center or Institution
    - 1.4.1.1. Student Body
    - 1.4.1.2. Center Needs
    - 1.4.1.3. Teachers Involved
    - 1.4.1.4. Managers
  - 1.4.2. Educational Projects Related to an Educational System
    - 1.4.2.1. Vision
    - 1.4.2.2. Strategic Objectives
    - 1.4.2.3. Political Resources
    - 1.4.2.4. Social Resources
    - 1.4.2.5. Educational Resources
    - 1.4.2.6. Regulatory Resources
    - 1.4.2.7. Financial Resources





- 1.4.3. Educational Projects that Take Place Outside the Educational System
  - 1.4.3.1. Examples:
  - 1.4.3.2. Complementary Approaches
  - 1.4.3.3. Reactive/Proactive
  - 1.4.3.4. Agents of Change
  - 1.4.3.5. Public/Private
- 1.4.4. Specialized Learning Educational Projects
  - 1.4.4.1. Particular Special Educational Needs
  - 1.4.4.2. Learning as a Motivation
  - 1.4.4.3. Self-assessment and Motivation
  - 1.4.4.4. They Learn from Research
  - 1.4.4.5. Examples: Improving Daily Life
- 1.5. Factors
  - 1.5.1. Analysis of the Educational Situation
    - 1.5.1.1. Stages
    - 1.5.1.2. Review
    - 1.5.1.3. Re-coupling Information
  - 1.5.2. Problem Selection and Definition
    - 1.5.2.1. Progress Check
    - 1.5.2.2. Institutional Support
    - 1.5.2.3. Delimitation
  - 1.5.3. Definition of Project Objectives
    - 1.5.3.1. Related Objectives
    - 1.5.3.2. Work Guides
    - 1.5.3.3. Analysis of Objectives
  - 1.5.4. Project Justification
    - 1.5.4.1. Relevance of the Project
    - 1.5.4.2. Utility for the Educational Community
    - 1.5.4.3. Viability

- 1.5.5. Solution Analysis
  - 1.5.5.1. Foundation
  - 1.5.5.2. End or Pre-purpose
  - 1.5.5.3. Goals or Scope
  - 1.5.5.4. Context
  - 1.5.5.5. Activities
  - 1.5.5.6. Schedule
  - 1.5.5.7. Resources and Responsibilities
  - 1.5.5.8. Assumptions
- 1.5.6. Action Planning
  - 1.5.6.1. Corrective Action Planning
  - 1.5.6.2. Work Proposal
  - 1.5.6.3. Sequence of Activities
  - 1.5.6.4. Delimitations of Deadlines
- 1.5.7. Work Schedule
  - 1.5.7.1. Work Breakdown
  - 1.5.7.2. Communication Tool
  - 1.5.7.3. Identify Project Milestones
  - 1.5.7.4. Blocks of the Set of Activities
  - 1.5.7.5. Identify Activities
  - 1.5.7.6. Development of a Business Plan
- 1.5.8. Specification of Human, Material and Economic Resources
  - 1.5.8.1. Human
    - 1.5.8.1.1 Project Participants
    - 1.5.8.1.2 Roles and Functions
  - 1.5.8.2. Materials
    - 1.5.8.2.1. Resources
    - 1.5.8.2.2. Project Implementation
  - 1.5.8.3. Technologies
    - 1.5.8.3.1. Necessary Equipment
- 1.5.9. Assessment
  - 1.5.9.1. Process Assessment
  - 1.5.9.2. Results Assessment
- 1.5.10. Final Report
  - 1.5.10.1. Guide
  - 1.5.10.2. Limitations
- 1.6. Agents Involved
  - 1.6.1. Students
  - 1.6.2. Parents
    - 1.6.2.1. Families
  - 1.6.3. Professors
    - 1.6.3.1. Educational Guidance Teams
    - 1.6.3.2. Faculty of the Center
- 1.7. Contents
  - 1.7.1. Identity Marks
    - 1.7.1.1. Micro to Macro
    - 1.7.1.2. Contribute to the Educational Community
  - 1.7.2. Features
    - 1.7.2.1. Ideological
    - 1.7.2.2. Teachings
    - 1.7.2.3. Units
    - 1.7.2.4. Schedules
    - 1.7.2.5. Installations
    - 1.7.2.6. Professors
    - 1.7.2.7. Managers
  - 1.7.3. Objectives and Commitments
    - 1.7.3.1. Goals and objectives
    - 1.7.3.2. Involvement of the educational world
  - 1.7.4. Specific values
    - 1.7.4.1. Broad beans
    - 1.7.4.2. Conduits that Promote

- 1.7.5. Methodology
  - 1.7.5.1. Attention to Diversity
  - 1.7.5.2. Working on a Project Basis A
  - 1.7.5.3. Thought Based Learning
  - 1.7.5.4. Digital Learning
- 1.7.6. Organizational Structure
  - 1.7.6.1. Fundamental Objective
  - 1.7.6.2. The Mission
  - 1.7.6.3. Theory, Principles and Values
  - 1.7.6.4. Purposes and Strategies for Change
  - 1.7.6.5. Pedagogical Conception
  - 1.7.6.6. Community Environment
- 1.8. Objectives
  - 1.8.1. Teachers
    - 1.8.1.1. Counselor-Coordinator
    - 1.8.1.2. Collaborate in Modernization
  - 1.8.2. Pedagogical Approaches
    - 1.8.2.1. Effectives
    - 1.8.2.2. Rate
    - 1.8.2.3. Design
    - 1.8.2.4. Develop
    - 1.8.2.5. Putting Methods into Practice
  - 1.8.3. Training Needs
    - 1.8.3.1. Ongoing Training
    - 1.8.3.2. Pedagogies
    - 1.8.3.3. Digital Learning
    - 1.8.3.4. Educational Collaboration
    - 1.8.3.5. Methodological Strategies
    - 1.8.3.6. Educational Resources
    - 1.8.3.7. Exchanging Experiences
- 1.9. Results
  - 1.9.1. What will be Assessed?
    - 1.9.1.1. How will the examination be conducted?
    - 1.9.1.2. Who Will Be in Charge of Carrying it Out?
    - 1.9.1.3. When Will the Analysis Take Place?
    - 1.9.1.4. SMART Analysis: Relevance, by Addressing Significant Issues
  - 1.9.2. Global
    - 1.9.2.1. Areas
    - 1.9.2.2. Dimensions
  - 1.9.3. Reliability
    - 1.9.3.1. Reflex
    - 1.9.3.2. Measurements
    - 1.9.3.3. Supporting Objective Evidence
  - 1.9.4. Accuracy
    - 1.9.4.1. Editorial Staff
    - 1.9.4.2. Introduction
  - 1.9.5. Operability
    - 1.9.5.1. Measurement
    - 1.9.5.2. Feasible Results
    - 1.9.5.3. Consensus: Assumed and Shared
- 1.10. Conclusions
  - 1.10.1. Digitization
  - 1.10.2. Collaboration
  - 1.10.3. Transformation

## Module 2. Types of Educational Projects

- 2.1. Technological Projects
  - 2.1.1. Virtual Reality
  - 2.1.2. Augmented Reality
  - 2.1.3. Mixed Reality
  - 2.1.4. Digital Whiteboards
  - 2.1.5. iPad or Tablet Project
  - 2.1.6. Cell Phones in the Classroom
  - 2.1.7. Educational Robotics
  - 2.1.8. Artificial Intelligence
  - 2.1.9. E-learning and Online Education
  - 2.1.10. 3D Printing
- 2.2. Methodological Projects
  - 2.2.1. Gamification
  - 2.2.2. Game Based Education
  - 2.2.3. Flipped Classroom
  - 2.2.4. Project-Based Learning
  - 2.2.5. Problem-Based Learning
  - 2.2.6. Thought Based Learning
  - 2.2.7. Skill Based Learning
  - 2.2.8. Cooperative Learning
  - 2.2.9. Design Thinking
  - 2.2.10. Montessori Methodology
  - 2.2.11. Musical Pedagogy
  - 2.2.12. Educational Coaching
- 2.3. Value Projects
  - 2.3.1. Emotional Education
  - 2.3.2. Anti-Bullying Projects
  - 2.3.3. Projects to Support Associations
  - 2.3.4. Projects in Favor of Peace
  - 2.3.5. Projects in Favor of Stopping Discrimination
  - 2.3.6. Solidarity Projects
  - 2.3.7. Projects Against Gender Violence
  - 2.3.8. Inclusion Projects
  - 2.3.9. Intercultural Projects
  - 2.3.10. Coexistence Projects
- 2.4. Evidence-Based Projects
  - 2.4.1. Introduction to Evidence Based Projects
  - 2.4.2. Previous Analysis
  - 2.4.3. Determining the Objective
  - 2.4.4. Scientific Research
  - 2.4.5. Choosing a Project
  - 2.4.6. Local or National Contextualization
  - 2.4.7. Viability Study
  - 2.4.8. Implementation of Evidence Based Projects
  - 2.4.9. Monitoring of Evidence Based Projects
  - 2.4.10. Evaluation of Evidence Based Projects
  - 2.4.11. Publication of Results
- 2.5. Artistic Projects
  - 2.5.1. LOVA (The Opera as a Learning Vehicle)
  - 2.5.2. Theater
  - 2.5.3. Musical Projects
  - 2.5.4. Choirs and Orchestras
  - 2.5.5. Projects on the Infrastructure of the Center
  - 2.5.6. Visual Art Projects
  - 2.5.7. Design Technology Art Projects
  - 2.5.8. Decorative Art Projects
  - 2.5.9. Street Projects
  - 2.5.10. Projects Centered on Creativity
- 2.6. Sanitary Projects
  - 2.6.1. Nursing Services
  - 2.6.2. Healthy Eating Projects
  - 2.6.3. Dental Projects
  - 2.6.4. Ophthalmic Projects
  - 2.6.5. First Aid Plan
  - 2.6.6. Emergency Plan
  - 2.6.7. Projects with External Health Framework Entities
  - 2.6.8. Personal Grooming Projects

- 2.7. Sports Projects
  - 2.7.1. Construction or Remodeling of Playgrounds
  - 2.7.2. Construction or Remodeling of Sports Facilities
  - 2.7.3. Creation of Sports Clubs
  - 2.7.4. Extracurricular Classes
  - 2.7.5. Individual Sports Projects
  - 2.7.6. Collective Sports Projects
  - 2.7.7. Sports Competitions
  - 2.7.8. Projects with External Sports Entities
  - 2.7.9. Projects for the Generation of Healthy Habits
- 2.8. Language Projects
  - 2.8.1. On-site Language Immersion Projects
  - 2.8.2. Local Language Immersion Projects
  - 2.8.3. International Language Immersion Projects
  - 2.8.4. Phonetic Projects
  - 2.8.5. Conversation Assistants
  - 2.8.6. Native Teachers
  - 2.8.7. Preparation for Official Language Exams
  - 2.8.8. Projects to Encourage Language Learning
  - 2.8.9. Exchange Projects
- 2.9. Excellence Projects
  - 2.9.1. Reading Improvement Projects
  - 2.9.2. Calculation Improvement Projects
  - 2.9.3. Foreign Language Improvement Projects
  - 2.9.4. Collaboration with Prestigious Entities
  - 2.9.5. Competitions and Prizes
  - 2.9.6. Projects for External Assessment
  - 2.9.7. Connection with Businesses
  - 2.9.8. Preparation for Standardized Tests of Recognition and Prestige
  - 2.9.9. Excellence Projects in Culture and Sport
  - 2.9.10. Advertising

- 2.10. Other Innovation Projects
  - 2.10.1. Outdoor Education
  - 2.10.2. Youtubers and Influencers
  - 2.10.3. Mindfulness
  - 2.10.4. Peer Tutoring
  - 2.10.5. RULER Method
  - 2.10.6. School Gardens
  - 2.10.7. Learning Community
  - 2.10.8. Democratic School
  - 2.10.9. Early Stimulation
  - 2.10.10. Learning Corners

### Module 3. Benefits of Implementing an Educational Project

- 3.1. For the Center as an Institution: Identity, Style and Presence
  - 3.1.1. Groups that Make Up a School: the Institution, the Students and their Families, the Educators
  - 3.1.2. The Educational Project is a Living Reality
  - 3.1.3. Defining Dimensions of the Educational Project
    - 3.1.3.1. Towards Tradition. Self-Identity/Character, Mission
    - 3.1.3.2. Towards the Future. The Style, The Vision
    - 3.1.3.3. The Tradition-Future Link: the Presence, Values
  - 3.1.4. Honesty and Consistency
  - 3.1.5. Identity. The Up-To-Date Development of its Mission (Own Character)
  - 3.1.6. Style. From the Image of What you Want To Do (Vision) To The Way you Want To Do It
  - 3.1.7. Presence. The Practical Realization of Values
  - 3.1.8. The Three Dimensions of the Educational Project as Strategic Referents
- 3.2. For Students and their Families
  - 3.2.1. The Image of the Center Says a Lot About its Educational Project

- 3.2.2. Relational Dimensions of the Educational Project
  - 3.2.2.1. Towards the Internal Addressees of the Educational Action: the Students
  - 3.2.2.2. Towards the External Partners of the Educational Action: the Families
- 3.2.3. Communication and Consistency
- 3.2.4. Essential Communicative Dimensions of an Educational Project
- 3.2.5. Identity. A Well-founded, Comprehensive Education, Rooted in a Tradition
- 3.2.6. Style. The Learning of Knowledge and Skills in the Field of Character Development
- 3.2.7. Presence. The Education of Today's Citizens With an Imprint
- 3.2.8. The Three Dimensions of the Educational Project as the Basis of School Marketing
- 3.2.9. Client Relationships and Membership
- 3.3. For Educators: Teachers and Other Personnel
  - 3.3.1. Educators as Stakeholders
  - 3.3.2. Educators, the Cornerstone of an Educational Project
  - 3.3.3. Human Capital, Social Capital and Decision-Making Capital
  - 3.3.4. The Indispensable Participation of Educators in Shaping the Educational Project
  - 3.3.5. Climate and Consistency
  - 3.3.6. Project, Change and People: it is Not Possible to Regulate All Three
  - 3.3.7. Identity. Clarity of Educational Intentions and Educator Identity
  - 3.3.8. Style. Formation of a Form of Presence, Methodological Principles and Common Didactic Practices
  - 3.3.9. Presence. Establishment of Educational Priorities, Organizational Structures, Training Needs, etc
  - 3.3.10. The Three Dimensions of the Educational Project as the Core of Human Resources Management
- 3.4. For the Motor Impulse of the Center 1. Improved Management Style
  - 3.4.1. Main Drivers of a School: Management Style, Leaders and Collective Alignment
  - 3.4.2. Educational Project and Management of the Center
  - 3.4.3. The Leading Manager as a Moral Reference
  - 3.4.4. The Managerial Style as a Pedagogical Reference
  - 3.4.5. Is it Possible to Speak of a Management Project?
  - 3.4.6. Elements of Management Style Dependent on the Educational Project
    - 3.4.6.1. Organizational Structures
    - 3.4.6.2. Management Style
    - 3.4.6.3. The Possibility of Other Leaderships
    - 3.4.6.4. Forms of Participation and Delegation
  - 3.4.7. Adaptation of Organizational Structures to the Identity, Style and Presence of the Center
  - 3.4.8. The Gradual Development of a Local Management Culture
- 3.5. For the Motor Impulse of the Center: 2. Generation of Leaders
  - 3.5.1. Managers as Leaders
  - 3.5.2. The Three Capitals of the Leader -Human, Social and Decisional- and the Educational Project
  - 3.5.3. Bringing Talent to the Surface
  - 3.5.4. Capability, Commitment and Service
  - 3.5.5. Educational Project, Organizational Flexibility and Leadership
  - 3.5.6. Educational Project, Innovation Processes and Leadership
  - 3.5.7. Educational Project, Creativity and Leadership
  - 3.5.8. Towards a Teaching Function in the Key of Leadership
  - 3.5.9. Educating Leaders
- 3.6. For the Motor Impulse of the Center: 3. Alignment with the Mission-Vision-Values
  - 3.6.1. The Need for Alignment
  - 3.6.2. Main Obstacles to Alignment
  - 3.6.3. The Leader as Aligner
  - 3.6.4. Lifelong Learning as an Educator: the Development of Own Lines of Competences
  - 3.6.5. From the Teaching Backpack to Shared Teaching Habits
  - 3.6.6. Educational Project and Development of a Professional Teaching Culture
  - 3.6.7. Having Resources for Authentic Assessment
  - 3.6.8. Assessment of the Quality of the Educational Service
    - 3.6.8.1. Local Reality
    - 3.6.8.2. Systemic Nature
    - 3.6.8.3. Absolute Priority of Teaching-Learning Activities

- 3.7. For Educational Advancement: 1. Adaptation to the Students, to Active Methodologies and to the Demands of the Environment
  - 3.7.1. The Importance of Educational Goals
  - 3.7.2. The Importance of Scientific Knowledge on How We Learn
  - 3.7.3. How Does the Evolution of a Center Manifest Itself?
  - 3.7.4. Concentration on Growth Processes
  - 3.7.5. Focus on Systematic Learning Processes
  - 3.7.6. Prioritization of Active Methodologies: What Matters is Learning
  - 3.7.7. Prioritization of Situated Learning
  - 3.7.8. Adequacy to the Demand of the Environment
  - 3.7.9. Beyond Current Needs: an Educational Project with a "Vision for the Future"
  - 3.7.10. Educational Project and Operational Research
- 3.8. For Educational Advancement 2. Improvement of the Living, Learning and Working Environment. Sustainability
  - 3.8.1. The Educational Project as the Basis for an Adequate School Climate
  - 3.8.2. Educational Project and Coexistence
  - 3.8.3. Educational Project and Learning Style
  - 3.8.4. Educational Project and Work Organization
  - 3.8.5. Management Support
  - 3.8.6. The Sustainability of Work in an Educational Center
  - 3.8.7. Elements of Sustainability
    - 3.8.7.1. The Center's Strategic Plan
    - 3.8.7.2. Practical Quality Indicators
    - 3.8.7.3. The Global Assessment System
- 3.9. For Educational Advancement. 3. Relationship with the Environment, other Centers in the Area or in the Same Network
  - 3.9.1. Have an Own Profile and a Recognizable Voice in the Environment
  - 3.9.2. Opening Up to the Surrounding Reality
    - 3.9.2.1. Knowing the Environment
    - 3.9.2.2. Interacting with It
  - 3.9.3. Identification with Other Centers in the Same Institution or Area
  - 3.9.4. From Peer-to-Peer Classroom Learning to Center-to-Center Learning
  - 3.9.5. Shared Experiences
  - 3.9.6. Institutional Framework Project and Own Educational Project
    - 3.9.6.1. The Common Framework
    - 3.9.6.2. Different Needs and Sensitivities
    - 3.9.6.3. What Does the Global-Local Dialectic Bring to Our Own Educational Project?
- 3.10. For Educational Advancement 4. Deepening of the Ideology and Style
  - 3.10.1. Own Ideology, Mission, Character. Three Complementary Terms
  - 3.10.2. The Mission Statement Underlies the Basic Lines of the Educational Project
  - 3.10.3. The Educational Project Develops the Specific Character
  - 3.10.4. Alignment Between the Educational Project and the Ideology
  - 3.10.5. Shaping a Style of Doing and Reflecting in Education
  - 3.10.6. Updates to the Educational Project Update the Perspective from Which New Realities are Addressed
  - 3.10.7. It is Necessary to Return Periodically to Reflect on the Fundamentals
  - 3.10.8. Ideology, Educational Project and Transmission of an Educational Tradition

#### Module 4. Circumstances that Influence the Programming and Implementation of the Educational Project

- 4.1. Scope of the Project
  - 4.1.1. Ownership of the Center
  - 4.1.2. Physical and Socio-Cultural Situation Where it is Located
- 4.2. Personal Resources
  - 4.2.1. Center Organization Chart in the Educational Project
  - 4.2.2. Management Team
  - 4.2.3. Professors
  - 4.2.4. PAS
  - 4.2.5. Non-teaching Staff
  - 4.2.6. Training
  - 4.2.7. Hiring
- 4.3. Transparency of the Educational Project
  - 4.3.1. Project Information
  - 4.3.2. Results of Educational Practice

- 4.4. Involvement of Educational Agents
  - 4.4.1. Personal Identification with the Project
  - 4.4.2. Center Staff
  - 4.4.3. Families
- 4.5. Quality Factors for the Creation of an Educational Project
  - 4.5.1. Inclusive vs. Exclusionary Center Project
    - 4.5.1.1. At the Student Body Level
    - 4.5.1.2. At the Faculty Level
    - 4.5.1.3. Methodologies
- 4.6. Difficulty with Change and Accommodation to Reality
  - 4.6.1. Comfort Zone
  - 4.6.2. Fears and Weaknesses
- 4.7. Analysis of Results and New Proposals
  - 4.7.1. At the External Testing Level
  - 4.7.2. At the Internal Testing Level
  - 4.7.3. Satisfaction of Families with the Different Elements (Curricular, Personal, etc.)
  - 4.7.4. Teacher Satisfaction

### Module 5. Programming Phase of the Educational Project: Holistic Analysis of the Situation

- 5.1. Social Analysis
  - 5.1.1. Globalization
  - 5.1.2. State and Society
  - 5.1.3. Contemporary Politics and Ideologies
  - 5.1.4. Social Vhanges
  - 5.1.5. Information and Knowledge Society
  - 5.1.6. The Welfare Society, Realities and Myths
  - 5.1.7. Work and Employability
  - 5.1.8. Citizen Participation
  - 5.1.9. Diagnosis of the Social Context
  - 5.1.10. Challenges of Contemporary Society

- 5.2. Psychological Analysis
  - 5.2.1. Notes on Learning Theories
  - 5.2.2. Dimensions of Learning
  - 5.2.3. Psychological Processes
  - 5.2.4. Multiple Intelligences
  - 5.2.5. Cognitive and Metacognitive Processes
  - 5.2.6. Teaching Strategies
  - 5.2.7. Teaching Styles
  - 5.2.8. Educational Needs and Learning Difficulties
  - 5.2.9. Thinking Skills
  - 5.2.10. Counseling and Guidance
- 5.3. Cultural Analysis
  - 5.3.1. Theories on Culture
  - 5.3.2. Culture and Cultural Evolution
  - 5.3.3. Components of Culture
  - 5.3.4. Cultural Identity
  - 5.3.5. Culture and Society
  - 5.3.6. Traditions and Customs in the Culture
  - 5.3.7. Culture and Communication
  - 5.3.8. Culture and Cultural Education
  - 5.3.9. Interculturality and Integration
  - 5.3.10. Crisis and Challenges in Culture
- 5.4. Technological Analysis
  - 5.4.1. ICT's and New Technologies
  - 5.4.2. Innovation and Development
  - 5.4.3. Advantages and Disadvantages of New Technologies
  - 5.4.4. Impact of ICT's in the Educational Field
  - 5.4.5. Internet Access and New Technologies
  - 5.4.6. Digital Environment and Education
  - 5.4.7. E-learning and B-learning
  - 5.4.8. Collaborative Learning
  - 5.4.9. Video Games and Education
  - 5.4.10. ICT and Teacher Training



- 5.5. Ethical Analysis
  - 5.5.1. Approach to Ethics
  - 5.5.2. Ethics and Morals
  - 5.5.3. Moral Development
  - 5.5.4. Principles and Values Today
  - 5.5.5. Ethics, Morals and Beliefs
  - 5.5.6. Ethics and Education
  - 5.5.7. Educational Ethics
  - 5.5.8. Ethics and Critical Thinking
  - 5.5.9. Training in Values
  - 5.5.10. Ethics and Project Management
- 5.6. Business Analysis
  - 5.6.1. Business Planning and Strategy
  - 5.6.2. Mission and Vision of the Organization
  - 5.6.3. Organizational Structure
  - 5.6.4. Administrative Management
  - 5.6.5. Management
  - 5.6.6. Coordination
  - 5.6.7. Control
  - 5.6.8. Resources
    - 5.6.8.1. Human
    - 5.6.8.2. Technologies
  - 5.6.9. Supply, Demand and Economic Environment
  - 5.6.10. Innovation and Competition
- 5.7. Analysis of the Center's Goals and Objectives
  - 5.7.1. Definition of Goals and Objectives
  - 5.7.2. Center Goals
  - 5.7.3. General Objectives
  - 5.7.4. Specific Objectives
  - 5.7.5. Plans and Strategies
  - 5.7.6. Actions and Campaigns
  - 5.7.7. Expected Results
  - 5.7.8. Indicators of Achievement
- 5.8. Analysis of Students and Family Context
  - 5.8.1. Characteristics of the Student's Environment
  - 5.8.2. The Socialization Process
  - 5.8.3. Family Structure and Dynamics
  - 5.8.4. Educational Involvement of the Family
  - 5.8.5. The Students and Their Reference Groups
  - 5.8.6. Educational Inclusion and Family
  - 5.8.7. Attention to Diversity
  - 5.8.8. Coexistence Plan
  - 5.8.9. Self-Regulation and Independence
  - 5.8.10. Performance Factors
- 5.9. Analysis of Educational Agents
  - 5.9.1. Definition of Educational Intervention Agents
  - 5.9.2. The Role of the Educational Mediator
  - 5.9.3. Civil Society and Organizations
  - 5.9.4. The Educational Community
  - 5.9.5. The Teaching Staff
  - 5.9.6. The Directors
  - 5.9.7. Responsibility of the Mass Media
  - 5.9.8. Leadership and Education
  - 5.9.9. The Learning Environment
  - 5.9.10. Integration and Participation Strategies
- 5.10. DAFO Analysis
  - 5.10.1. The SWOT Matrix
  - 5.10.2. Weaknesses
  - 5.10.3. Threats
  - 5.10.4. Strengths
  - 5.10.5. Opportunities
  - 5.10.6. Successful Pairs
  - 5.10.7. Matching Pairs
  - 5.10.8. Reaction Pairs
  - 5.10.9. Risk Pairs
  - 5.10.10. Lines of Action and Strategy

## Module 6. Phase of Integration of the Educational Project in the Center

- 6.1. Applicable Regulatory Framework. General Considerations and Contents of the Educational Project
    - 6.1.1. General Considerations
    - 6.1.2. School Organization
      - 6.1.2.1. General Considerations
      - 6.1.2.2. Theoretical Approaches to School Organization
      - 6.1.2.3. Organizational Components in Schools
    - 6.1.3. Definition and Characteristics
    - 6.1.4. Values, Objectives and Priorities for Action Based on the Center's Identity
    - 6.1.5. Common Basic Aspects for the Implementation of the Curriculum
    - 6.1.6. Pedagogical Lines
    - 6.1.7. Content of an Educational Project
    - 6.1.8. Aspects to Take into Account
  - 6.2. Tutorial Action Plan
    - 6.2.1. General Considerations
    - 6.2.2. Objectives
    - 6.2.3. Tutor
      - 6.2.3.1. Tutorial Functions
      - 6.2.3.2. Tutoring Assignments
      - 6.2.3.3. Organization of Tutorials
    - 6.2.4. Cycle Coordination
      - 6.2.4.1. Election of the Coordinator
      - 6.2.4.2. Cycle Functions
      - 6.2.4.3. Duties of the Coordinator
    - 6.2.5. Reinforcements
    - 6.2.6. Activities and Activities
      - 6.2.6.1. In Relation to Students
      - 6.2.6.2. In Relation to Families
      - 6.2.6.3. In Relation to the Teaching Staff and Organization of the Center
      - 6.2.6.4. In Relation to Other Educational Agents
  - 6.2.7. Student Assessment
    - 6.2.7.1. Instruments
    - 6.2.7.2. Phases
    - 6.2.7.3. Qualification Criteria
    - 6.2.7.4. Promotion of the Student Body
  - 6.2.8. Teacher Assessment Assessment of Other Educational Agents
  - 6.2.9. Assessment of the Tutorial Action Plan
  - 6.2.10. Aspects to Take into Account
- 6.3. Absenteeism Plan
  - 6.3.1. General Considerations
  - 6.3.2. Definition of Absenteeism
  - 6.3.3. Absenteeism Typology
  - 6.3.4. Program Objectives
  - 6.3.5. Procedures for Action
    - 6.3.5.1. Preparation Phase
    - 6.3.5.2. Intervention Phase
    - 6.3.5.3. Assessment Phase
  - 6.3.6. Punctuality Record
  - 6.3.7. Justification for Absences and Punctuality
  - 6.3.8. Summons and Minutes
  - 6.3.9. Referral Letter and Report
  - 6.3.10. Aspects to Take into Account
- 6.4. Plan of Attention to Educational Inclusion
  - 6.4.1. General Considerations
  - 6.4.2. Organizational Measures
  - 6.4.3. Access Adaptations
  - 6.4.4. Significant Adaptations
  - 6.4.5. Personal Resources
  - 6.4.6. Material Resources
  - 6.4.7. Agents Involved
  - 6.4.8. Protocols to be Followed by the Tutor/School with Students
  - 6.4.9. Follow-up of the Action Plan
  - 6.4.10. Aspects to Take into Account

- 6.5. Coexistence and Equality Plan
  - 6.5.1. General Considerations
  - 6.5.2. Diagnosis of the State of Coexistence in the Center
  - 6.5.3. Objectives
  - 6.5.4. Organizational and Operational Criteria
  - 6.5.5. Performance Models
    - 6.5.5.1. Model of Action Oriented to Prevention and to Achieving a Climate of Equality and Equal Opportunities
    - 6.5.5.2. Action Plans
      - 6.5.5.2.1. In the General Organization and Planning of the Center
      - 6.5.5.2.2. In the Area of Tutoring
      - 6.5.5.2.3. In the Field of Educational Guidance
      - 6.5.5.2.4. In the Area of Common Space Activities
      - 6.5.5.2.5. At the Family Level
    - 6.5.5.3. Model of Action with Respect to Students Who Behave in a Manner Contrary to the Rules of Coexistence
    - 6.5.5.4. Model of Action with Respect to Students Who Behave in a Way that is Seriously Detrimental to the Center's Coexistence
  - 6.5.6. Follow-up of the Action Plan
  - 6.5.7. Action Protocol for Situations of Violence Among Peers
  - 6.5.8. Action Protocol for Aggressions Against Teachers
  - 6.5.9. Other Action Protocols
  - 6.5.10. Aspects to Take into Account
- 6.6. Transition Plan Between Stages
  - 6.6.1. General Considerations
  - 6.6.2. Personnel Involved
  - 6.6.3. Infant to Primary Transition Plan
  - 6.6.4. Promotion
  - 6.6.5. Objectives
  - 6.6.6. Methodological Guidelines
  - 6.6.7. Assessment
  - 6.6.8. Follow-up Meetings
  - 6.6.9. Aspects to Take into Account
- 6.7. Reading Promotion Plan
  - 6.7.1. General Considerations
  - 6.7.2. Analysis of the Needs in the Area of Reading in the Center
  - 6.7.3. Objectives
  - 6.7.4. Strategies to Achieve the Objectives
  - 6.7.5. Methodology
  - 6.7.6. Proposed Activities
  - 6.7.7. Resources
  - 6.7.8. Assessment of the Reading Plan
  - 6.7.9. Templates
  - 6.7.10. Aspects to Take into Account
- 6.8. School Welcome Plan
  - 6.8.1. General Considerations
  - 6.8.2. General Objectives
  - 6.8.3. Responsibilities
  - 6.8.4. Newly Arrived Students
    - 6.8.4.1. General Aspects
      - 6.8.4.1.1. Before Incorporation
        - 6.8.4.1.1.1. Registration, Information and Preparation
      - 6.8.4.1.2. Incorporation
        - 6.8.4.1.2.1. Welcome
        - 6.8.4.1.2.2. Incorporation into the Classroom
      - 6.8.4.1.3. Subsequent to Incorporation
        - 6.8.4.1.3.1. Initial Assessment and Determination of Needs
        - 6.8.4.1.3.2. Coordination of Educational Agents
        - 6.8.4.1.3.3. Follow-up Planning
      - 6.8.4.1.4. Follow-up and Possibilities
      - 6.8.4.1.5. Process Assessment
    - 6.8.4.2. New Students Arriving at the Beginning of the Course Once the Course Has Started
    - 6.8.4.3. Newly Arrived Students After the Start of the Course
    - 6.8.4.4. Newly Arrived Students with No Knowledge of the Language

- 6.8.5. Newly Recruited Teaching Staff
  - 6.8.5.1. General Aspects
  - 6.8.5.2. Newly Arrived Teaching Staff at the Beginning of the School Year
  - 6.8.5.3. Newly Arrived Teaching Staff After the Start of the Academic Year
- 6.8.6. Non-teaching Staff
  - 6.8.6.1. General Aspects
  - 6.8.6.2. Non-teaching Staff Newly Arrived at the Beginning of the Academic Year
  - 6.8.6.3. Non-teaching Staff Arriving at the Beginning of the Course
- 6.8.7. Model Student Welcome Plan
- 6.8.8. Template for the Teacher Welcome Plan
- 6.8.9. Model Welcome Plan for Non-teaching Staff
- 6.8.10. Aspects to Take into Account
- 6.9. Internal Regulations
  - 6.9.1. General Considerations
  - 6.9.2. Student Enrollment in the School
  - 6.9.3. Check-in and Check-out Times
  - 6.9.4. Absence and Substitutions
    - 6.9.4.1. Student Absences and Substitutions
    - 6.9.4.2. Absence and Substitutions of Teaching and Non-teaching Personnel
  - 6.9.5. Medication Administration Protocol
    - 6.9.5.1. General Criteria
    - 6.9.5.2. Health Protocol
    - 6.9.5.3. Foreseeable and Non-foreseeable Emergencies
    - 6.9.5.4. First Aid Kit
    - 6.9.5.5. Medication Administration
    - 6.9.5.6. Annexes
  - 6.9.6. Accident Protocol
    - 6.9.6.1. General Criteria
    - 6.9.6.2. Mild and Severe Situations
  - 6.9.7. Protocol Regarding Extracurricular and Complementary Outings
  - 6.9.8. Protocol for the Management of the Center's Spaces and Facilities
    - 6.9.8.1. General Criteria
    - 6.9.8.2. Security and Surveillance of the Center
    - 6.9.8.3. Concierge
    - 6.9.8.4. Common Areas
    - 6.9.8.5. Classroom
    - 6.9.8.6. Use of Information Technology
    - 6.9.8.7. Others
  - 6.9.9. Mentoring Meetings
  - 6.9.10. Aspects to Take into Account
- 6.10. Project of Projects
  - 6.10.1. School Lunchroom Educational Project
  - 6.10.2. Emergency Plan
  - 6.10.3. Innovation Project
  - 6.10.4. Textbook Reuse, Replacement and Renewal Program
  - 6.10.5. Improvement Plan
  - 6.10.6. Curricular Project
  - 6.10.7. Language Project
  - 6.10.8. Educational Marketing Plan
  - 6.10.9. Teacher Training Plan
  - 6.10.10. ICT Project
  - 6.10.11. To Learn More

## Module 7. Implementation Phase of the Educational Project: Key Factors for an Efficient and Effective Educational Project

- 7.1. Educational Leadership How Many of Us Are There?
  - 7.1.1. General Considerations
  - 7.1.2. Theories that Bring Us Closer to the Figure of the Leader
  - 7.1.3. Essential Leadership Competencies
  - 7.1.4. Leadership Models
  - 7.1.5. European Trends in Educational Leadership
  - 7.1.6. Tools for Effective and Efficient Leadership
  - 7.1.7. Phases to Become a Leader
  - 7.1.8. Social Skills
  - 7.1.9. Emotional Skills
  - 7.1.10. Aspects to Take into Account
- 7.2. Preparation. Who Are We?
  - 7.2.1. General Considerations
  - 7.2.2. Definition of the Educational Project
  - 7.2.3. Relationship of the Educational Project with Other Documents
  - 7.2.4. Components of the Educational Project
  - 7.2.5. Implications of the Educational Project
  - 7.2.6. Process Definition
  - 7.2.7. Performance Planning
  - 7.2.8. Proposal
  - 7.2.9. Examples of Planning the Process of Elaboration of an Educational Project
  - 7.2.10. Aspects to Take into Account
- 7.3. Situation Analysis. Where Are We?
  - 7.3.1. General Considerations
  - 7.3.2. Process Definition
  - 7.3.3. Analysis of the Center
    - 7.3.3.1. Center Analysis Sheets
  - 7.3.4. Analysis of the Environment
    - 7.3.4.1. Environmental Analysis Sheets
  - 7.3.5. Model Report from the Management Team to the Different Educational Agents
  - 7.3.6. Educational Project Survey
  - 7.3.7. Aspects to Take into Account
- 7.4. Sensitization. Why Do We Need Everyone?
  - 7.4.1. General Considerations
  - 7.4.2. Process Definition
  - 7.4.3. Performance Planning
  - 7.4.4. Proposal
  - 7.4.5. Examples of Planning the Awareness-Raising Process of an Educational Project
  - 7.4.6. Aspects to Take into Account
- 7.5. Production. What Do We Want?
  - 7.5.1. General Considerations
  - 7.5.2. Process Definition
  - 7.5.3. Principles, Values and Signs of Identity of the Center
  - 7.5.4. Basic Objectives. Priorities
  - 7.5.5. Approval and Validation
  - 7.5.6. Broadcast
  - 7.5.7. Templates
  - 7.5.8. Aspects To Take into Account
- 7.6. Implementation. How Do We Do It?
  - 7.6.1. General Considerations
  - 7.6.2. Process Definition
  - 7.6.3. Templates
  - 7.6.4. Aspects To Take into Account
- 7.7. Monitoring and Assessment. Which Way Do We Go?
  - 7.7.1. General Considerations
  - 7.7.2. Process Definition
  - 7.7.3. Validity and Revision
  - 7.7.4. Templates
  - 7.7.5. Aspects To Take into Account

- 7.8. Redesign of the Educational Project. Shall We Continue?
  - 7.8.1. General Considerations
  - 7.8.2. Process Definition
  - 7.8.3. Aspects To Take into Account
- 7.9. Coordination of Unipersonal and Collegiate Governing Bodies. How Are We Going To Coordinate?
  - 7.9.1. General Considerations
  - 7.9.2. Process Definition
  - 7.9.3. Single-Member Bodies
  - 7.9.4. Collegiate Governing Bodies
  - 7.9.5. Aspects To Take Into Account
- 7.10. Participation of the Different Educational Agents. How Are We Going To Participate?
  - 7.10.1. General Considerations
  - 7.10.2. Process Definition
  - 7.10.3. Participation and Management Model
  - 7.10.4. Family Involvement
  - 7.10.5. Teacher Participation
  - 7.10.6. Non-teaching Staff Participation
  - 7.10.7. Student Participation
  - 7.10.8. Involvement of the Environment
  - 7.10.9. Aspects To Take Into Account
- 7.11. To Learn More

## Module 8. Leadership, Direction and Management of the Educational Project

- 8.1. Terms and Roles: Management, Administration, Leadership
  - 8.1.1. Manager
  - 8.1.2. Director
  - 8.1.3. Leader
  - 8.1.4. The Role of Management in the School Management Function
  - 8.1.5. The Role of Management in the School Leadership Role
  - 8.1.6. The Role of leadership in the School Management Function
  - 8.1.7. The Virtuous Triangle
  - 8.1.8. Nobody Is Perfect. No One Is an Island

- 8.1.9. A Set of Counterweights
- 8.1.10. Is the Solitude of the President Really Necessary?
- 8.2. Coaching and Leadership
  - 8.2.1. The Management Function as Leadership of Leaders
  - 8.2.2. The Leader as Coach
  - 8.2.3. Leadership, Coaching and Maieutics
  - 8.2.4. Elements of Team Coaching: Assisting Water Breakage
    - 8.2.4.1. Check the Equipment
    - 8.2.4.2. Make Them Aware of the Change
    - 8.2.4.3. Be a Loudspeaker, Be a Flag-Bearer, Encourage, Provoke
  - 8.2.5. Elements of Team Coaching: Intervening Subcutaneously
    - 8.2.5.1. Transferring Responsibility to the Team
    - 8.2.5.2. Encourage Participation
    - 8.2.5.3. Articulate What is Already in Place
    - 8.2.5.4. Standardization
  - 8.2.6. Elements of Team Coaching: Boosting the Body's Defenses
    - 8.2.6.1. Revealing Signs or Symptoms
    - 8.2.6.2. Sustaining Discomfort
    - 8.2.6.3. Giving Back to the Team What Belongs To It
    - 8.2.6.4. Giving Voice to the Silenced
  - 8.2.7. The Leader and the Chaosorder: Transaction and Transformation
  - 8.2.8. Changing the Language to Change the Facts
    - 8.2.8.1. Communication as the Key to Change
    - 8.2.8.2. Language as an Engine of Change
    - 8.2.8.3. History, Metaphors and Stories The Effectiveness of Symbolic Language
    - 8.2.8.4. From Words to Deeds
    - 8.2.8.5. Celebrate What Has Been Achieved
  - 8.2.9. Words Persuade, Example Drags
- 8.3. Structures and Leadership: Persons of Reference in the Center, Other Leaders
  - 8.3.1. The Power-Authority Binomial
  - 8.3.2. Organizational Structures and Formal Leaderships
  - 8.3.3. Do We Have the Necessary and Sufficient Structures?

- 8.3.4. Types of Leadership (Without Last Names)
  - 8.3.4.1. Master Leaders
  - 8.3.4.2. Organizing Leaders
  - 8.3.4.3. Leading Builders
- 8.3.5. Paraformal Leadership and Adaptive Structures
- 8.3.6. The Delegated Power
- 8.3.7. There is No Manager Without Direction and No Leader Without a Project
- 8.3.8. You Can Learn to Be a Leader, But You Have To Dedicate Time and Attention To It
- 8.3.9. Leading From Values: Commitment, Exemplarity, Greatness and Resilience
- 8.4. Election, Training and Accompaniment of Leaders in the Center
  - 8.4.1. Why Do We Need This Leader? Work Teams and Leadership
  - 8.4.2. Creating the Future: Delegation in Leaders
    - 8.4.2.1. Requirements to Delegate
    - 8.4.2.2. The Delegation Process
    - 8.4.2.3. Delegation Phases
  - 8.4.3. Co-creating the Future: Empowering Leaders
    - 8.4.3.1. Forms of Empowerment
    - 8.4.3.2. Communication to the Center
    - 8.4.3.3. The Limits of Power
  - 8.4.4. The Ongoing Training of Leaders
  - 8.4.5. Accompanying Those Who Care for Them
  - 8.4.6. Personalized Follow-up for Those Who Have a Responsibility
  - 8.4.7. Professional Development of Leaders
  - 8.4.8. It is Well Born to Be Grateful: the Day After Relinquishing a Responsibility
- 8.5. How to Champion the Educational Project
  - 8.5.1. Know the Framework Well: Mission, Vision and Values
  - 8.5.2. Knowing How to Transmit
  - 8.5.3. Times and Forms of Transmission
    - 8.5.3.1. The Important vs. The Urgent
    - 8.5.3.2. Be Aware that 92% of What is Communicated is Non-Verbal Language
  - 8.5.4. Anchoring in the Real Context
  - 8.5.5. Every Project Requires Strategy and Tactics
    - 8.5.5.1. The Strategic Plan. Actors
    - 8.5.5.2. Tactics. Actors
  - 8.5.6. Trial and Error
  - 8.5.7. The Educational Project and Leaders as Coolhunters
  - 8.5.8. Erarre Humanum Est. The School as a Laboratory: Possibilities and Limits
  - 8.5.9. Perseverare Autem Diabolicum. What Does Not Work is Ballast
  - 8.5.10. Et Tertia Non Datur? That 50-25-20 Advice
- 8.6. Theoretical and Practical Training on the Basics of the Project
  - 8.6.1. The Binomial Foundation-Practicality
  - 8.6.2. It is Always Necessary to Justify What is Going To Be Done
    - 8.6.2.1. The Necessary Scientific Support
    - 8.6.2.2. As a Propaedeutic Motive
    - 8.6.2.3. As a Communicative Argument
    - 8.6.2.4. To Encourage Reflection, Observation and Assessment
  - 8.6.3. The Practical Benefits Must Also Be Substantiated
  - 8.6.4. Application of What Has Been Learned: Motivation and Supervision
  - 8.6.5. Where to Invest More Effort?
  - 8.6.6. Non-complaining Reflection on What is Not Working
  - 8.6.7. Cross-Pollination: Co-Learning Among Teachers
  - 8.6.8. Reflection on Best Practices
  - 8.6.9. When What is Done Has Already Been Done
- 8.7. The Development of a Project. 1: Its Phases, Possibilities of Each Phase
  - 8.7.1. Every Project and Group has Phases of Change
  - 8.7.2. Phases of a Project. Possibilities
    - 8.7.2.1. Analysis
    - 8.7.2.2. Design
    - 8.7.2.3. Implementation
    - 8.7.2.4. Assessment
  - 8.7.3. From Paper Project to Reality

- 8.7.4. Microchanges and Development of the Educational Project: the Value of Work in the Classroom
- 8.7.5. Making the Most of What You Do: Listening as a Driver of Change
- 8.7.6. Project Development and Personal Changes: the Change Curve
  - 8.7.6.1. Neutral Phases
  - 8.7.6.2. New Beginnings
  - 8.7.6.3. Transition and Development
- 8.7.7. Overlapping Phases in Complex Projects
  - 8.7.7.1. How to Deal with Permanent Change?
  - 8.7.7.2. When it is Not Possible to Change Wquipment
- 8.7.8. What if it Doesn't Work? You Can Also Live on Mistakes
- 8.8. The Development of a Project. 2: Possible Obstacles
  - 8.8.1. Personal Obstacles
    - 8.8.1.1. Different Types of Stakeholder Profiles
    - 8.8.1.2. Profiles by Time of Performance
    - 8.8.1.3. Profiles by Socket
    - 8.8.1.4. From Balkanized Cultures to Professional Communities
  - 8.8.2. Bureaucratic Lace
    - 8.8.2.1. Continuous Assessment. Development of Appropriate Indicators
    - 8.8.2.2. There Are No Universal Indicators
    - 8.8.2.3. No School Fits on Paper
  - 8.8.3. Laws, Rules and Regulations
    - 8.8.3.1. Learning to Read
    - 8.8.3.2. Ask
    - 8.8.3.3. Daring to Propose
  - 8.8.4. Obstacles as Tools for Improvement
- 8.9. The Development of a Project. 3: Risk Factors
  - 8.9.1. Personal
    - 8.9.1.1. Lack of Equipment
    - 8.9.1.2. Internal Conflicts
    - 8.9.1.3. Anti-Leadership Attitudes
  - 8.9.2. Structural
    - 8.9.2.1. Inconsistency with the Mission
    - 8.9.2.2. Lack of Alignment with the Vision
    - 8.9.2.3. Contradiction with Values
    - 8.9.2.4. Duplicity
    - 8.9.2.5. Overload
  - 8.9.3. Strategic
    - 8.9.3.1. Decontextualization
    - 8.9.3.2. Unsustainability
  - 8.9.4. Tactical
    - 8.9.4.1. Lack of Knowledge of the Context
    - 8.9.4.2. Lack of Planning
    - 8.9.4.3. Premura
  - 8.9.5. Communicative
    - 8.9.5.1. The "juanpalomismo"
    - 8.9.5.2. "What People Will Say"
    - 8.9.5.3. From Customers to Allies
  - 8.9.6. Project Design and Risk Factors. Courage and Prudence
  - 8.9.7. The Need for External Advisors/Supervisors
- 8.10. Assessment of the Leadership and Management of the Educational Project
  - 8.10.1. Assessment as the Cornerstone of a Project
  - 8.10.2. The Role of Leadership and Management Assessment in Project Assessment
  - 8.10.3. Who Assess the Leader?
  - 8.10.4. Leadership Assessment Tools
  - 8.10.5. Developing a Professional Management Career: Learning to Manage and Lead
    - 8.10.5.1. Continuing Education
    - 8.10.5.2. Management Support
    - 8.10.5.3. Forums and Exchanges
  - 8.10.6. The Local Management Culture and the Educational Project of the Center
  - 8.10.7. The Local Management Culture is Part of the Center's Pedagogical Teaching
  - 8.10.8. Leadership Cycles, the Hallmark of Schools
  - 8.10.9. The Role of Seniors in the School of Tomorrow



## Module 9. Fundamentals and Evolution of Applied Technology in Education

- 9.1. Aligning with HORIZON 2020
  - 9.1.1. Early Advances in ICTs and Teacher Participation
  - 9.1.2. Horizon 2020 European Plan Progress
  - 9.1.3. UNESCO: ICT Competence for Teachers
  - 9.1.4. The Teacher as a Coach
- 9.2. Pedagogical Foundations of Educational Robotics
  - 9.2.1. MIT - a Pioneering Center of Innovation
  - 9.2.2. Jean Piaget - Forerunner of Constructivism
  - 9.2.3. Seymour Papert - Transformer of Technology Education
  - 9.2.4. George Siemen's Connectivism
- 9.3. Regularization of a Technological-Legal Environment
  - 9.3.1. Ethical Agreement on Applied Robotics European Report
- 9.4. Importance of the Curricular Implementation of Robotics and Technology
  - 9.4.1. Educational Competencies
    - 9.4.1.1. What is a Competence?
    - 9.4.1.2. What is an Educational Competency?
    - 9.4.1.3. Core Competencies in Education
    - 9.4.1.4. Application of Educational Robotics to Educational Competences
  - 9.4.2. STEAM. New learning Approach. Innovative Education to Train Future Professionals
  - 9.4.3. Technological Classroom Designs
  - 9.4.4. Creativity and Innovation Included in the Curricular Model
  - 9.4.5. The Classroom as a MAKERSPACE
  - 9.4.6. Critical Thinking
- 9.5. Another Way of Teaching
  - 9.5.1. Why Should we Innovate in Education?
  - 9.5.2. Neuroeducation; Emotion as Success in Education
    - 9.5.2.1. Some Neuroscience to Understand How Do We Produce Learning in Children?
  - 9.5.3. The 10 Keys to Gamify your Classroom
  - 9.5.4. Educational Robotics; The Flagship Methodology of the Digital Age

- 9.5.5. Advantages of Robotics in Education
- 9.5.6. Design with 3D Printing and its Impact on Education
- 9.5.7. Flipped Classroom y Flipped Learning
- 9.6. Gardner and Multiple Intelligences
  - 9.6.1. The 8 Types of Intelligence
    - 9.6.1.1. Logical-mathematical Intelligence
    - 9.6.1.2. Linguistic Intelligence
    - 9.6.1.3. Spatial Intelligence
    - 9.6.1.4. Musical Intelligence
    - 9.6.1.5. Body and Kinesthetic Intelligence
    - 9.6.1.6. Intrapersonal Intelligence
    - 9.6.1.7. Interpersonal Intelligence
    - 9.6.1.8. Naturalistic Intelligence
  - 9.6.2. The 6 Keys to Apply the Different Intelligences
- 9.7. Knowledge Analytical Tools
  - 9.7.1. Applying BIG DATA in Education

## Module 10. Educational Robotics; Robots in the Classroom

- 10.1. Beginnings of Robotics
- 10.2. Robo... What?
  - 10.2.1. What is a Robot? What isn't?
  - 10.2.2. Robot Types and Classification
  - 10.2.3. Components of a Robot
  - 10.2.4. Asimov and the Laws of Robotics
  - 10.2.5. Robotics, Educational Robotics and Pedagogic Robotics
  - 10.2.6. DIY (Do it Yourself) Techniques
- 10.3. Educational Robotics Learning Systems
  - 10.3.1. Meaningful and Active Learning
  - 10.3.2. Project-Based Learning (PBL)
  - 10.3.3. Play Based Learning
  - 10.3.4. Learning to Learn and Problem Solving

- 10.4. Computational Thinking (CT) Comes to the Classrooms
  - 10.4.1. Nature
  - 10.4.2. The PC Concept
  - 10.4.3. Computational Thinking Techniques
  - 10.4.4. Algorithmic Thinking and Pseudocode
  - 10.4.5. Computational Thinking Tools
- 10.5. Educational Robotics Work Formula
- 10.6. Four C's Methodology to Boost your Students
- 10.7. General Educational Robotics Advantages

### **Module 11. Working with Robots in the Pre-School. "Not to Just Learn Robotics, Rather Learn With Robotics"**

- 11.1. The Revolution of New Technologies in Pre-School Education
  - 11.1.1. How have New Technologies Evolved in Pre-School Education?
  - 11.1.2. Digital Teaching Competence
  - 11.1.3. The Importance of Merging Emotional Intelligence and Educational Robotics
  - 11.1.4. Teaching Children to Innovate from an Early Age
- 11.2. Robotics in the Infant Classroom. Educating for the Future
  - 11.2.1. Emergence of Educational Robotics in the Pre-School Classroom
  - 11.2.2. Why Introduce Computational Thinking Development in Pre-School Education?
  - 11.2.3. Use of Educational Robotics as a Learning Strategy
  - 11.2.4. Curricular integration of Educational Robotics
- 11.3. Robots in the Classroom!
  - 11.3.1. Which Robots can we Introduce in Pre-School Education?
  - 11.3.2. LEGO DUPLO as a Complementary Tool
  - 11.3.3. Software to Get Started in Programming
- 11.4. Getting to Know Bee-Bot!
  - 11.4.1. The Bee-Bot Programmable Robot
  - 11.4.2. Contributions of Bee-Bot Robots in Education
  - 11.4.3. Software Study and Performance
  - 11.4.4. Bee-Bot CARDS
  - 11.4.5. Classroom Resources and Beyond

- 11.5. Classroom Tools
  - 11.5.1. How Do I implement Robotics in the Classroom?
  - 11.5.2. Working with Educational Robotics in Pre-School Curriculum
  - 11.5.3. Relationship of Robotics with the Contents
  - 11.5.4. Bee-Bot Session Development in the Classroom

### **Module 12. I'm a Grown up Now! Knowledge of Educational Robotics in the Primary School Stage**

- 12.1. Learning Robotics, Building Apprenticeships
  - 12.1.1. Pedagogical Approach in Primary School Classrooms
  - 12.1.2. Importance of Collaborative Work
  - 12.1.3. Enjoying By Doing Method
  - 12.1.4. From ICTs (New Technologies) to LKT (Learning and Knowledge Technology)
  - 12.1.5. Correlating Robotics and Curricular Contents
- 12.2. We Become Engineers!
  - 12.2.1. Robotics as an Educational Resource
  - 12.2.2. Robotic Resources to Introduce in the Primary School Stage
- 12.3. About LEGO®
  - 12.3.1. Lego WeDo 9580 Kit
    - 12.3.1.1. Kit Contents
    - 12.3.1.2. Lego WEDO 9580 Software
  - 12.3.2. Lego WeDo 2.0 Kit
    - 12.3.2.1. Kit Contents
    - 12.3.2.2. WEDO 2.0 Software
  - 12.3.3. First Notions in Mechanics
    - 12.3.3.1. Scientific and Technological Principles of Levers
    - 12.3.3.2. Scientific and Technological Principles of Wheels and Axles
    - 12.3.3.3. Scientific and Technological Gear Principles
    - 12.3.3.4. Scientific and Technological Pulley Principles
- 12.4. Teaching Practice. Bulding My First Robot
  - 12.4.1. Introduction to mBot, Getting Started
  - 12.4.2. Robot Movement
  - 12.4.3. IR Sensor (Light Sensor)
  - 12.4.4. Ultrasonic Sensor. Obstruction Detector

- 12.4.6. Line Follow Sensor
- 12.4.7. Additional Sensors not Included in the Kit
- 12.4.8. mBot Face
- 12.4.9. Robot Operation with the APP
- 12.5. How to Design your Teaching Materials?
  - 12.5.1. Development of Competencies with Technology
  - 12.5.2. Working on Projects Linked to the School Curriculum
  - 12.5.3. How is a Robotics session held in the Primary School Classroom?

### Module 13. Focusing High School Students on the Careers of the Future

- 13.1. Robotics as a Motivator
  - 13.1.1. Motivation as a Learning Strategy
  - 13.1.2. Educational Robotics Against School Dropout. OECD Report
  - 13.1.3. The Road to the Careers of the Future
  - 13.1.4. Robotics as a Subject in Secondary Education
  - 13.1.5. Robotics for Youth Entrepreneurship
- 13.2. How Can We Introduce Resources in Secondary School Classrooms?
- 13.3. Being Electronics
  - 13.3.1. Importance of Open Source Hardware (SSO)
  - 13.3.2. Educational Uses of Open Source technology
  - 13.3.3. What is Arduino?
  - 13.3.4. Arduino Components
  - 13.3.5. Arduino Types
  - 13.3.6. Software Arduino
  - 13.3.7. How the ProtoBoard Works
  - 13.3.8. Fritzing as a Training Platform
- 13.4. LEGO MINDSTORMS Education
  - 13.4.1. Lego Mindstorms Development. MIT + Lego®
  - 13.4.2. Mindstorms Generations
  - 13.4.3. Lego Mindstorms Robotics Kit Components
  - 13.4.4. EV3 Software
  - 13.4.5. Coding Blocks

- 13.5. Taking up mBot
  - 13.5.1. Challenge: Wall-tracking Robot
  - 13.5.2. The Robot Solves Mazes Challenge
  - 13.5.3. Advanced Follow the Lines Challenge
  - 13.5.4. Autonomous Vehicle Challenge
  - 13.5.5. SumoBot Challenge
- 13.6. Competitions: Challenging the Best
  - 13.6.1. Types of Educational Robotics Competitions
  - 13.6.2. RoboCup
  - 13.6.3. Robotics Competition
  - 13.6.4. First Lego League (FLL)
  - 13.6.5. World Robot Olympiad (WRO)
  - 13.6.6. Robotlympic

### Module 14. Robotics Specifically for Children with SEN (Special Educational Needs)

- 14.1. Robotics as a Pedagogical Resource for Children with SEN
  - 14.1.1. What is Meant by Students with Special Educational Needs?
  - 14.1.2. The Educator's Role when Faced with SEN Students
  - 14.1.3. Robotics as a Pedagogical Resource for Children with SEN
- 14.2. Educational Robotics the Educational Answer to ADHD
  - 14.2.1. What is Attention Deficit Hyperactivity Disorder (ADHD)?  
Teaching-Learning Process, Attention and Motivation
  - 14.2.2. Why does Educational Robotics Benefit Children with ADHD?  
Teaching Strategies for Working with Students with ADHD
  - 14.2.3. The Most Important Part: Fun and Motivation
- 14.3. Robotics as Therapy for Children with Autism and Asperger's Disease
  - 14.3.1. What is Autism Spectrum Disorder?
  - 14.3.2. What is Asperger Syndrome?
  - 14.3.3. What are the Differences Between ASD and Asperger's?
  - 14.3.4. Benefits of Robotics for Children with ASD and Asperger's Disease
  - 14.3.5. Can a Robot Help a Child with Autism to Socialize?
  - 14.3.6. APPS to Support Oral Learning, Writing, Mathematics, etc
  - 14.3.7. APPS to Support Daily Life

- 14.4. Robotics, an Alternative for Children with High Abilities
  - 14.4.1. Intelligence and High Capacities
  - 14.4.2. Learning Style of Children with High Abilities
  - 14.4.3. How does Educational Robotics Help Children with High-Capacities?
  - 14.4.4. Robotic Resources for Working with Highly Capable Children

### Module 15. The Most Widespread Language in Primary Classrooms: Scratch

- 15.1. Introduction to Scratch
  - 15.1.1. What is Scratch?
  - 15.1.2. Free Knowledge
  - 15.1.3. Educational Use of Scratch
- 15.2. Getting to know Scratch
  - 15.2.1. Stage
  - 15.2.2. Object and Scenario Editing
  - 15.2.3. Menu Bar and Tools
  - 15.2.4. Switch to Costume and Sound Editing
  - 15.2.5. View and Share Projects
  - 15.2.6. Program Block Editing
  - 15.2.7. Help
  - 15.2.8. Backpack
- 15.3. Programming Blocks Development
  - 15.3.1. According to Shape
  - 15.3.2. According to the Color
    - 15.3.2.1. Motion Blocks (Navy blue)
    - 15.3.2.2. Appearance Blocks (Purple)
    - 15.3.2.3. Sound blocks (Pink)
    - 15.3.2.4. Pencil Blocks (Green)
    - 15.3.2.5. Data Blocks (Orange)
    - 15.3.2.6. Event Blocks: (Brown)
    - 15.3.2.7. Control Blocks (Ochre)
    - 15.3.2.8. Sensor Blocks (Light blue)
    - 15.3.2.9. Operator Blocks (Light Green)
    - 15.3.2.10. More Blocks (Violet and Dark Gray)

- 15.4. Stacking Blocks. Practical Part
- 15.5. Scratch Community for Students
- 15.6. ScratchED. Learn, Share and Connect. Teachers' Community

### Module 16. Programming for Learning by Playing

- 16.1. The Future of Education Lies in Teaching How to Code
  - 16.1.1. The Origins of Programming for Children: the LOGO Language
  - 16.1.2. Impact of Learning Programming in the Classroom
  - 16.1.3. Small Creators Without Fear of Error
- 16.2. Teaching Tools for Introducing Programming in the Classroom
  - 16.2.1. From Where Do We Start Teaching Programming?
  - 16.2.2. How Can it be Introduced in the Classroom?
- 16.3. What Programming Tools Can We Find?
  - 16.3.1. Platform for Learning to Program Starting from Pre-School. Code org
  - 16.3.2. Video Game Programming in 3D. Kodu Game Lab
  - 16.3.3. Learn to Program in High School with JavaScript, C+, Phyton. Code Combat
  - 16.3.4. Other Alternatives for Programming at School

### Module 17. Design and 3d printing "If You Can Dream it You Can Create It"

- 17.1. Origins and Development of 3D Design and 3D Printing
  - 17.1.1. What Is It?
  - 17.1.2. NMC Horizon Project. EDUCAUSE Learning
  - 17.1.3. Evolution of 3D Printing
- 17.2. 3D Printers Which Ones Can We Find?
  - 17.2.1. SLA - Stereolithography
  - 17.2.2. SLS - Selective Laser Sintering
  - 17.2.3. Injection
  - 17.2.4. FDM - Fused Material Deposition
- 17.3. What Types of Materials Are Available for 3D Printing?
  - 17.3.1. Abs
  - 17.3.2. Pla
  - 17.3.3. Nylon

- 17.3.4. Flex
- 17.3.5. Pet
- 17.3.6. Hips
- 17.4. Applications in Different Fields
  - 17.4.1. Art
  - 17.4.2. Feeding
  - 17.4.3. Textile and Jewelry
  - 17.4.4. Medicine
  - 17.4.5. Construction
  - 17.4.6. Educational

## Module 18. Tinkercad, a Different Way of Learning

- 18.1. Working with TinkerCad in the Classroom
  - 18.1.1. About Tinkercad
  - 18.1.2. 3D Perception
  - 18.1.3. Cube, Hello World!
- 18.2. First Steps with TinkerCad
  - 18.2.1. Using "Hole" Command
  - 18.2.2. Grouping and Ungrouping
- 18.3. Clone Creation
  - 18.3.1. Copy, Paste, Duplicate
  - 18.3.2. Design Scaling; Modifying Clones
- 18.4. Fine-tuning Our Creations
  - 18.4.1. AlignAlinear
  - 18.4.2. "Mirror" (Mirror effect)
- 18.5. Printing First Designs
  - 18.5.1. Import and Export Designs
  - 18.5.2. Which Software Can We Use for Our Printing?
  - 18.5.3. From TinkerCad to CURA. Making Our Designs Come True!

- 18.6. Guidance for Design and 3D Printing in the Classroom
  - 18.6.1. How to Work with Design in the Classroom?
  - 18.6.2. Linking Design and Contents
  - 18.6.3. Thingiverse as a Teacher Support Tool

## Module 19. Planning and Economic-Financial Management of Educational Projects

- 19.1. Situation Analysis and Educational Problems
  - 19.1.1. Diagnostic Examination
  - 19.1.2. Educational Indicators
  - 19.1.3. The Educational Problem
  - 19.1.4. Infrastructure Problems
  - 19.1.5. Socio-economic Problems
  - 19.1.6. Administrative and Institutional Problems
  - 19.1.7. Environmental Problems
  - 19.1.8. Historical-Cultural Problems
  - 19.1.9. Cause-effect Analysis
  - 19.1.10. SWOT Analysis
- 19.2. Introduction to the Planning and Economic-Financial Management of Educational Projects
  - 19.2.1. Project Preparation and Assessment
  - 19.2.2. Decision-Making Associated with a Project
  - 19.2.3. Typology of Projects
  - 19.2.4. Project Assessment
  - 19.2.5. Social Assessment of Projects
  - 19.2.6. Projects in Development Planning
  - 19.2.7. Scope of the Project Study
  - 19.2.8. The Technical Study of the Project
  - 19.2.9. Market Research
  - 19.2.10. Organizational and Financial Study

- 19.3. Economic Structure and Market Research Educational
  - 19.3.1. Market Structure
  - 19.3.2. Demand for Educational Product
  - 19.3.3. Pricing
  - 19.3.4. The Offer
  - 19.3.5. The Project Market
  - 19.3.6. Objective and Stages of the Market Study
  - 19.3.7. The Consumer
  - 19.3.8. Commercial Strategy
  - 19.3.9. Analysis of the Medium
  - 19.3.10. The Demand
- 19.4. Projection and Cost Estimation Techniques
  - 19.4.1. The Projection
  - 19.4.2. Projection Methods
  - 19.4.3. Qualitative and Causal Methods
  - 19.4.4. Time Series Model
  - 19.4.5. Cost Information
  - 19.4.6. Differential and Future Costs
  - 19.4.7. Relevant Cost Elements
  - 19.4.8. Short-Term Cost Functions
  - 19.4.9. Cost-Volume-Utility Analysis
  - 19.4.10. Accounting Costs and V.A.T. (Value Added Tax) Cost
- 19.5. Economic Background for Technical Study and Sizing
  - 19.5.1. Scope of the Study and Production Process
  - 19.5.2. Economies of Scale
  - 19.5.3. Lange Model
  - 19.5.4. Investments in Equipment
  - 19.5.5. Personal Balance and Choice of Technological Alternatives
  - 19.5.6. Factors Influencing Project Size
  - 19.5.7. The Economics of Size
  - 19.5.8. Size Optimization
  - 19.5.9. Size of a Project with a Growing Market
  - 19.5.10. Size of a Project with Constant Demand
- 19.6. Location Decisions and Organizational Economic Effects
  - 19.6.1. Study and Location Factors
  - 19.6.2. Non-Quantifiable Factor Assessment Methods
  - 19.6.3. Qualitative Point Method
  - 19.6.4. Brown and Gibson's Method
  - 19.6.5. Net Present Value Maximization
  - 19.6.6. The Study of the Project Organization
  - 19.6.7. The Economic Effects of Organizational Variables
  - 19.6.8. Investment in Organization
  - 19.6.9. Administrative Operation Costs
  - 19.6.10. Relevance of Administrative Systems in Project Preparation and Appraisal
- 19.7. The Legal Framework and Project Investments
  - 19.7.1. The Relevance of the Legal Framework
  - 19.7.2. Economic Considerations of the Legal Study
  - 19.7.3. Some Economic Effects of the Legal Study
  - 19.7.4. The Legal System of Social Organization
  - 19.7.5. Pre-start-up Investments
  - 19.7.6. Investment in Working Capital
  - 19.7.7. Accounting Method
  - 19.7.8. Time Lag Period Method
  - 19.7.9. Maximum Cumulative Deficit Method
  - 19.7.10. Investments During Operation
- 19.8. Project Benefits and Construction of Cash Flows
  - 19.8.1. Types of Benefits
  - 19.8.2. Scrap Values
  - 19.8.3. Pricing Policies
  - 19.8.4. Profitability Analysis for Pricing
  - 19.8.5. Elements of Cash Flow
  - 19.8.6. Structure of a Cash Flow
  - 19.8.7. Investor Cash Flow
  - 19.8.8. Cash Flows from Projects in Going Concerns
  - 19.8.9. EBITDA
  - 19.8.10. Other Considerations

- 19.9. Project Assessment Criteria and Discount Rate
  - 19.9.1. Net Present Value (NPV) Approach
  - 19.9.2. The Internal Rate of Return Criterion (IRR)
  - 19.9.3. Other Decision Criteria
  - 19.9.4. Effects of Inflation on Project Appraisal
  - 19.9.5. The Cost of Capital
  - 19.9.6. The Cost of Debt
  - 19.9.7. The Cost of Equity
  - 19.9.8. Capital Asset Pricing Model for Determining the Cost of Equity
  - 19.9.9. Average Company Rate Versus CAPM
  - 19.9.10. The Agency Problem
- 19.10. Risk and Sensitivity Analysis
  - 19.10.1. Preliminary Considerations
  - 19.10.2. One-dimensional Model of NPV Sensitization
  - 19.10.3. Multidimensional NPV Sensitization Model, Monte Carlo Simulation
  - 19.10.4. Uses and Abuses of Sensitivity
  - 19.10.5. Project Preparation and Social Assessment
  - 19.10.6. Social Costs and Benefits
  - 19.10.7. Incidence of Indirect Effects or Externalities
  - 19.10.8. Incidence of Intangible Effects
  - 19.10.9. Incidence of the Social Discount Rate
  - 19.10.10. Private and Social Assessment

## Module 20. Marketing and Advertising of an Educational Project

- 20.1. Introduction to Marketing
  - 20.1.1. Introduction to Marketing
  - 20.1.2. Marketing Needs
  - 20.1.3. The Evolution of the Concept of Marketing
  - 20.1.4. New trends in Marketing
  - 20.1.5. From Transactional Marketing to Relational Marketing
  - 20.1.6. Corporate Social Responsibility
  - 20.1.7. Marketing
    - 20.1.7.1. Marketing 1.0
    - 20.1.7.2. Marketing 2.0
    - 20.1.7.3. Marketing 3.0
    - 20.1.7.4. Marketing 4.0
  - 20.1.8. Holistic Marketing
- 20.2. Commercial Planning
  - 20.2.1. Corporate Strategic Planning and Marketing Planning
  - 20.2.2. The Marketing Plan in the Company
  - 20.2.3. Phase 1. Situation Analysis
    - 20.2.3.1. Market Analysis
    - 20.2.3.2. Microenvironment
    - 20.2.3.3. Macroenvironment
    - 20.2.3.4. Internal Analysis
  - 20.2.4. Phase 2. Setting Objectives
  - 20.2.5. Phase 3. Strategy Design
    - 20.2.5.1. The Product
    - 20.2.5.2. The Price
    - 20.2.5.3. Distribution
    - 20.2.5.4. Communication
  - 20.2.6. Phase 4. Assessment, Organization, Implementation and Monitoring of the Strategy
    - 20.2.6.1. Assessment of the Commercial Strategy
    - 20.2.6.2. Organization of the Marketing Department and Implementation of the Commercial Strategy
    - 20.2.6.3. Commercial Strategy Control (Feedback)

- 20.3. Market and Customer segmentation
  - 20.3.1. Improve the Effectiveness of Marketing Actions by Means of Correct Customer Segmentation
  - 20.3.2. Differentiate Campaign Leads to Target Efforts to Those Who will Buy the Products
  - 20.3.3. Select the Markets and Audiences that Best Fit your Company's Products/ Services and Characteristics
  - 20.3.4. Identify your Customer's Needs and design an Effective Marketing Mix to Meet those Needs
  - 20.3.5. Obtain a High Competitive Advantage and Generate Growth Opportunities for your Company
  - 20.3.6. Know which Variables Should be Part of my Segmentation Program
  - 20.3.7. What are the Benefits of Implementing a Segmentation Program?
  - 20.3.8. Incorporate Segmentation into the Company's Sales and Marketing Process
- 20.4. Positioning and Personal Brand Building
  - 20.4.1. How is the So-called Brand Value Generated?
  - 20.4.2. Keys to Proper Online and Offline Brand Management
  - 20.4.3. Elements that Make up the Trademark and what Characteristics they Must Meet
  - 20.4.4. Characteristics, Advantages and Disadvantages of the Different Existing Strategies for Brand Management
  - 20.4.5. Appropriate Strategies to Improve the Positioning of the Product or Service through the Brand and its Communication
- 20.5. Advertising Creativity and a New Form of Communication in the Company
  - 20.5.1. What is Creativity and What are the Best Conditions to Create?
  - 20.5.2. What Does it Take to Get to the Idea?
  - 20.5.3. How Does the Advertising Creative's Thinking Work?
  - 20.5.4. How is an Advertising Message Structured?
  - 20.5.5. How to Generate Publicity?
  - 20.5.6. How to Create Ads in the Digital Sphere?
  - 20.5.7. What are the Main Reasons why it is Necessary to Have a Brand?
  - 20.5.8. What are the Differences Between the Logo and the Brand?
- 20.6. Educational Offer
  - 20.6.1. The Educational Project
  - 20.6.2. Ideology
  - 20.6.3. Extra Services
  - 20.6.4. Use of Different Materials
  - 20.6.5. Certifications
  - 20.6.6. Differences in your Educational Offer
  - 20.6.7. Methodology
  - 20.6.8. Teaching Staff
  - 20.6.9. Facilities
  - 20.6.10. Ancillary Services. (Location and Access Roads)
- 20.7. Social Networks
  - 20.7.1. Facebook ADS Campaign
    - 20.7.1.1. Create Persuasive, High-Impact Campaigns, Driving the Customer through the Entire Buying Journey and Using the Right Campaign Objectives
    - 20.7.1.2. Take 100% Advantage of the Facebook Platform, knowing its Structure and Operation
    - 20.7.1.3. Create ads in different Facebook Formats, knowing their Structure and Operation
    - 20.7.1.4. Prepare a Presentation Covering all the Sales Processes
    - 20.7.1.5. Create and Optimize your Facebook Page for the Best Results
    - 20.7.1.6. "Spy" on Competitors and Use Them as a Reference to Improve your Products and Services
    - 20.7.1.7. Control the ROI of your Campaign and thus Increase your Results
  - 20.7.2. Twitter ADS Campaign
    - 20.7.2.1. Objective
    - 20.7.2.2. Audience
    - 20.7.2.3. Bids
    - 20.7.2.4. Budget
    - 20.7.2.5. Creativity
    - 20.7.2.6. Analysis of your Campaign



- 20.7.3. Instagram Campaign
  - 20.7.3.1. Contents
  - 20.7.3.2. Optimize your Profile
  - 20.7.3.3. Use of Hashtags
  - 20.7.3.4. Encourage Participation
  - 20.7.3.5. Show Customer Experiences
  - 20.7.3.6. Instagram for Events
- 20.7.4. Email Marketing Campaigns
- 20.7.5. WhatsApp Campaigns
- 20.7.6. The Apps
- 20.7.7. Blog
- 20.8. Creation and Management of the Marketing Strategy for Service Companies
  - 20.8.1. What is Service Marketing and the Strategies, Methodologies and Tools?
  - 20.8.2. Distinctive Aspects of Service Marketing
  - 20.8.3. Service Marketing Plan
  - 20.8.4. Successful Positioning in Service Markup
  - 20.8.5. Analyze Customer Behavior in Service Companies
- 20.9. Marketing Strategies
  - 20.9.1. Introduction
  - 20.9.2. Product Decisions
    - 20.9.2.1. Product Dimensions
    - 20.9.2.2. Product Portfolio Decisions
    - 20.9.2.3. Creation of New Products
    - 20.9.2.4. Product Life Cycle
  - 20.9.3. Pricing Decisions
    - 20.9.3.1. Pricing Policies and Strategies
    - 20.9.3.2. Pricing Policy Determinants
    - 20.9.3.3. Pricing Strategies
  - 20.9.4. Distribution Decisions
    - 20.9.4.1. Decisions Related to Distribution Management
  - 20.9.5. Communication Decisions
    - 20.9.5.1. Personal Selling
    - 20.9.5.2. Sales Promotion
    - 20.9.5.3. Public Relations
    - 20.9.5.4. Advertising
    - 20.9.5.5. Other Communication Tools
- 20.10. Marketing Metrics: Campaign Profitability Analysis
  - 20.10.1. Usefulness of the Different Metrics According to the Type of Company, its Strategy and Objectives
  - 20.10.2. Main Indicators used to Measure the Performance of Companies Commercial and Marketing Activities
  - 20.10.3. The importance of Assessing the Marketing Actions Developed in the Company for Management and Improvement Purposes
  - 20.10.4. Avoiding Inappropriate use of Metrics
  - 20.10.5. Use Marketing Metrics to Assess the Profitability, Efficiency and Effectiveness of Programs



*A comprehensive specialized program that will take you through the necessary training to compete with the best in your profession"*

06

# 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.





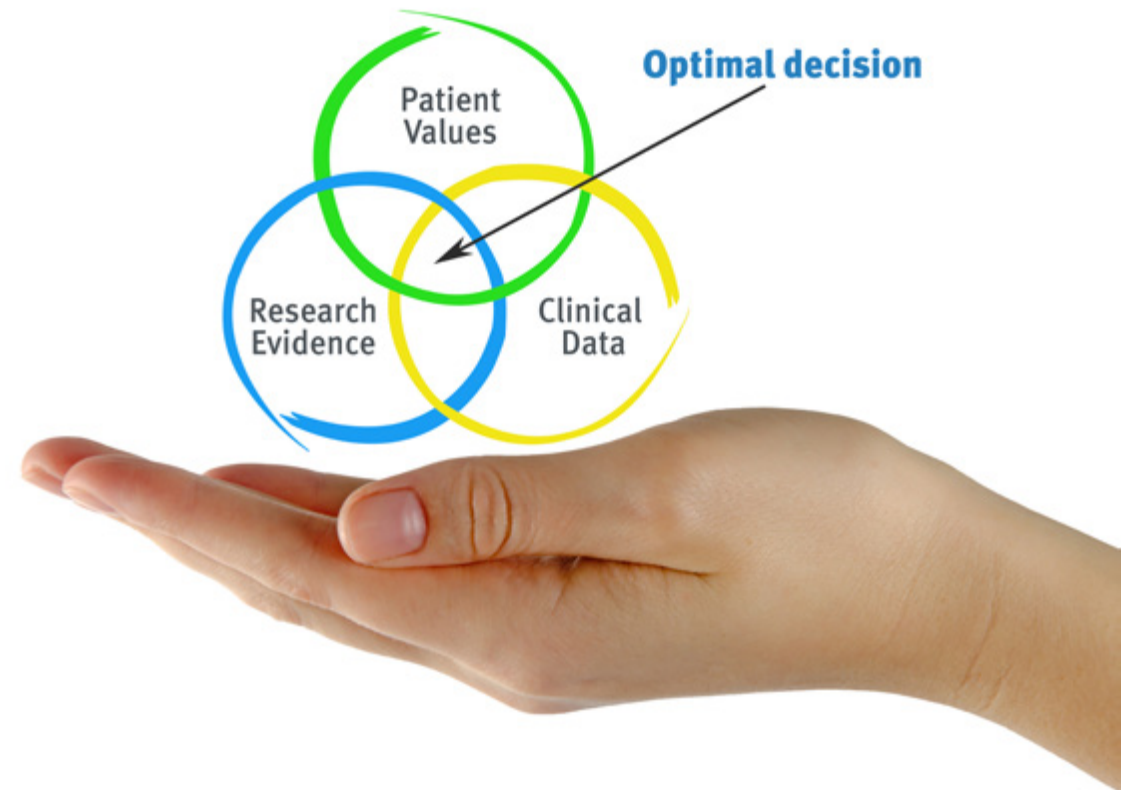
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*Discover Relearning, a system that abandons conventional linear learning, to take you through cyclical teaching systems: a way of learning that has proven to be extremely effective, especially in subjects that require memorization"*

## At TECH Education School we use the Case Method

In a given situation, what should a professional do? Throughout the program, students will be presented with multiple simulated cases based on real situations, where they will have to investigate, establish hypotheses and, finally, resolve the situation. There is an abundance of scientific evidence on the effectiveness of the method.

*With TECH, educators can experience a learning methodology that is shaking the foundations of traditional universities around the world.*



*It is a technique that develops critical skills and prepares educators to make decisions, defend their arguments, and contrast opinions.*

“

*Did you know that this method was developed in 1912, at Harvard, for law students? The case method consisted of presenting students with real-life, complex situations for them to make decisions and justify their decisions on how to solve them. In 1924, Harvard adopted it as a standard teaching method.*

**The effectiveness of the method is justified by four fundamental achievements:**

1. Educators who follow this method not only grasp concepts, but also develop their mental capacity, by evaluating real situations and applying their knowledge.
2. The learning process is solidly focused on practical skills that allow educators to better integrate the knowledge into daily practice.
3. Ideas and concepts are understood more efficiently, given that the example situations are based on real-life teaching.
4. Students like to feel that the effort they put into their studies is worthwhile. This then translates into a greater interest in learning and more time dedicated to working on the course.



## 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.



*Educators will learn through real cases and by solving complex situations in simulated learning environments. These simulations are developed using state-of-the-art software to facilitate immersive learning.*

At the forefront of world teaching, the Relearning method has managed to improve the overall satisfaction levels of professionals who complete their studies, with respect to the quality indicators of the best online university (Columbia University).

With this methodology we have trained more than 85,000 educators with unprecedented success in all specialties. 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 specialization, developing a critical mindset, defending arguments, and contrasting opinions: a direct equation to success.*

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.

The overall score obtained by our learning system is 8.01, according to the highest international standards.



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



#### Study Material

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

These contents are then adapted in 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.



#### Educational Techniques and Procedures on Video

TECH introduces students to the latest techniques, with the latest educational advances, and to the forefront of Education. All this, first-hand, with the maximum rigor, explained and detailed for your assimilation and understanding. And best of all, students can watch them as many times as they want.



#### Interactive Summaries

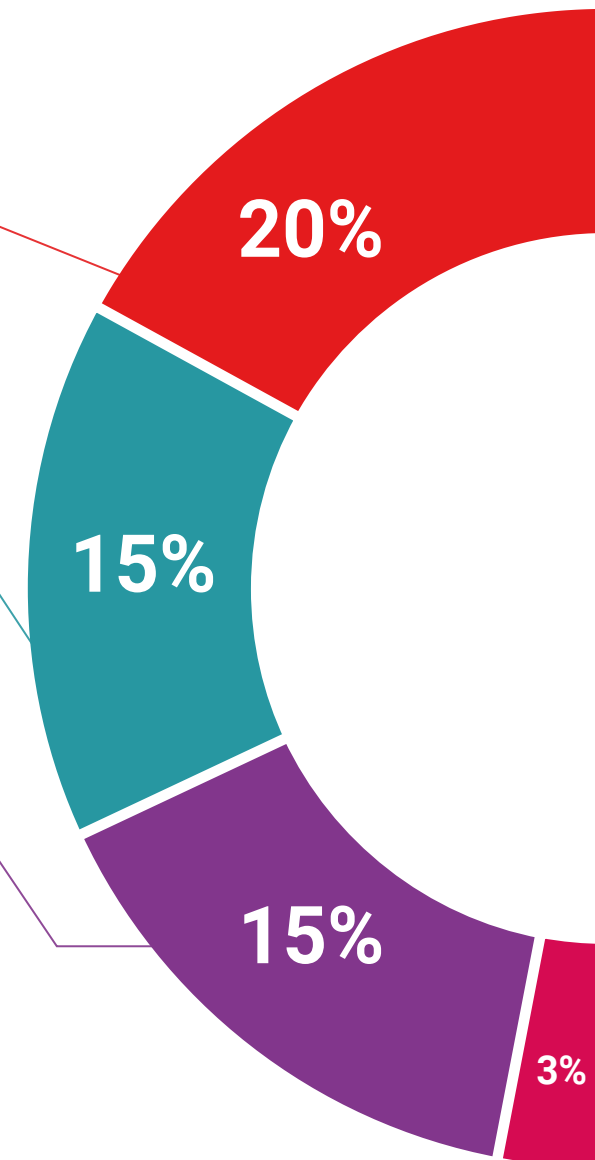
The TECH team presents the contents attractively and dynamically in multimedia lessons that include audio, videos, images, diagrams, and concept maps in order to reinforce knowledge.

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

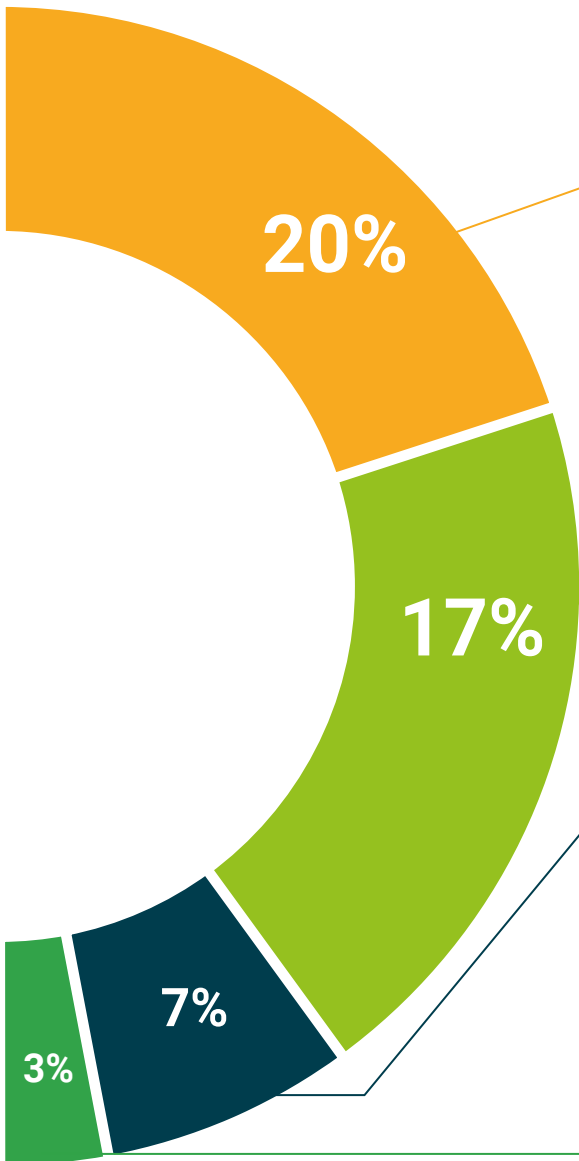


#### Additional Reading

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.







#### Expert-Led Case Studies and Case Analysis

Effective learning ought to be contextual. Therefore, TECH presents real cases in which the expert will guide students, focusing on and solving the different situations: a clear and direct way to achieve the highest degree of understanding.



#### 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.



#### 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.



#### Quick Action Guides

TECH offers the most relevant contents of the course in the form of worksheets or quick action guides. A synthetic, practical, and effective way to help students progress in their learning.



07

# Certificate

This Advanced Master's Degree in Educational Project Implementation, Robotics and 3D Printing guarantees you, in addition to the most rigorous and up-to-date training, access to a Professional Master's Degree issued by TECH Technological University.



“

*Successfully complete this program  
and receive your university degree  
without travel or laborious paperwork”*

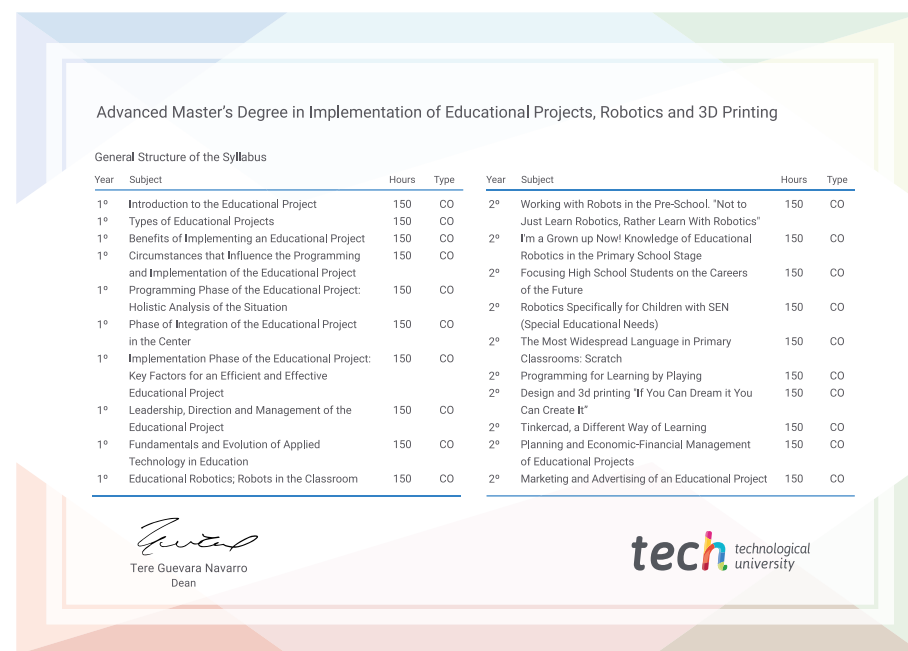
This **Advanced Master's Degree in Implementation of Educational Projects, Robotics and 3D Printing** contains the most complete and up-to-date program on the market.

After the student has passed the assessments, they will receive their corresponding **Professional Master's Degree** issued by **TECH Technological University** via tracked delivery\*.

The certificate issued by **TECH Technological University** will reflect the qualification obtained in the Advanced Master's Degree, and meets the requirements commonly demanded by labor exchanges, competitive examinations, and professional career evaluation committees.

**Title: Advanced Master's Degree in Implementation of Educational Projects, Robotics and 3D Printing**

Official N° of hours: **3,000 h.**



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



## Advanced Master's Degree Implementation of Educational Projects, Robotics and 3D Printing

- » Modality: online
- » Duration: 2 years
- » Certificate: TECH Technological University
- » Dedication: 16h/week
- » Schedule: at your own pace
- » Exams: online

# Advanced Master's Degree Implementation of Educational Projects, Robotics and 3D Printing

