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COLLECTION
OF
GOOD PRACTICES

The Future of the Jobs vs the Jobs of the Future

(ERASMUS+ 2019-1-HU01-KA202-060896)

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1. FOREWORD

Both students and teachers have to face continuous and changing challenges in the field of vocational training. There is a demand for qualified employees with up-to-date knowledge on the labor market, and the existence of new professions, skills and competencies is necessary. On the part of employers, in addition to professional knowledge, there are also demands for skills - such as problem solving, cooperation, adaptability, creativity, innovation, emotional intelligence, leadership skills, digital competence - which are difficult to acquire with traditional education methods. Another problem is the lack of student motivation and the high number of students leaving school early. Teachers must adapt to new expectations, renew their traditional, well-proven methods, and familiarize themselves with innovative teaching-learning methods.

In order to solve these problems, the Nyíregyháza Centre of Vocational Training and five other European vocational training institutions jointly decided to share the knowledge of their well-proven methods in the framework of the project "The Future of the Jobs vs the Jobs of the Future".

Institutions participating as project partners:

- **Nyíregyháza Centre of Vocational Training** (Hungary)
- **Second Vocational High School of Chania** (Greece)
- **Greåker videregående skole** (Norway)
- **IES F. Ribalta** (Spain)
- **FORAVE - Associação para a Educação Profissional do Vale do Ave** (Portugal)
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The partner organizations presented their good practices in the following areas:

- Maker pedagogy – Hungary
- Apprenticeship and entrepreneurship – Greece
- Digital skills and soft skills – Norway
- Experience-based learning – Spain
- Development of projects with companies and higher education institutions – Portugal
- Improving foreign language skills in an international work environment– Italy

The purpose of this publication is to share the presented good practices, the elements of which form a creative, flexible framework that can be adapted to the specific, special opportunities, capabilities, and goals of certain teaching-learning processes and educational activities.

2. PROJECT PARTNER: NYÍREGYHÁZA CENTRE OF VOCATIONAL TRAINING

2.1. EXTERNAL ENVIRONMENTAL FACTORS OF THE ORGANIZATION

Main social and economic characteristics

Hungary is located in the central part of Europe, in the Carpathian Basin. Its area is 93,030 square kilometres and its population is 9,730,000. Its capital - at the same time its largest and most populous city - is Budapest, where nearly 1.7 million people live, 16.8 percent of the country's population.

Hungary is divided into 19 counties. The counties - in addition to the capital - are the larger administrative territorial units of the country, which are further divided into districts. Larger cities[1]: Debrecen, Szeged, Miskolc, Pécs, Győr, Nyíregyháza, Kecskemét, Székesfehérvár.

The country's population is characterized by an aging process. In addition to the increase in the number of elderly people, the decreasing number of children also contributes to this. Within the total population, the proportion of children is 14.6%, the proportion of people of active age is 65.1%, and the proportion of the elderly is 20.3%.

In 2020, the employment rate among the 15-64 age group in EU countries was 67.6%, in Hungary it exceeded this average, 69.7%. The unemployment rate was 4.3% at the national level, compared to 7.2% in the EU. Within the country, however, there are significant differences between the counties: it is more favourable in the western counties, while it is less favourable in the southern and eastern counties. The unemployment rate of young people (aged 15-24) is 12.2%, which is 1.7 percentage points lower than the EU average, but it is in the middle of the ranking of the member countries.

Education

Education, including secondary education, is greatly influenced by demographic trends. Enrolment numbers - moving along with the population decline - have shown a decrease in the last nearly 20 years.

In addition to the decreasing number of students, several problems appeared before 2020 in the field of vocational training [2]:

- Based on an international comparison, fewer people participate in professional training than the European average.
- An increasing number of students (nearly 30%) come from primary school with such serious competence deficits that they are unable to acquire competitive knowledge.
- During vocational training, the dropout rate is high (12%).

[1] Cities with a population of over 100,000 people.

[2] Source: Vocational Training 4.0 Strategy

- Due to the inflexible regulations of compulsory education, a significant number of young people drop out of education - especially in disadvantaged regions - in order to earn an income in trained work. (On a national average, the proportion of school dropouts without a qualification exceeds 10%, in some regions it is close to 40%.)
- The vocational and adult education system cannot provide an efficient enough response to the challenges of Industry 4.0 and digitalization
- Most of the graduates is not even capable of basic level foreign language communication
- Enterprises do not participate in the dual training system in an adequate number, and the number of students attending dual training courses also falls short of the European average.

In addition to dealing with problems, vocational training also has to meet a number of challenges. These include the fourth industrial revolution.

By 2030, as an effect of the fourth industrial revolution and digitization, jobs will largely be transformed, primarily as a result of robotization and automation.

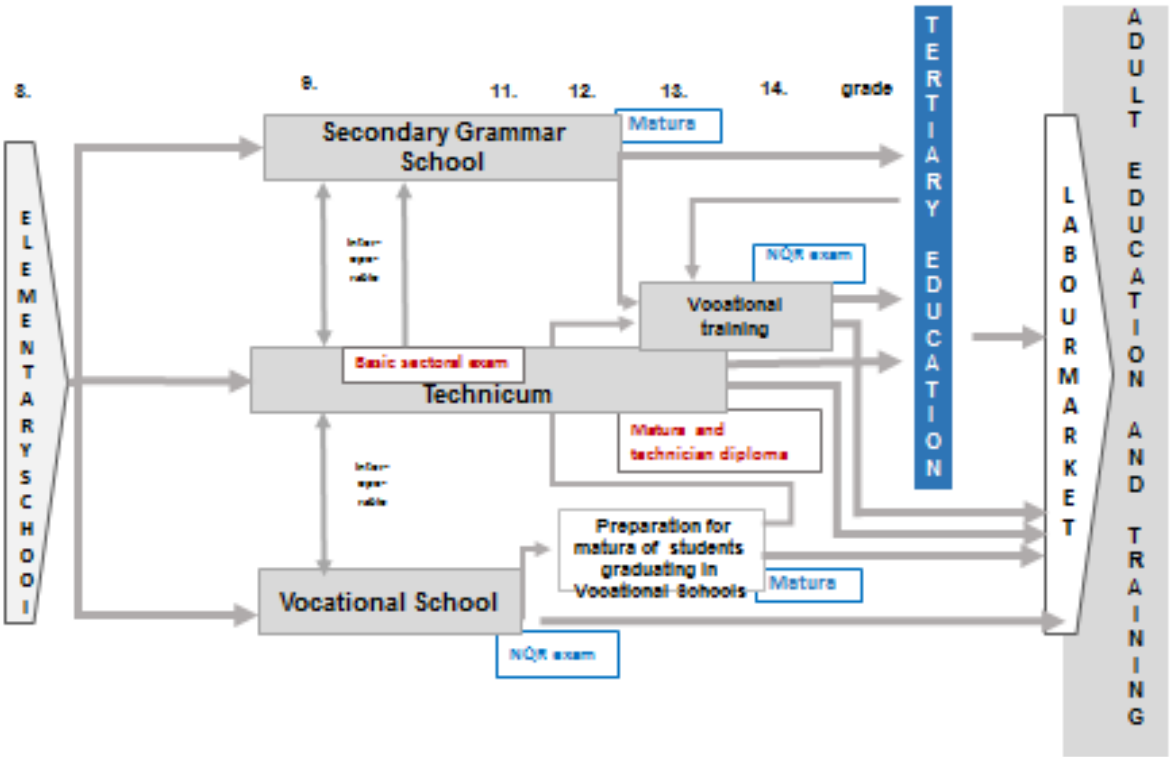
The number of trained jobs that can be filled even without a professional qualification will decrease, but the demand for specialists with IT and robotics training who deal with the design, construction and operation of systems will increase. Specialists will be needed who can support more efficient production and services that produce higher added value. Not only qualified workers will be needed, but also those who have received training according to the aspects of Industry 4.0.

In order to meet the emerging problems and challenges, the Act LXXX of 2019 on vocational training, which entered into force on January 1, 2020, results in a significant change in vocational training.

Significant changes in the vocational training system:

- The first and most important change is the complete restructuring of the institutions of the school system; vocational training institutions: vocational schools and secondary technical schools.
- The National Training Register (OKJ) is replaced by the Register of Vocations, which includes 174 basic professions belonging to 25 sectors. Basic professions can only be learned in the school system. Among other things, interoperability between professions within the sector, the duration of the training, and the level of digital competence are indicated in the Vocational Register.
- The restructuring of the vocational training system also brings favourable changes to adults who want to learn: in the new system, adults can acquire professions in a shorter time, their previous qualifications and previous knowledge in practice are also taken into account.
- Another important consequence of the restructuring: the participants acquire a state-guaranteed profession or professional qualification, and the adult trainers operating on a market basis issue certificates to those who take part in their vocational training. After obtaining the certificate, students in professional training can obtain the state-recognized certificate in accredited examination centres.
- Vocational education can be conducted by the vocational training institution or the dual training place. The new vocational training law names three types of training centres: the sectoral training centre, the company training centre and the knowledge centre.

- In the field of dual training, the apprenticeship contract is replaced by the vocational training employment contract.
- Allowances to encourage learning professions have been introduced.



The structure of vocational training in Hungary

In Hungary, vocational training has been offered in 381 educational institutions within the frameworks of 44 vocational training centres (currently 41) since July 1, 2015. Three vocational training centres were established in Szabolcs-Szatmár-Bereg county in Nyíregyháza, Mátészalka and Kisvárda.

2.2. THE INSTITUTION'S SCOPE OF ACTIVITIES

The Nyíregyháza Centre of Vocational Training includes ten vocational training schools, which operate in Nyíregyháza (8), Tiszalök (1) and Tiszavasvári (1), thereby ensuring vocational training in the county seat and the western part of the county.

1. *Nyíregyházi SZC Bánki Donát Secondary Technical School and Student Hostel*
2. *Nyíregyházi SZC Bencs László Vocational School*
3. *Nyíregyházi SZC Inczédy György Vocational School and Student Hostel*
4. *Nyíregyházi SZC Teleki Blanka Vocational School and Student Hostel (Tiszalök)*
5. *Nyíregyházi SZC Tiszavasvári Vocational School and Student Hostel (Tiszavasvári)*
6. *Nyíregyházi SZC Széchenyi István Secondary Technical School and Student Hostel*
7. *Nyíregyházi SZC Sipkay Barna Secondary Technical School*
8. *Nyíregyházi SZC Vásárhelyi Pál Secondary Technical School*
9. *Nyíregyházi SZC Wesselényi Miklós Secondary Technical School and Student Hostel*
10. *Nyíregyházi SZC Zay Anna Secondary Technical School and Student Hostel*

The training selection offered by the schools covers a number of areas, including healthcare, IT, construction, automotive industry, chemical, trade, hospitality, tourism, service industry, mechanical engineering, wood industry - vocational training is provided in 20 sectors, 63 basic professions, and in 85 gradually expiring professions according to the previous OKJ With 7,000 students.

The Centre employs 861 people, 584 of which are teachers. Among our students, there is a high number of disadvantaged and living in difficult circumstances.

All schools offer adult education. In addition to education in the school system, it also conducts significant adult training activities in the entire area of Szabolcs-Szatmár-Bereg County. The training offer is constantly expanding in accordance with the needs of the labour market.

In the centre's schools, great emphasis is placed on the development of 21st century competencies, as the working environment of the foreseeable future will also be digital. Therefore, in addition to the development of students' general reading comprehension ability, we also consider it important to develop digital skills. This approach is also reflected in the work of the Bánki Robotics and Innovation Workshop and the operation of the Digital Community Creative Workshop.

We strive to ensure that our students have marketable knowledge and an appropriate level of professional and personal competences, thereby meeting the expectations of the next school level and the future workplace, becoming well-educated and reliable employees with a wide range of basic knowledge who can be involved in modern production. In order to respond quickly to the needs of the labour market, we consider adult education and the continuous development and expansion of adult training activities to be an important task.

With our career orientation and career selection activities, we strive to make our schools attractive and popular among both young people and adults. In the course of our work, great emphasis is placed on nurturing talents and compensation of disadvantages. The good practice of exceptional talent nurturing and compensation of disadvantages - that has also gained international fame - "Tekerd!" Group.

The professional experience and innovative skills of the instructors are a guarantee that high-quality education and training will be ensured within the walls of the schools in the future.

We strive to get involved in projects - ERASMUS, Határtalanul, European Union and domestic tenders - for the sake of development.

We are constantly looking for new and good practices, which we try to incorporate into the nurturing, education and training processes. We share the good practices developed in our schools among each other, but we also organize events suitable for this on a wider scale.

The changes in vocational education demand continuous renewal from the instructors; proven and effective applied methods are also passed on at the centre level.

Our important task in dual training is to build close cooperation with small and medium-sized enterprises, as well as with large companies. In practical training, we try to keep up with technological development. During training, we take into account the needs of employers and the required competencies. We consider it important to develop language competencies and to learn foreign languages.

2.3 THE PROJECT PARTNER'S GOOD PRACTICES
GOOD PRACTICE 1.: TRYING THE DIGITAL COMMUNITY CREATIVE WORKSHOP

Creative pedagogy and maker culture is a model based on creativity, critical thinking, cooperation and experience-based learning, which is both a pedagogical and social model.

In November 2018, the Nyíregyháza Centre of Vocational Training created the Digital Community Creation Workshop - the first in the country - on a floor area of 300 m2. In the special training area, project-based education, self-motivated experimentation, and not industrial, but unique, rapid prototyping take place. New, modern, IT-controlled machines help the creation process. In addition to robotics and programming, those interested can try the tools and work processes of the "traditional" professions taught at the centre, such as e.g. embroidery, carving, turnery.

The mission of the workshop,

is to show different age groups that technology is for everyone and anyone can create things that work. The goal is to integrate learning by doing and introducing modern technologies into the educational process of schools. The essence of the idea is that in such a workshop you can find all the tools that may be necessary to implement an idea, be it a robot arm, embroidery machine or laser cutter.

The workshop introduces to the world of creators, 3D printing, electronic construction, microcontroller programming, laser cutting, sewing, wood and metalworking.

Effects of the operation of the workshop:

- It has a very strong career orientation role, not only towards traditional engineering and natural science careers, but also towards complex professions that require a great deal of added technical knowledge.
- Due to the wide-ranging technical palette, its talent nurturing role is significant, during creation it becomes clear if someone is exceptionally talented in a given field and has good problem-recognition and problem-solving skills.
- One of the most important elements of the creative process is teamwork, the creations are usually so complex that the participants always work as a team, gain experiences as a team, so they experience the joy of joint creation, failure and success together.

Appearance of pedagogical and methodological elements:

It is difficult for an external observer to determine what exactly happens in a creative workshop, since the creators are in different phases of the process.

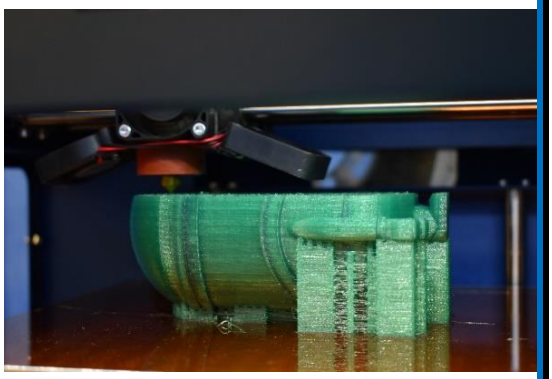
The role of the teacher also changes in this new learning space, since the assisting teacher gives/can give the idea. Then, for a while, leads and accompanies the children as a co-creator, creating together with them. In this way, the teacher controls the creative process, he brings the topic, he introduces newer and newer techniques. The development does not stop when it seems impossible to implement a task with a specific technique, but additional solutions are looked for by involving other techniques. The machines, tools and equipment of the creative workshops are almost industrial precision; actually, they are not games, but allow practice in a real industrial work environment.

Tools that can be tried:

3D printing

Displayed tools: Craftbot 3D printer, laptop used for designing

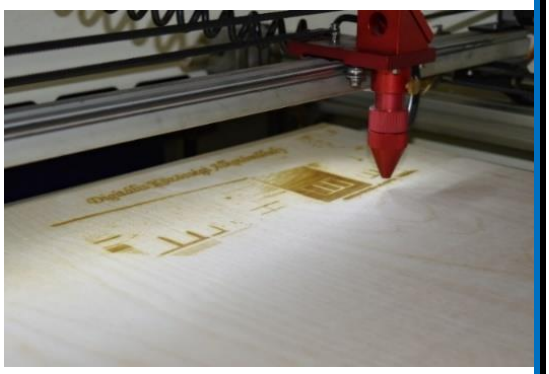
A 3D printer is a device that can create three-dimensional objects from digital models. Its current main field of application is rapid prototyping and hobbyist use, but with the development of technology, industrial and medical applications are also possible.



CNC machining

Displayed tools: CNC router, small size lathe, laser engraver 3018 PRO, laptop used for designing

CNC machining is one of the most widespread technologies. The best example of this is laser engraving. During the process, the material vaporizes or burns under the influence of a concentrated laser beam. Thanks to the properties of the laser beam, even small surfaces can be engraved with high precision, and we can even cut wood, plastic or softer metal with it. In this way, you can even make a wooden puzzle, really it is only our imagination that can set a limit in the creation.



The basics of programmable robot technology

Displayed tools: Bee robot, Primo robot

Our two robots are capable of performing various tasks, similarly to industrial robots. For example, they can be programmed to emit sounds, wave or perform sequences of movements for various interactions. By using the tools, those interested can learn the basics of programming in a playful way.

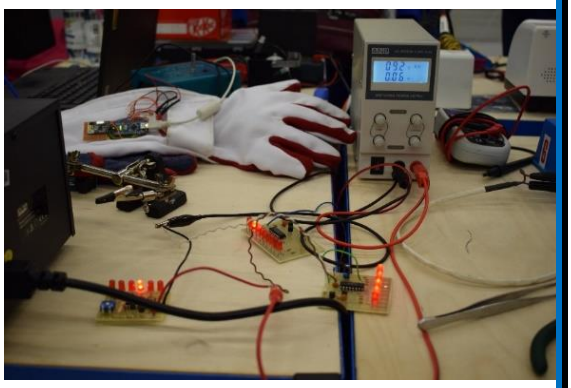
Modern robot technology

Displayed tools: UBTech humanoid robot, DJI Battle robot, Fable robot, DJI programmable drone, laptop used as controller

After mastering the basic programming technologies, we have several robots at our disposal that introduce us to advanced robot technology. Anyone can try the operation of the humanoid robots.

In the future, the use of drones will become increasingly common, either in industry or in everyday life.

With our advanced DJI drones, we not only provide the opportunity to try them out, but also present the basics of drone programming.



Basics of electronics

Displayed tools: soldering station, practice board

The basic task of a good electronic technician is to calibrate, repair and maintain electrical, electronic, telecommunications and administrative technical devices and equipment. Our exhibition gives an insight into the details of the profession.

Those interested can try electronic soldering and get to know the basic elements of the profession.

Woodworking

Displayed tools: drilling machine, electric screwdriver

Woodworking is a special profession in which dexterity is just as important as precision and creativity. The design can be implemented digitally or manually, the basic techniques can also be tried out in the mobile Digital Community Creative Workshop.

Virtual reality

Displayed tools: HTC Vive pro

Virtual reality encompasses many areas of education, sports, industrial design, architecture and landscape planning, urban planning, space exploration, medicine and rehabilitation, modelling and science. For us, it is of particular importance because it appears as a new, superior medium that offers countless practical possibilities. Learning to read and write digitally is therefore essential, and those interested can get a glimpse of this here.

Textile processing

Displayed tools: sublimation heat press, laptop used for designing, sublimation printer

Sewing and embroidery are also becoming more and more modernized. Graphic design and the use of programs already appear in the case of automated embroidery machines. The technology is illustrated by the so-called sublimation printing process, with which we can easily print patterns on various materials.

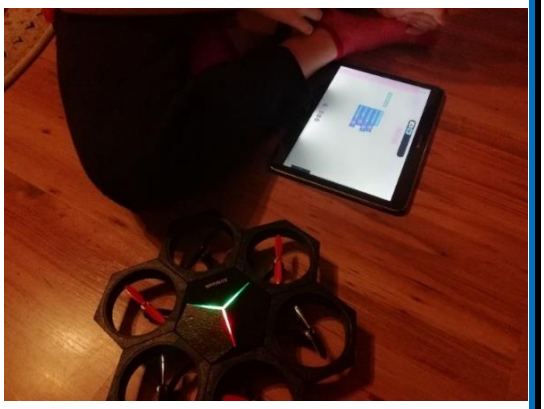
Production simulation

Displayed tools: production simulation tool

DKA's practical education options have been further expanded with a production simulation tool, with the help of which the operation of the machines used in production with the most modern technology can be modelled, thus helping students to acquire and deepen practical skills. With the help of the equipment, Industry 4.0 can be easily modelled in practice, it contains all the functions of a complete production system in a reduced size.

GOOD PRACTICE 2.: PROGRAMMING DRONES

Representative of the good practice: Zsolt Zsigó



The use of drones in education is a novelty of recent years. In addition to being incredibly easy to learn how to control, even recordings can be made with them. Few people know that they can also be programmed, so children or even adults can be playfully introduced, to the basics of programming. In this way, we can achieve several goals: we can develop the children's spatial perception and strategy building, as well as their coding competencies.

Target group:

The course material can be widely used in any grade where the aim is to teach coding and algorithmic thinking. If the students already have prior knowledge of programming, the initial steps can be skipped.

Prior knowledge*:* know how to download applications.

Student activities:

The course material is processed under the supervision of the teacher. In the add-on modules, we strive to develop students' creativity and support their independent learning. In any case, we test the finished program codes on the drones, and if necessary, we can also carry out repairs. Real-life situations can also be easily simulated with the help of the created drone tracks, e.g. efficient planning of the postman's drone route.

Developed competencies: observation, algorythmization, coding, accuracy, independent work

Content requirements:

By the end of the sessions, students should be familiar with the construction of drones, be able to put them into operation, and troubleshoot simpler malfunctions. They must know the basic algorithm elements that can be used in programming drones (loops, conditions, variables) and be able to use them when creating simpler programs. They must know the information needed to download and install the application that can be used to control the drone. They must be able to install the app on mobile devices and how to use it to control the drone. They must be able to write simple programs, with the help of which the drone can perform basic tasks. They must be able to navigate the vehicle on a designated drone track.

Duration of sessions: 5 x 45 minutes

Methodological recommendations:

- The person leading the session must have knowledge about drones, must be familiar with the methodological elements related to algorithmic thinking, and must also be able to program at a basic level (be familiar with Scratch language.)
- Nowadays, mobile devices have already gained a place in the classroom, and they must be used here as well, so it is good if the session leader has experience in downloading and installing applications.
- Should know the Airblock type drone and be able to use it at a basic level. Knowing how to use the programming language called Makeblock makes the work easier. This language is a specially narrowed down version of the Scratch programming language for drones.

- Know the elements of project pedagogy and choose the appropriate method for the group for the given task if it differs from what was expected.

Description of activities:

I. What is a drone? (0- 20 minutes)

After searching the Internet, students share the information with each other. Should the students look for the answers to the following questions on the Internet? What is a drone? What are the laws regulating the operation of drones? A brief history of drones! (Introductory lessons (3.-4. lessons) http://scratch.elte.hu/alapozo-leckek)

Review of basic algorithm elements (21-45 minutes)

Ask and answer, frontal work. Based on the lessons, the students revive their knowledge. Further review at home (if necessary). Introductory lessons (3.-4. lessons) http://scratch.elte.hu/alapozo-leckek

II. Getting to know the Airblock drone (0-20 minutes)

Pair work unboxing https://www.makeblock.com/steam-kits/airblock

Downloading and use of Makeblock software (21- 45 minutes)

It depends on the number of mobile devices, ideally everyone does it for themselves; the drone must be calibrated when first used (and whenever necessary).

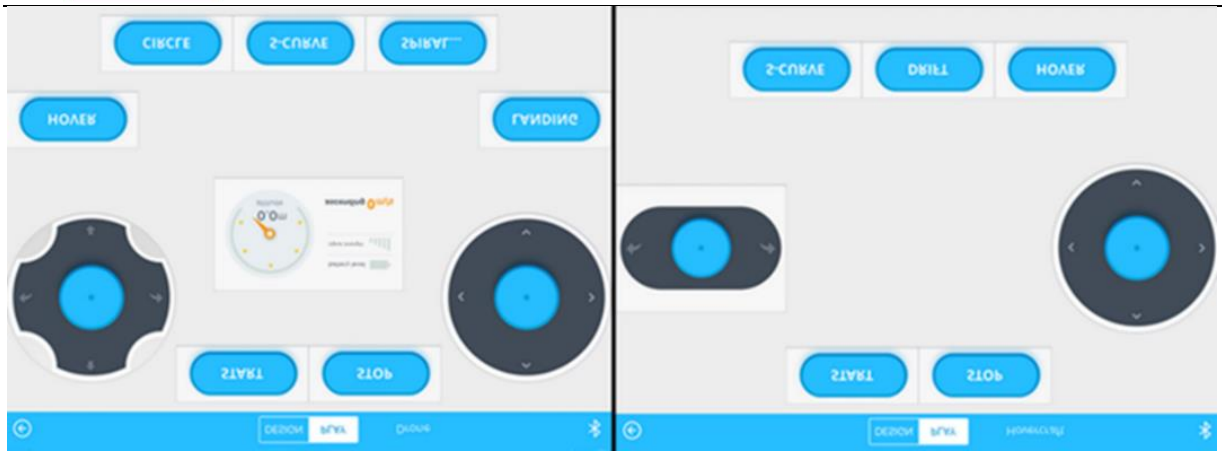
https://play.google.com/store/apps/details?id=cc.makeblock.makeblock
https://apps.apple.com/us/app/makeblock-play-stem-robots/id918804737

III. Airblock – Flight operations (0-12 minutes) Calibration

The drone must be calibrated when first used (and whenever necessary).

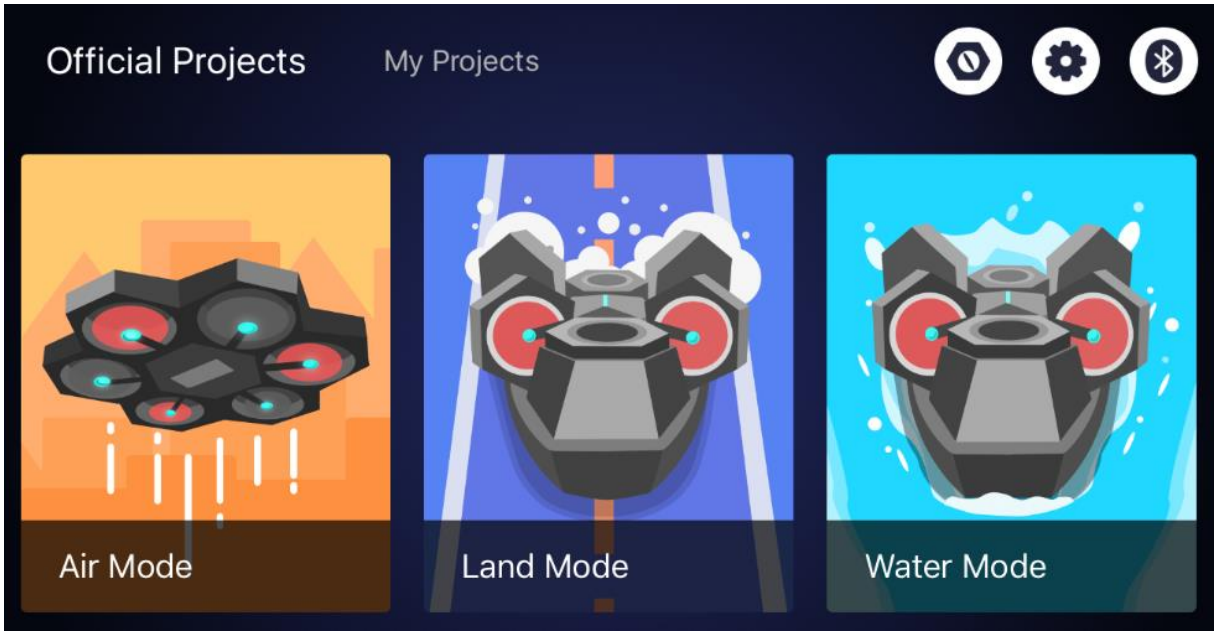
Flight operations (13-45 minutes)

The flight of the drone can also be programmed with a sequence of operations. This allows the vehicle to perform a specific task autonomously. We assemble the action sequence by arranging the icons in a row. In case of inaccurate operation of the sequence, the parameters must be corrected depending on the test results.



I. Reviewing the programming environment (0-10 minutes)

By using an application run on a mobile device.

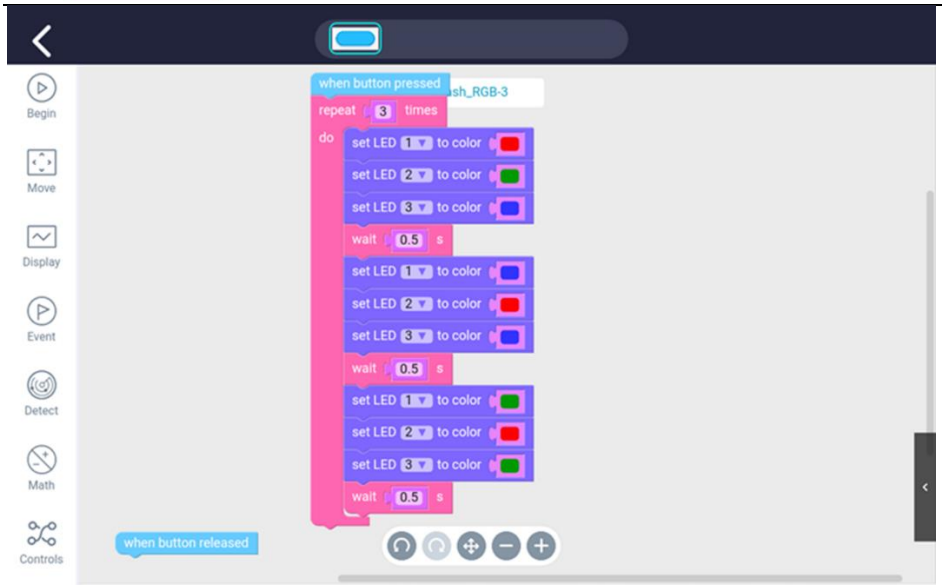


Writing and testing simple programs (11 – 45 minutes)

Changing the colour of the RGB LED; Solve the following tasks:

1. Take off with the drone, hover for 0.5 s, then fly forward for 0.5 s, then fly back.

2. Rebuild the drone into hover mode, and starting from a given location, travel one square, returning to the starting point.



I. Design and construction of a drone race track (0-10 minutes)

Elements of the race track are selected by brainstorming

Competition on the drone track (11-45 minutes)

We help the competitors with timing. After testing, the students try different forms of competition. (e.g. pair competition)

Tools and materials:

To try it out, you need a tablet/smartphone with a WIFI connection and the appropriate application (Makeblock), as well as an Airblock drone. Of course, other drones with similar specifications can be used as well.

Supporting system:

Introductory lessons (3.-4. lessons)

http://scratch.elte.hu/alapozo-leckek/

https://www.makeblock.com/steam-kits/airblock
https://play.google.com/store/apps/details?id=cc.makeblock.makeblock
https://apps.apple.com/us/app/makeblock-play-stem-robots/id918804737

Monitoring, evaluation:

During development programming, the pairs check each other's codes, if necessary they ask the teacher for help.

The joint analysis of solutions and their measurement based on parameters (e.g. time) also help in creating the optimal solution.

Evaluated element: The drone track designed and built by the students and the solution given to the task set there.

GOOD PRACTICE 3.: NAME CARD/BADGE WITH MICRO:BIT

Representative of the good practice: Zsolt Zsigó

The use of 21st century technology in education is a novelty of the last decade. It's amazingly exciting, relatively easy to learn how to use it, and we can make almost anything we can imagine with it. Few people know that the BBC gives a small programmable unit called Micro:bit to all 7-year-old English schoolchildren for free. Using this, we can playfully introduce children, or even adults, to the basics of programming. In this way, we can achieve multiple goals: we teach children how to use modern technology, they will be able to apply the acquired knowledge during object design, and we can also develop their coding competencies.

Target group

The course material can be widely used in any grade where we want to teach object planning, coding, and algorithmic thinking. It is also an excellent example of the everyday application of creative pedagogy. If the students already have prior knowledge of block programming, the initial steps can be skipped.

Prior knowledge: students should know how to use graphics software.

Developed competencies: precision, reliability, independence, cooperation, consensus seeking, helpfulness, sense of initiative, logical thinking, fault finding (diagnosing), error correction, problem solving.

Content requirements:

By the end of the sessions, the students should be familiar with the software used for object design, they should be able to put the devices into operation and use them under supervision. The student must be able to use the laser cutting machine properly. They must be able to make a template and cut out the part based on the template. They must know the basic algorithm elements that can be used when programming the Micro:bit. (loops-repetitions, conditions, variables) and they should be able to use them when creating simpler programs. They must be able to write simple programs. They must know the information needed to download and install the graphic software used to draw shapes, and they must be able to use it during graphic design. They must be able to assemble the finished product from the components based on a given description.

Duration of sessions: 5 x 45 minutes

Methodological recommendations:

- The person leading the session should have knowledge about object planning, it will make his job easier if he knows the methodological elements related to algorithmic thinking and can also program at a basic level (he knows the Scratch language.)
- Should know the laser cutter and be able to use it at a basic level and convert pre-planned shapes into a format that can be understood by the laser cutter.
- Should be familiar with the elements of project pedagogy and choose the appropriate method for the group in the case of the given task, if it differs from what was expected.
- When designing the shapes, it is worth relying on the development of children's natural curiosity, they can cut out shapes that they like best.

Description of activities:

I. What is Micro:bit? (0-15 minutes)

Students should look for the answers to the following questions on the Internet: What is Micro:bit? What can it be used for? They search for information with a search engine, and the formed groups share it using the Mosaic method. Introductory lessons (3.-4. lessons) http://scratch.elte.hu/alapozo-leckek/

Reviewing basic algorithm elements; writing the program (16-40 minutes)

Based on the lessons, the students refresh their knowledge. They prepare the short program.

Introductory lessons (3.-4. lessons) http://scratch.elte.hu/alapozo-leckek/

Downloading the program to Micro:bit

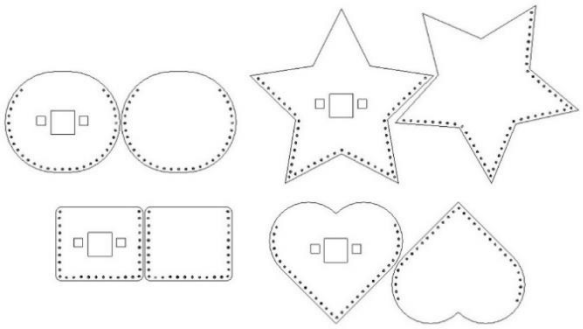
program code: microbitBadge.hex

II. Using the graphic software (0-20 minutes)

Shapes (templates) can be designed on paper or graphically, it is worth guiding the students in the direction of graphic design. Recommended software for drawing: Inscape, SketchUp, Paint, other graphic software. (inscape_ismertetes.pdf)

Designing and drawing the shape (21-45 minutes)

It is advisable to choose simple flat shapes bordered by straight lines or other simple shapes (circle, star, square, etc.) The completed shapes are checked by the pairs and the necessary modifications are made.



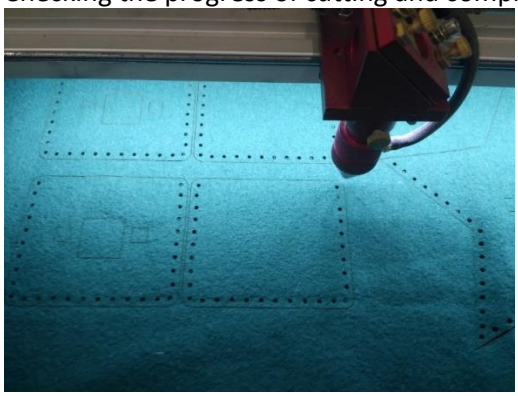
III. Presenting the laser cutting machine (0-34 minutes)

Getting familiar with the most important safety regulations of the laser cutter combined with a demonstration during operation with an explanation of the important safety regulations.

Assessment of participants' knowledge (35-45 minutes)

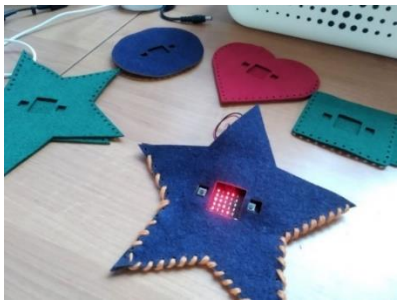
IV. Cutting out the designed shapes (0-45 minutes)

Checking the progress of cutting and compliance with safety regulations



V. Sewing the shapes together (0-15 minutes)

Assembling and testing the name card (16-45 minutes)



Supporting system:

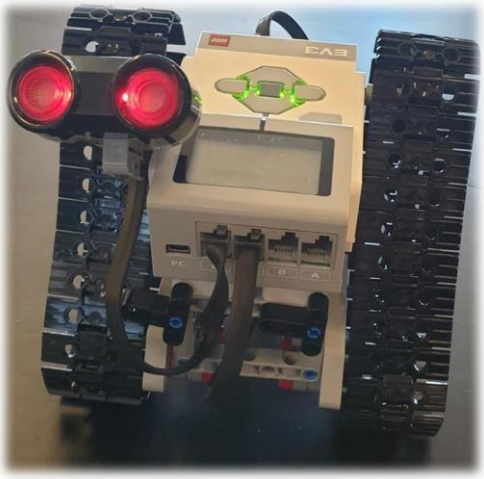
Introductory lessons (3.-4. lessons), http://scratch.elte.hu/alapozo-leckek/
biztonsági_leírás.pdf, inscape_ismertetés.pdf
műszaki_leírás.pdf, lézervágás.pdf
értékelés.pdf, feladatlaírás.pdf

Monitoring, evaluation:

Creation of the program: practical task. Designing and cutting the shapes, assembly of the name card: practical task.

GOOD PRACTICE 4.: INNOVATIVE IT EDUCATION WITH LEGO EV3 ROBOTS

Representative of the good practice: Enikő Mázsáriné Fábián



Students get to know the basics of programming and complex instructions in a playful way. While operating the robot, students learn about algorithms, sensors and the possibilities of electronic communication. They can also learn the safe use of various mobile devices. They will be able to load captions and different images from the Internet on the display, in addition to the built-in ones. They will learn several types of movement blocks, but they will have to choose the best one according to the task.

A joint playful session during which the students acquire skills imperceptibly (algorithmization and programming approach, knowledge of control structures, variables, etc.) that will facilitate their later studies. For this, the following social competences are necessary: the ability to create relationships, the ability to cooperate.

Target group:

9th-grade vocational high school students participating in IT sector training, or 7th grade elementary school students who are switching from the Lego robot Wedo to the Lego Ev3 robot.

Prior knowledge:

For participating in the session, participants do not need to have prior knowledge of programming a Lego Ev3 robot.

Developed competencies:

- Individual competencies: precision, ability to make decisions, ability to develop, self-development.
- Methodological competencies: logical thinking, creativity, problem solving, troubleshooting.
- Social competencies: sense of initiative, helpfulness.
- Foreign language competencies: technical English communication during development and construction of programming.
- Mathematical and physical competencies: programming of mathematical relations (use of coordinate system, distance measurement, in the field of logical operations), application of knowledge used in the field of physics in robot construction (efficiency, friction, balance, speed).

Content requirements:

The students should get to know the elements of the LEGO EV3 assembly kit, be able to assemble a robot and wire it up. They become able to program, connect and move a robot. They know how to test the written program, correct errors and expand the program. They should be able to create independent blocks and develop the robot.

Duration of the sessions:

5 x 45 minutes (1-2 lessons First steps with the Lego EV3 tools, orientation and robot construction, 3-4 lessons Robot programming through given tasks, 5th lesson Creative programming and testing)

Methodological recommendations:

The success of the lesson largely depends on the cooperation of the groups, the teacher's guidance and the joint implementation of creative thinking and robot building.

The varied use of methods keeps students interested and inspires them to acquire new knowledge. During group work, they learn to think together, work and complete the assigned tasks with any team member from the class by using their knowledge appropriately when performing practical tasks.

The sample tasks help form the steps of the algorithmization, but individual, creative solutions can also be created in the solutions. During programming the robot, it is easy to apply the blocks learned in class and the new knowledge together, as well as to expand it with additional blocks. The structure of the program can be continuously developed and expanded. Under teacher guidance, they get to know new information and the possibility of incorporating it into practice, which is realized through playful tasks. Extra tasks are a special experience, in which they can show their skills and individual thinking. Systematization, step-by-step processing, efficient management of time and work, focus and professional communication are realized in robot construction. During testing, the use of network communication and mobile devices also gain space in the lesson. ICT tools support the transfer of new knowledge in addition to the teacher's instructions. Within graphic programming, block programming facilitates the students' work, in which they acquire sufficient proficiency in the interface during coding. By moving the robot, they learn to use the sequence and settings of different data structures, cycles, branches. Thus, when expanding the elementary steps, they can incorporate it into the algorithm according to the operation of the sensors. Robotics class is not a template class, because here students have the opportunity to develop. If they are capable of performing a faster solution, expediency and speed are important to them, they solve the programming steps more efficiently, so even new opportunities open up for them. In this way, the team members also perform much better and complement each other. They help the team, so everyone develops and wants more in these classes, that are the most important motivational tools and thus help the class's efficiency.

Description of activities:

I-II. sessions

1-2. lessons: First steps with the Lego EV3 tools, orientation and robot construction

Creating groups (6 minutes)

Students draw from 5 pictures: Ultrasonic sensor, Touch sensor, Infra sensor, Gyro sensor, Colour sensor Sorting into groups is done based on sensors. (Fastest group gets +5 points.) Distribution of score sheets per group and discussion of the points that can be awarded.

Lead-in activity (15 minutes)

Presentation of Lego EV+ assembly boxes, getting to know bricks and discussing the tasks of the sensors. /frontal/

Robot construction (24 minutes)

Playing a video required for building a robot during construction. /group work/

Finishing robot construction (5 minutes)

Testing the robot via an application (15 minutes)

- Specifying a Wi-Fi user name and password
- Downloading an application from the Store corresponding to the device

- After switching the robot on, connecting it to the network, testing. (It can be turned on with the middle button on the brick)
- Moving the robot with the control panel within the application. /group work/

https://apps.apple.com/us/, app/ev3-programmer/id1039354955,

Connecting the robot to the computer (5 minutes)

Presentation of the program, discussion of its options /frontal/ Motor block settings

Programming can begin (10 minutes)

Green block (Motor block) • direction • speed • setting RPM /group work/

Inserting an image on the display (10 minutes)

• Selecting a pre-prepared image from the Lego folder • testing • Tools/Image Editor individual image creation or downloading a *.jpg from the internet • testing

III-IV. sessions

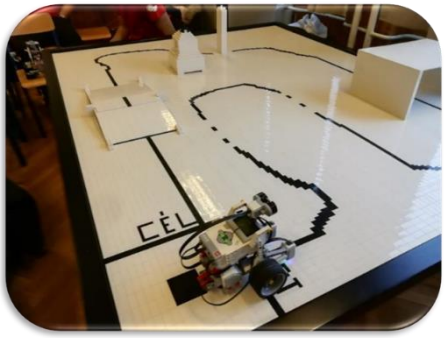
3-4. lessons: Robot programming through given tasks

Lead-in activity (5 minutes)

Preparing the robot, connecting it to the computer

Robot programming (40 minutes)

Using previously learned movement blocks, tracks need to be created according to the given outlines. /group work/



Lead-in activity (5 minutes)

Getting to know, building in and working of the cycle block. Discussion /frontal/

Programming can begin (10 minutes)

Inserting a loop into the programming task / group work

Getting to know, building in and working of the switch (conditional branching) blokk and the Ultrasonic Sensor (10 minutes). discussion /frontal/

Programming can begin (15 minutes) Inserting the switch in the programming task /group work/

Finishing the programming task and writing up the scores (5 minutes)

V.session

5. lesson: Creative programming and testing

Lead-in activity (5 minutes)

Preparing the robot, connecting it to the computer

Robot programming (35 minutes)

Be creative and make a new route! Use of knowledge acquired during previous lessons, planning, programming and testing a new track. /group work/

Writing up the scores (5 minutes)

Summing up scores, rewarding the best result.

Evaluation, discussion /frontal/

Used tools and materials:

computer/laptop with a mouse, assembly tray with the given elements, projector / digital board, 0.5l bottle

Supporting system:

https://hdidakt.hu/letoltheto-anyagok/Kiss Róbert – A MINDSTORMS EV3 robotok programozásának alapjai

Monitoring, evaluation: Students complete the tasks with the finished, working robot, then test it and expand it with the independently made blocks. Based on these, theoretical knowledge can be measured both during its implementation in professional practice, and as practical knowledge as well.

GOOD PRACTICE 5.: LEGO BRICKS IN THE CLASSROOM
Representative of the good practice: Zsolt Hudák

The Tekerd! group is a community of young people who create works of art and pictures from Lego blocks. The students got to know this art form in 2014, when they built a map of Szabolcs-Szamár-Bereg county from blocks as part of the project "Here we are at home".

After the program, the children started to make pictures from the building blocks left over. The academic results and behaviour of the participating students improved, that resulted in the 2014 founding of Tekerd! group.

Its members are usually (highly) disadvantaged, struggling with integration, learning or behavioural difficulties and/or gypsy students. We have a student who was undergoing psychiatric treatment for drug problems. One of us had three pending police cases for robbery, drunk driving without a license, and breach of public peace. We have a homeless person among us. There are those whose father drunkenly set their house on fire. Another one of us - although his parents live in the county - is raised by his grandparents. There are people who ended up in state care after a suicide attempt.

The goal of the group is to strengthen and help each other in finishing school through joint activities.

The team already has its own workshop at the Miklós Wesselényi Secondary Technical School and Student Hostel in Nyíregyháza, where the technical base necessary for designing and Lego blocks are located.

Students who are not at risk are also widely involved in the school, since the cooperation of all professions may be necessary, just as teachers and technical workers also help to implement the programs.

Carpenters, wood industry technicians, fashion and style designers, computer scientists, electricians, chemical industry students often work together.

LEGO mosaics are made using ready-made works and works of art.

The creative energy in the students is supported by the IT toolkit, which allows the graphic concepts to be pixelated, so the most modern software is used from design to construction. In addition, manual work is also carried out during construction.

Construction takes place in two ways. At the events, large Lego bases are glued to a frame, including a smaller base, which is approximately 6x8 and they prepare the pattern for the participants. They lay out the piece based on the pattern and put it on the picture. The advantage is that several people can work on the picture at the same time.

If they build it themselves, it's like building a Lego wall, they have a smooth surface on the side of the picture, because the blocks are stacked on top of each other.

Outcomes

Exhibitions, events

In recognition of their activities, they have regular exhibitions in Nyíregyháza and Budapest. Their pictures can be viewed in the Hungarian National Gallery and the Ludwig Museum. They are invited participants of international events, such as:

- Budapest International Comic Festival
- FIRST LEGO LEAGUE robot world championship
- Hello Nyíregyháza!
- Opening of the National Vocational Education Academic Year
- Denmark Vejle Eco-City project
- The 30th anniversary of the Fall of the Berlin Wall at the German Embassy

Mix the bricks!

Since the creation of the group, they have reached more than 100 schools and thousands of students, for example in: Zalaegerszeg, Miskolc, Nyíregyháza, Pécs, Szeged, Alsószentmárton, Berettyóújfalu, Balatonboglár and Siófok, where, in addition to playful tasks, they built a portrait made of thousands of LEGO bricks at each location.

In 2019, at the Youth Days in Szeged, they met Anima Sound System, one of the songs of whom the group was named after. Released on 31.12.2020, an album of 17 remixes entitled 'Tekerd meg és táncolj', has a montage of their own pictures on the cover. The band recommended the album to us on their social media pages.

Co-operations

For the images created in the spirit of Op-Art, permission was obtained from Pierre Vasarely, president of the **Fondation Vasarely**, and from **The Official Ferrari Magazine**.

They came into contact with — among others — the Austrian **Anatol Knotek**, the Australian **WorkByKnight**, and the British **Steve Purnell**. **Judit Tondora**, the artist of **DC Comics**, also visited, who introduced the group to the basics of drawing comics. The world of comics is close to them, so with the permission of the Macedonian **Marko Manev**, in addition to their constructions processing his works, they worked together with several **MARVEL Comics** artists: **Mike Hawthorne** and **Declan Shalvey**. Moreover, **Matteo Lolli**, **Reilly Brown** and **Skottie Young** also autographed the constructions based on their drawings.

For their project related to space exploration and the solar system, they requested and received help from **NASA**, the **Smithsonian National Air and Space Museum**, and **ILC Industries**, which also produced the first astronauts' clothing. An American **LEGO** artist, **David Tracy**, is making the plans for the building for them. Two artists from the **Poster Posse** organization, **Doaly** from England and **Oli Riches** from Norway, are also involved in the implementation of the project.

The album **Music for Astronauts and Cosmonauts** served as background music for the exhibition of the **SpaceRulez** space project, for which permission was requested and received from composers **Húbert Nói** and **Howie B.** The latter worked as a producer for the bands **U2**, **Massive Attack** and **Björk**. It was here that they first presented their new logo, built from the **MEGAZERO** typeface by Spanish-born **Alex Trochut** (album cover artist for **AC/DC** and **The Rolling Stones**), with permission from the designer.

Presentation of Tekerd! group is an inspiring example on the basis of which any creative idea can be realized. Following their example, creative activities can be carried out with any material and waste (not only LEGO bricks) during vocational training.

Target group:

The idea can be widely used outside of the classroom in any grade, in any profession. Recommended within the framework of a study club or workshop.

Prior knowledge:

Knowledge of the base material depending on the material and waste. No other prior knowledge is required.

Developed competencies:

Creativity, cooperation, logical thinking, digital, social competence, artistic competencies.

Content requirements:

The course should be able to develop students' motivation and creativity.

Duration of the sessions:

not defined; due to creative activity, the time it takes to make any product can vary greatly.

Methodological recommendations:

The leader of the session should be open to new things, creative and proactive and know the basics of pixelization and have knowledge of materials.

Description of activities:

I. session: brainstorming – materials, artistic knowledge

II. session: graphic skills – pixelization

III. session: planning

From session IV.: Building the created work of art (e.g. using textile, wood, metal, plastic waste generated during professional classes)

Monitoring, evaluation: active participation in the group's work.

3. PROJECT PARTNER: SECOND VOCATIONAL HIGH SCHOOL OF CHANIA - GREECE

3.1 EXTERNAL ENVIRONMENTAL FACTORS OF THE ORGANIZATION

MAIN SOCIAL AND ECONOMIC CHARACTERISTICS

Greece, also known as Hellas, and officially the Hellenic Republic, is a country located in Southeast Europe. Its population is approximately 11,3 million. Athens is its largest and capital city, followed by Thessaloniki. Greece is located on the southern end of the Balkan Peninsula; it lies at the meeting point of three continents – Europe, Asia and Africa. The total area of Greece is 131,957 km2 and consists of three main geographic areas: a peninsular mainland being the biggest geographic feature of the country, the Peloponnese peninsula that is separated from the mainland by the canal of the Corinth Isthmus, and around 6.000 islands and islets, scattered in the Aegean and Ionian Sea. The country is a Parliamentary Republic. The official language is Greek. Greece is a Member-State of the European Union and uses its uniform currency – the Euro

Regarding the age group distribution of the country's population, the proportion of elderly people is the highest in the EU (22.3%) and the aging index is 156.2. The proportion of children is 14.3%, and that of active age is 63.5%, which is below the EU average.

Economic Situation Problems relating to poverty, social exclusion and economic inequality have always been present in Greece even before the beginning of the economic crisis, when Greek economy was achieving high growth rates for over a long period of time. Since late 2009 - early 2010, due to both international and domestic factors, Greece confronted serious economic hardships. The country faced the second largest budget deficit and the second highest fiscal debt in the European Union. In May 2010, Greece signed a Memorandum of Understanding with the International Monetary Fund (IMF), the European Union (EU) and the European Central Bank (ECB) in order to receive assistance for reducing its debt.

The employment rate was well below the EU average (67.6%), at 56.3% in 2020, which is the lowest among the member states. The unemployment rate was 16.5%, which was the highest in 2020, well above the EUS average of 7.2%.

Economic activity, though shifting gradually to tradable sectors, is still concentrated in traditional and low-innovation sectors, contributing to low productivity growth.
Greece's main industries are tourism, shipping, industrial products, food and tobacco processing, textiles, chemicals, metal products, mining and petroleum.

Greece attracts more than 16 million tourists each year. In recent years a number of well-known tourism-related organizations have placed Greek destinations in the top of their lists.

EDUCATION

The Greek education system is under the central responsibility and supervision of the Ministry of Education and Religious Affairs. The Greek educational system is mainly divided into three levels:

primary, secondary, and tertiary, with an additional post-secondary level providing mainly vocational training.

Technical education includes learning designed to enable the students to develop skills and abilities related to certain professions in order to prepare them for entering the workforce.

From 1998, there are Technological Vocational Schools (TEE) of two cycles:

- The first cycle of courses offers a level 2 degree
- The Second cycle of courses offers a level 3 degree

In 2006 TEE were separated again into Vocational High Schools and Technical Schools, only to be combined once again in 2016 into present form of the Technical and Vocational of Chania.
During the 2017-2018 school year, the Ministry of Education began a new program that has been implemented in the first grade of EPAL.

It includes the following actions:

- Alternative reinforcement teaching in Language and Mathematics, co-taught by two teachers, belonging to the staff of each EPAL.
- Including psychologists on the staff, aiming at the psychosocial support of students, but also in the educational process in general, as well as to organize the networking of schools with supportive psychosocial health structures in the area.
- Activation of the institution of the "Teacher Counselor", which contributes to better communication between students and teachers but also improves of the climate in the school community.
- Creation of "Action Plans", funded, that promote innovation and creativity in schools and promote science, technology and culture.
- Equipping EPAL. with video conferencing infrastructure
- Networking of schools through common communication platforms

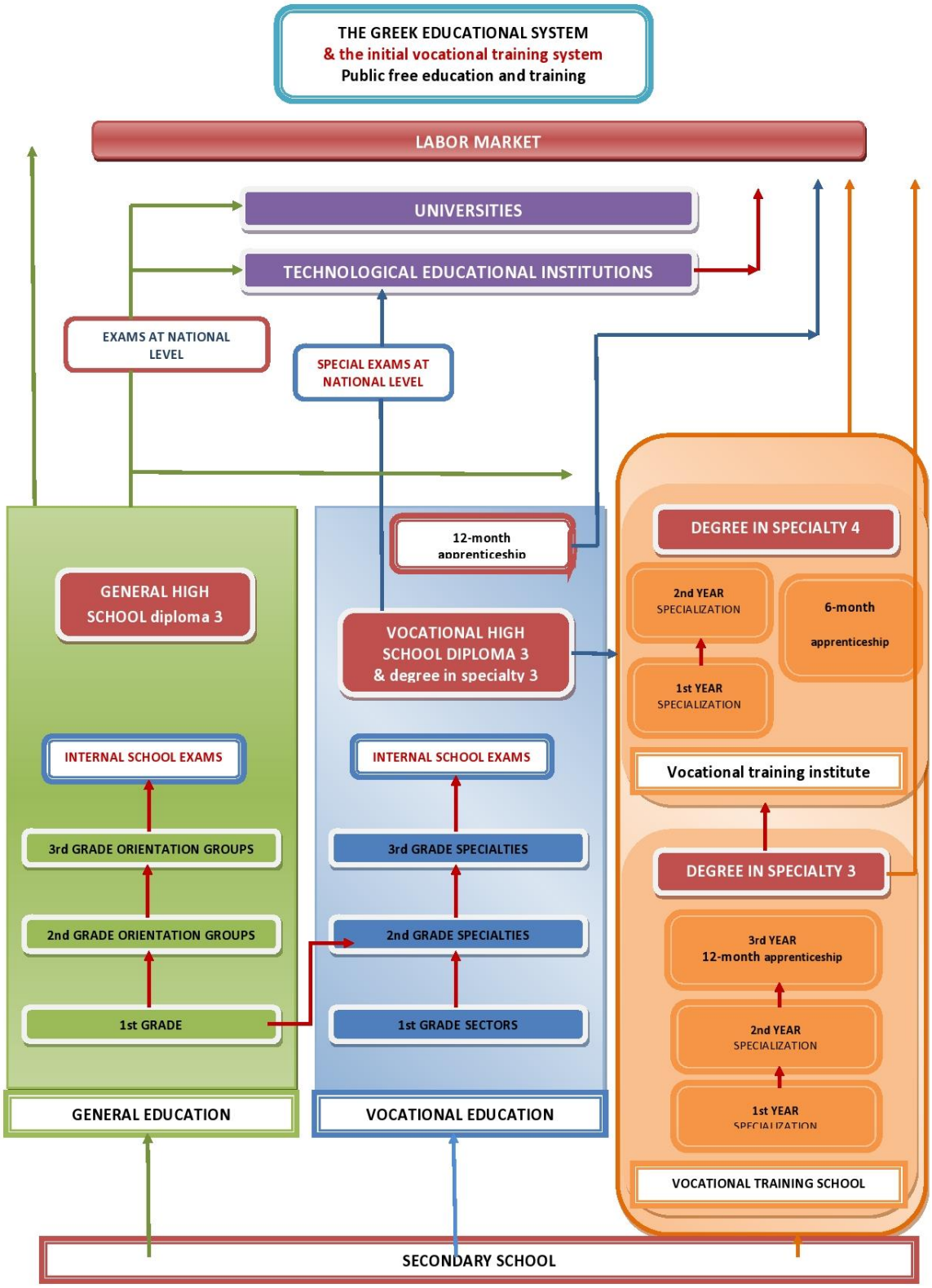
National System of Vocational Education, Training and Lifelong Learning, incorporation into Greek legislation of Directive (EU) 2018/958 of the European Parliament and of the Council as of 28th June 2018 on proportionality test (law 4763/2020).

A holistic reform is being attempted in Vocational Education and Training and Lifelong Learning (law 4763/2020), which is organised in 3 principal axes:

Axis 1: The joint strategic planning of Vocational Education and Training and Lifelong Learning. With distinct levels of qualifications, to avoid overlapping of structures and services. In this context, a National Vocational Education and Training System is established, which extends over levels 3, 4 and 5 of the National Qualifications Framework, in line with those of the European Qualifications Framework.

Axis 2: A more direct and effective interconnection of Vocational Education and Training and Lifelong Learning with the real needs of the labour market, through the effective participation of social partners.

Axis 3: The upgrade of the (initial and continuing) vocational education and training, at the level of structures, procedures, curricula and certification.


THE GREEK EDUCATIONAL SYSTEM
& the initial vocational training system
Public free education and training
LABOR MARKET
UNIVERSITIES
TECHNOLOGICAL EDUCATIONAL INSTITUTIONS
EXAMS AT NATIONAL LEVEL
SPECIAL EXAMS AT NATIONAL LEVEL
12-month apprenticeship
DEGREE IN SPECIALTY 4
2nd YEAR SPECIALIZATION
6-month apprenticeship
1st YEAR SPECIALIZATION
GENERAL HIGH SCHOOL diploma 3
VOCATIONAL HIGH SCHOOL DIPLOMA 3 & degree in specialty 3
Vocational training institute
INTERNAL SCHOOL EXAMS
INTERNAL SCHOOL EXAMS
3rd GRADE ORIENTATION GROUPS
3rd GRADE SPECIALTIES
DEGREE IN SPECIALTY 3
2nd GRADE ORIENTATION GROUPS
2nd GRADE SPECIALTIES
3rd YEAR 12-month apprenticeship
1st GRADE
1st GRADE SECTORS
2nd YEAR SPECIALIZATION
1st YEAR SPECIALIZATION
GENERAL EDUCATION
VOCATIONAL EDUCATION
VOCATIONAL TRAINING SCHOOL
SECONDARY SCHOOL

3.2 THE INSTITUTION'S SCOPE OF ACTIVITIES

The 2nd Epal (Vocational High School) of Chania, is a state vocational school of secondary education and training, situated in the centre of the city. The school staff is comprised of 40 teachers and the total number of students is 430. The school offers 6 specialties: auto mechanics, refrigeration technicians, plumber and gas technicians, general mechanics, beauticians and hairdressers. The graduates receive both an EQF4 High School General Diploma and an EQF4 Professional Diploma.

We also offer our graduates a 9-month apprenticeship program in four of the above specialties, which will give them the opportunity, not only to gain professional experience, but also to upgrade their diploma to EQF5. Students receive training for 4 days a week in public and private entities of the region and the 5th day they attend laboratory classes at school.

The students come from various socio-economic backgrounds, during the last years there are also a lot of immigrant population and the majority of the students have showed low academic performance, which is one of the reasons they chose to attend a vocational type of senior high school. Our students have low self-esteem and they show lack of motivation to learning, resulting in high rates of dropping out before the completion of their studies.

We have participated in seminars and events by career experts and counsellors related to the disciplines of our school, we have organized visits to relevant professional places, we have completed environmental projects towards the power upgrading of the school buildings and the reusage of recyclable materials.

We are very active in the apprenticeship program, and contrary to the majority of vocational schools which operate with the public sector, we have succeeded in finding apprenticeship positions for 80% of our students in small local businesses.

The school complex "DAEDALOS" is a landmark of technical - vocational education in the city of Chania and a reference point for a large number of professionals. Many graduates of the departments work in the public and private sector of their specialties. Today within the institution of Apprenticeship, students of the school immediately after obtaining a diploma and degree, work in companies and services under the supervision of the School, and are active professional and scientific employees covering the needs of the modern market

3.3 THE PROJECT PARTNER'S GOOD PRACTICES
GOOD PRACTICE 1. „CREATIVE ACTIVITIES ZONE" - MOSAIC

"Creative Activities Zone"

The implementation of the "Creative Activities Zone" – CAZ course is part of the 1st grade of Vocational Schools timetable. It includes educational activities related to the interests of the students and specifically designed by each school unit for the particular school unit.

It is an innovation, which is based on the reformation of school time and, through it, there is an attempt not only to introduce new teaching approaches but also to upgrade the autonomy of the teacher who is responsible to plan the curriculum of this course. The thematic units vary and mainly concern art and culture, local history, students' contact with monuments, environment and sustainable development while they are constantly being enriched. The "Creative Activities Zone" course belongs to the same context of learning objectives which places emphasis on the development of students' creativity, the utilization of their inclinations, talents and skills, as well as the cultivation of a cooperative approach to learning. The cultivation of positive attitudes and behaviors, the development of qualities of a responsible and active citizen and the stimulation of students' self-esteem in the context of a pleasant, healthy and creative school environment are equally important goals. The utilization of the CAZ provides, finally, the possibility of developing cooperation between the members of the school community and also promotes a connection between the school and the local community through the implementation of various events.

The CAZ course is based on students' interests and abilities and is organized according to the principles of experiential approach, encouragement and enhancement of expression. The teacher who is in charge of the implementation of the course informs the teachers' board about the topic they wish to deal with and groups are formed among the students, who finalize the topic and organize the course of action.

The experience is positive, especially when the students are engaged in constructions or artistic creations, where they are freed from the narrow limits of the educational process and work as a group but with clear rules largely based on self-regulation, as well. The presence and the exposure of the project to the general public is an important factor in the success of the effort as well as a special reward that is not related to a grade but is an important motivation and springboard for further action.

<u>Mozaics</u>

The term good practices, as a technical term, is used to describe a framework or grid of actions aimed at improving the learning and educational process as well as the social relationships that develop between the participants. The 2nd EPAL Chania promotes experiential, collaborative and exploratory learning through various - cultural, social, sports, environmental - activities that are developed inside and outside the school

curriculum in collaboration with institutions. The aim is to activate students in social issues. In particular, the following is sought:

(a) developing the necessary attitudes and social skills required for self-regulated learning ("learning how to learn");

(b) using experiences to gain an in-depth understanding of the issues they are studying;

(c) utilizing new attitudes, knowledge and skills to make targeted improving interventions in their personal field (self-esteem, choices and behaviour as individuals, as members of local communities and as responsible citizens) and in their fields of direct and wider social, natural and cultural environment and

(d) relating their learning experiences to feelings of creativity, joy and enjoyment.

As part of the "Mosaic" good practice activity, students create works of art from pebbles. This art form, which was widely known in the past, is still very popular today. In the framework of the "Creative Activities Zone" course, students' connection with traditions and their imagination are strengthened through the projects created by the students, and at the same time, the activity also stimulates their creativity. The finished mosaics are presented as works of art in the school.

The lighthouse of Chania

Location of the implementation: 2nd Vocational School of Chania

Target group: 14-18-year-old age group, class A students of all courses.

Necessary tools and material: tiles, pebbles

Prior knowledge: No prior expertise is required to implement the activity. The only prerequisite is the willingness to cooperate and create.

Developed competencies:

1. The purpose of the good practice is to strengthen students' environmental awareness and to realize that art plays a catalytic role in its development.

2. The goal is to understand how a work of art is connected to local culture and history, and to develop students' visual perception and stimulate their creativity.

3. The goal is to exploit the students' abilities and skills, to develop their cooperation and collaboration skills.

Expected outcomes:

Students come into contact with it and get to know the basic material, i.e. gravel. Under the supervision of responsible teachers, they get to know this material and learn how to use it properly. More specifically, students learn to select the most suitable pebbles for each project and use them based on the designs they draw. By completing this task, students will be able to create one or more finished pieces of pebble art.

Duration of the sessions: 6x45 minutes

Módszertani ajánlás: A tevékenység sikere attól függ, hogy a tanárok mennyire ismerik a csoportos kooperatív módszert. Hatékony lehet a mozaik művészetével kapcsolatos korábbi tapasztalat is.

Description of activities:

I. session

- What is a pebble? (15 minutes)

The history of pebbles (15 minutes)
The teacher briefly presents to the students the history of pebble art.

- Students break into groups in the computer room and search the internet for information about pebble art. Then, they find pictures of pebble creations from different parts of the city.
- Recording of students' impressions (15 minutes)

Students exchange opinions and impressions about the specific art.

II. session

- Watching videos (45 minutes)

The teachers show the students videos of the construction stages of the project while giving the necessary explanations.

III. session

- Creating plans (45 minutes)

Student groups proceed to create plans based on which the project will be completed.

IV. session

- Submission of proposals (30 minutes)

The designs from each group are presented.

- Design selection. (15 minutes)

Discussion and selection of the final design follows.

V. session

- Imprinting the design on a large scale (45 minutes).

The students draw the final design on the appropriate substrate with the guidance of the teachers

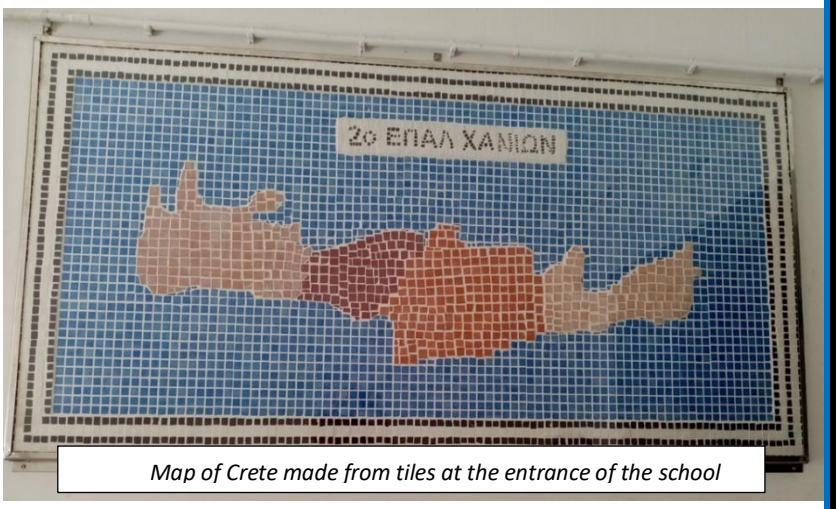
VI. session

- Presentation of materials and tools (20 minutes)

Teachers present students with the materials and tools to be used.
Start of the construction of the project (25 minutes), which will be completed at the end of the school four-month term

Monitoring, evaluation:

Throughout the implementation of the project, the teachers have the role of encouraging and guiding. They intervene whenever necessary allowing the students to act on their own. After the completion of the project, an evaluation form is filled in where the students record their impressions which will be used as feedback material. The project is presented at the end of the school year and is exhibited in the school premises.



Map of Crete made from tiles at the entrance of the school

GOOD PRACTICE 2. VOLUNTARY WORK

Target group: 14-18 age group

We participated in events with the cooperation of the local authorities and in social offer events. These activities sensitized our students into feeling an active part of the community and enhanced their self-esteem, by being able to help others on the one hand, and on the other hand, they were able to shape their cooperation skills and work with peers of different ethnic and social backgrounds, resulting in integration of the majority of the students.

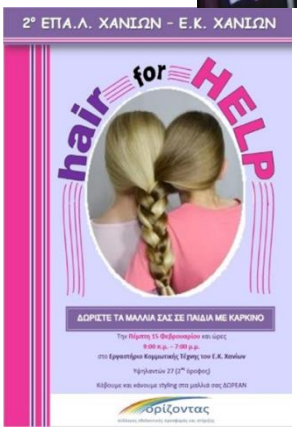
We have also organized activities, which aimed at improving the educational background of our students, their entrepreneurship skills, and their sensitization towards environmental and social matters. We have organized the production of soap and cosmetics using local products and using the profits from the sales in financial subsistence of economic disadvantaged students of ours. Through all these actions, the school hopes to cultivate social and political consciousness and to form mature, active and responsible citizens.

„Chaff chuff" Entrepreneurship development

As part of the course "Creative Activities Zone", students organized the operation of a business within the school space with second hand items. We have set up and maintained a shop and an online equivalent of second hand clothes, and the profits are given for social purposes, teaching our students entrepreneurship skills but also the need to reuse and recycle and above all, the need to be active and sensitive citizens.

Hair for Help

The specialty of Hairdressing in collaboration with the association "Horizon", which supports people suffering from cancer, organizes yearly a day for cutting and donating hair.

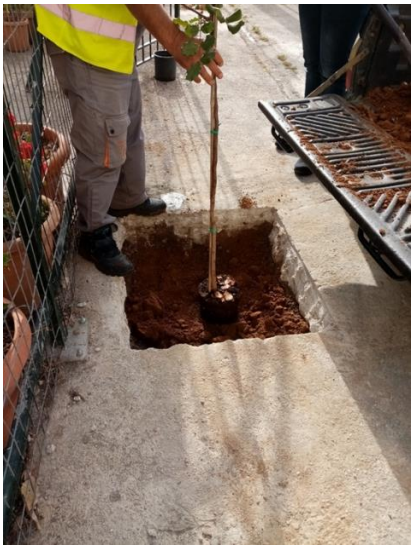


Repairing equipment of public hospital

Students in the field of Engineering voluntarily undertook the **repair of hospital equipment** in disuse. As part of this action, stretchers, wheelchairs, chairs, beds covering the needs of the hospital were delivered to the General Hospital "Agios Georgios".

Painting art on Kindergarten Facade

Planting trees: a voluntary environmental action in our city school



Target group: any age group

Prior knowledge:

In order to implement the activity, prior professional knowledge is required, with which the undertaken activity can be implemented (it must be assessed by the teacher).

Developed competencies:

In addition to professional competencies, the goal is to develop social and social competencies. Another goal is to increase students' self-esteem, develop their cooperation skills and social sensitivity.

Expected outcomes:

In addition to sensitization, their entrepreneurial skills develop; they become active and responsible citizens.

Duration of sessions:

Duration of session depend on the jointly organized activities.

Methodological recommendations:

Teachers must have well developed social competencies. They must cooperate with local civic or municipal partners.

Description of the activities:

Activities depend on local needs.

4. PROJECT PARTNER: GREÅKER VIDEREGÅENDE SKOLE – NORWAY

4.1 EXTERNAL ENVIRONMENTAL FACTORS OF THE ORGANIZATION

MAIN SOCIAL AND ECONOMIC CHARACTERISTICS

The official name of the country is the Kingdom of Norway. It is located in the northern part of Europe, on the western side of the Scandinavian peninsula. Approximately half of its population lives in the southern part of the country, in the region surrounding the capital, Oslo. About two-thirds of Norway's territory is mountainous, and there are about 50,000 islands along the deeply indented coastline broken by glacial fjords. Its population is 5.4 million people, the population density is 17 people/km2. The distribution of the population by age group is more favorable than the EU average. Within the population, the proportion of children (17.3%) and the elderly (17.5%) is almost the same, with 65.1% of those aged 15-64.

The Østlandet region around the Oslofjord is home to more than half of Norway's population, most of whom live in the area of the national capital, Oslo, and in the many industrial cities and urban agglomerations on both sides of the Oslofjord. Among the traditional regions of Norway, Østlandet has the highest average income per household.

Major cities: Oslo, Drammen, Stavanger, Lillehammer, Bergen, Trondheim

Norway's economy is a highly developed mixed economy with state ownership in strategic areas. The Norwegian state maintains significant ownership positions in key industrial sectors focused on natural resources and strategic industries, such as the strategic petroleum sector, hydropower generation, aluminium production, Norway's largest bank and telecommunications provider. The country is extremely rich in natural resources, such as petroleum, hydropower, timber.

The country has a very high standard of living compared to other European countries and is characterized by a highly integrated welfare system. GDP per capita - after Luxembourg, Ireland and Switzerland - is the highest in the world.
The oil and gas industry accounts for the largest part of the country's GDP. The regions of oil and gas production are the Norwegian, North and Barents Seas. Norway also occupies one of the leading positions in the manufacturing industry in Europe and is one of the world's largest suppliers of aluminium, magnesium, zinc, copper and nickel. Norway gives 15% of the fish caught in Europe (herring, cod and artificially bred salmon).

Among the population aged 15-64, the employment rate is 74.7%, which is considered high compared to the rest of the world. The active population mostly works in industry, 1/10 of the population deals with agriculture and forestry. The unemployment rate in 2020 was 4.5%.

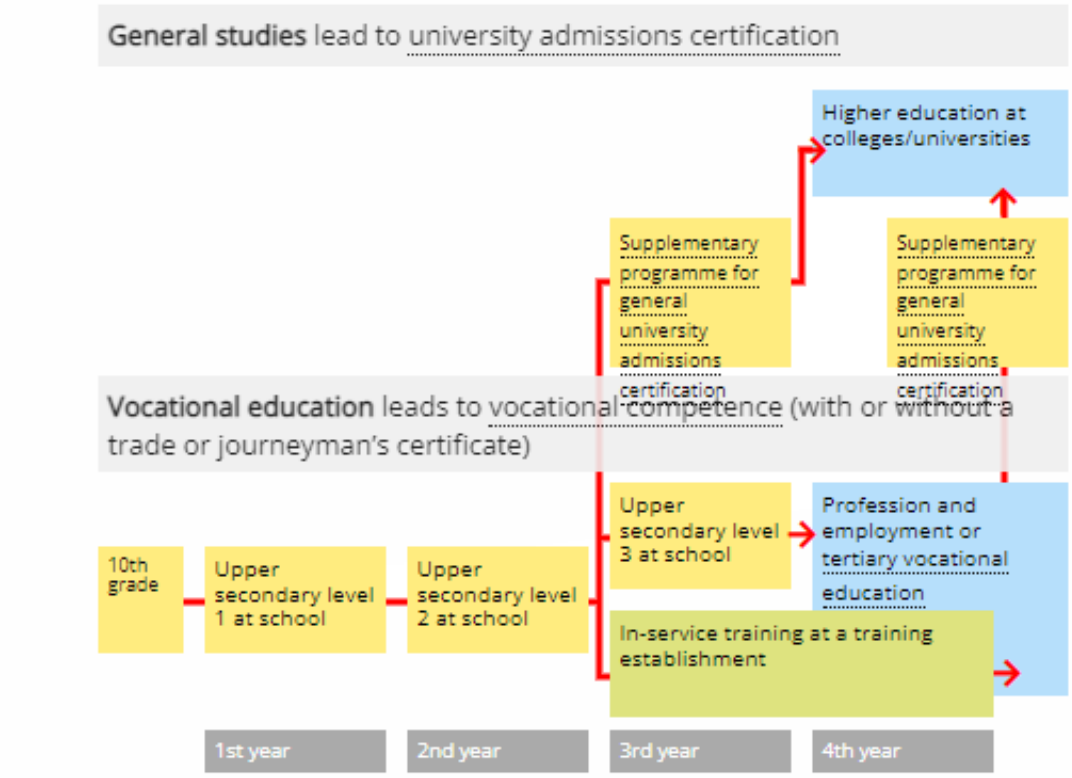
EDUCATION

The level of education is high, 35 % of the population has education on university or university college level. Education is free and mandatory between the age of 6 and 16. Between 16 and 19 the youth has a legislated right to education (upper secondary school).

Public universities and university colleges are receiving grants from the government. The students only pay a small fee per semester.

The school system

- Primary level
  - Lower primary level, grades 1–4. (age 6–10)
  - Upper primary level, grades 5-7. (age 10-12)
- Lower secondary school
  - Grades 8-10. (age 12-15)
- Upper secondary school
  - Grades 1 to 3
    - Programme for general studies
    - Vocational education programme



Vocational education and training are a part of the upper secondary education system in Norway.

It covers 10 programmes and lead to more than 180 different trade or journeyman's certificates.

- Agriculture, fishing and forestry
- Building and construction
- Crafts, design and product development

- Electrical engineering and computer technology
- Hairdressing, floral, interior and retail design
- Healthcare, childhood and youth development
- Information technology and media production
- Restaurant and food processing
- Sales, service and tourism
- Technological and industrial production

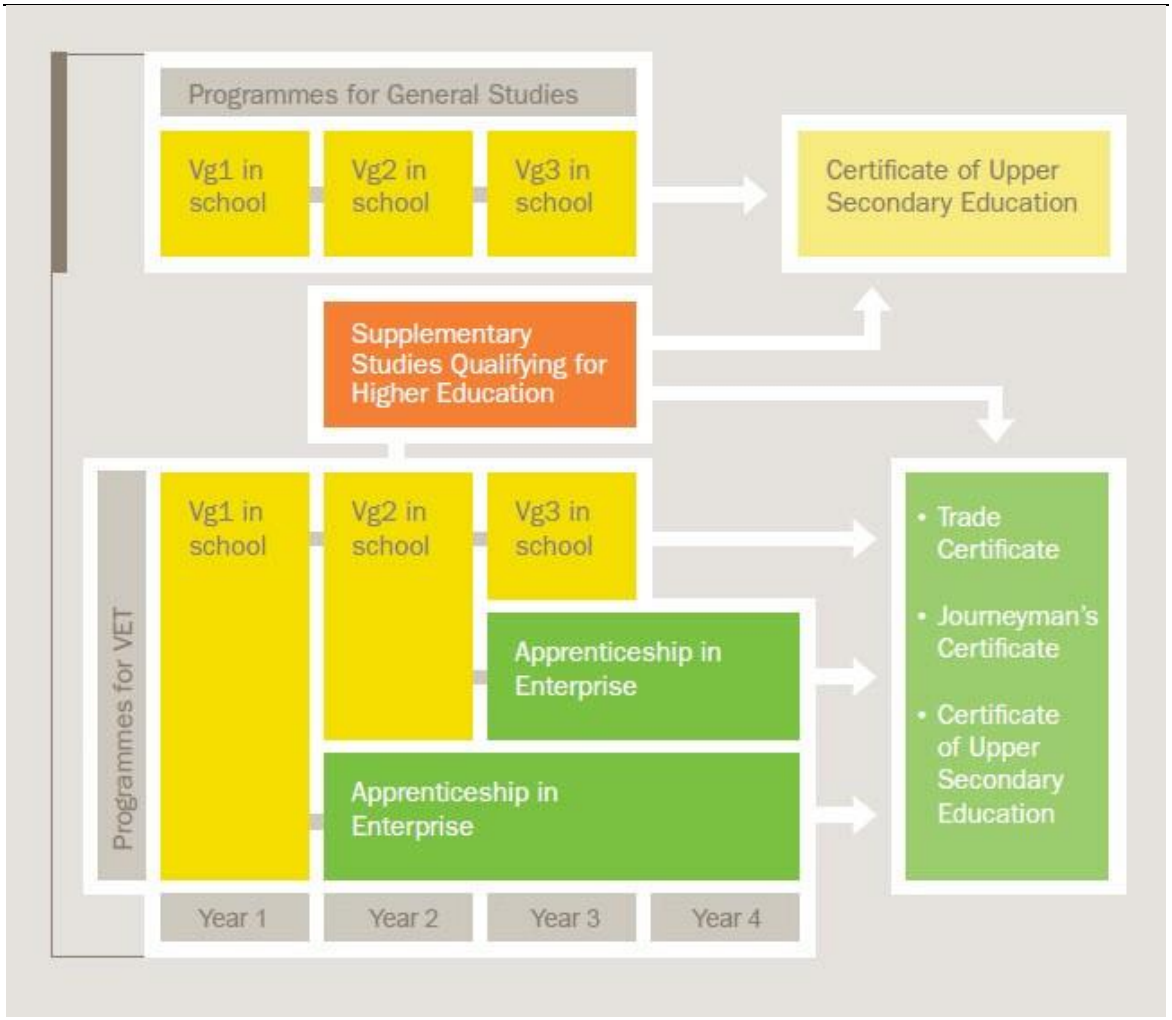
Most upper secondary VET programmes follow the main 2+2 model; two years in an upper secondary school followed by two years of apprenticeship training and productive work in a training enterprise or public institution.

During the last 25 years there have been several reforms in the education system. There have been political measures in order to strengthen the basis for the apprenticeship system as a part of the upper secondary education system in Norway.

The apprenticeship areas have traditionally been industry and crafts, but we also see expansion within the service sector.

Providing an apprenticeship place for all young people that apply is still far from accomplished. About 30% of the applicants are rejected. Of these, about half disappear from the upper secondary education system.

There are 415 upper secondary schools in Norway. 315 of these schools provide vocational education programmes.



4.2 THE INSTITUTION'S SCOPE OF ACTIVITIES

Greåker videregående skole is a combined Upper Secondary VET schools and an Upper Secondary general school located in Østfold county in Norway. The School has about 1300 pupils and approximately 250 employees. The pupils are mainly between 16-19 years old, but they also have adult learners.

Education programmes:

- Specialization in General Studies
- Music, Dance and Drama
- Building and construction
- Healthcare, childhood and youth development
- Childcare and youth workers with university and college admissions certification
- Supplementary programme for general university admissions certification
- Introduction programme for young refugees who need to finish lower secondary education in collaboration with Sarpsborg municipality
- Hub-school for the blind and partially sighted

The county in which Greåker is situated, is one of the poorest in the country and has one of the highest drop-out rates on the national level. The school therefore has a focus on preventing dropout, and to motivate the pupils to finish with good results.

The unemployment rate in the county is quite high, as the level of education is low. The school has a focus on adapting to 21. Century skills. During the last years we have had a constant focus on how to change methods and didactics to prepare our students for the future working life. This is also a way of motivating the pupils to stay in school, and to give our teachers more methods to motivate the pupils such as focusing on using new ICT tools and new teaching methods that engage and motivate the students.

The purpose of the teaching-learning activities in the school is for students to find joy in learning, to involve students in their own learning and development, to implement active learning activities that trigger students' curiosity, the need to participate, and the desire to discover.

The institution also places great emphasis on managing the training and development of teachers in a professional environment, the main guidelines in this process being focusing on common values, a richer/fuller understanding of best practices, and the regular evaluation and further development of their pedagogical practice.

4.3 THE PROJECT PARTNER'S GOOD PRACTICES

GOOD PRACTICE 1. DIGITAL SOFTWARE IN THE BUILDING AND CONSTRUCTION COURSES

Representative of the good practice: Øyvind Østby

The use of CNC-machines in the building and construction department is a well-known technique to create different wooden models. It is a necessary tool for carpentry and furniture makers. The machine needs input data from other programs like Sketchup.

Target group:

The target group can never be "everybody". The target group are students who have already completed level 1 of the construction specialization, whose goal is to obtain a carpentry and furniture maker qualification.

Prior knowledge:

Previous knowledge from the building and construction programs is needed.

Student activities:

Planning the series of activities necessary to operate woodworking undertakings. Creating the budget and time plan of making a certain product. In the framework of the current program, to make a wooden cutting board with the help of the available technology. The teacher monitors the activities of students performed during the learning-practical activities.

Developed competencies:

Digital competences, mathematical competence, learning to learn, effective time management, problem solving

Student activities:

Planning the series of activities necessary to operate woodworking undertakings. Creating the budget and time plan of making a certain product. In the framework of the current program, to make a wooden cutting board with the help of the available technology. The teacher monitors the activities of students performed during the learning-practical activities.

Developed competencies:

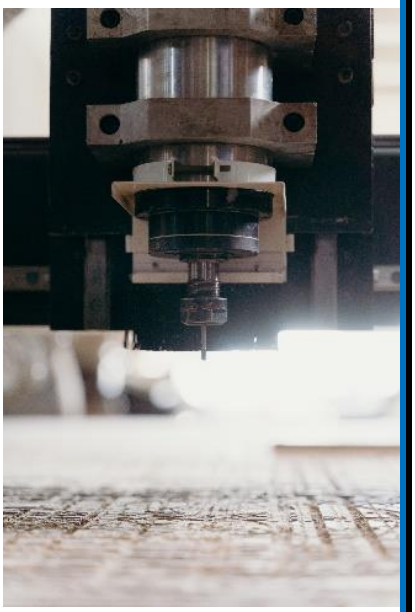
Digital competences, mathematical competence, learning to learn, effective time management, problem solving

Content requirements:

The students can use the Sketchup drawing program at the level necessary for the implementation of the task, define and appropriately manage the materials to be used and their required quantity, as well as their expected costs. Acquire and confidently apply the digital skills that are necessary to prepare the budget using Excel. Acquire the professional and occupational safety knowledge required to calibrate and operate the CNC machines required to perform the task.

Duration of activities: 8 lessons

Description of activities:



Students make a cutting board out of wood using CNC machines and ICT tools. Using the Sketchup drawing program, they prepare the blueprint of the cutting board, and with the help of the blueprint, determine the raw materials to be used and their required quantity. The choice of material can be made from the available materials: pine, walnut, oak, birch, spruce, larch. After that, with the help of an excel budget table, the students determine the cost requirements for the preparation of the cutting board. Cutting boards are made from the finished plans using a woodworking CNC milling machine. The students must set up the CNC milling machine, calibrate it, make the settings necessary to complete the task and operate it during the implementation. Woodworking digital skills include digital work through drawing, calculation and documentation, as well as the use of relevant digital resources in product development.

Lesson 1:
What is a CNC-machine (0-15 minutes)
The teacher introduces the curriculum goals to the students.
A brief review of the CNC-machinery is provided, its functions and areas of use.

Planning (16-90 minutes)
The students plan their work: what kind of material they will use (pine, walnut, oak, birch, spruce, or larch). They need to consider the design and the costs.
With the help of an excel budget table, the students determine the cost requirements for the preparation of the cutting board.
The choice of materials as well as the budget must be controlled by the teacher.

Lesson 2
Drawing (0-90 minutes)
Using the Sketchup drawing program, they prepare the blueprint of the cutting board.
They determine the raw materials to be used and their required quantity.
The drawings must be approved by the teacher.

Lesson 3
Cutting boards (0-90 minutes)
Students make a cutting board out of wood using CNC machines and ICT tools
Cutting boards are made from the finished plans using a woodworking CNC milling machine. The students must set up the CNC milling machine, calibrate it, make the settings necessary to complete the task and operate it during the implementation.

Lesson 4
Finishing, displaying and evaluation (0-90 minutes)
Finishing the surface of the cutting boards. The surface will be treated with eatable oil, like almond oil.
The cutting boards are to be displayed in the woodshop.

Resources and materials:

CNC woodworking milling machine, ICT tools necessary for the preparation of plans and budgets, Sketchup program, several types of wood depending on the students' choice of material.

Supporting system:

ICT tools, Sketchup, excel, software necessary to operate the CNC machine

Monitoring, evaluation:

The teacher supervises the workshop, as well as the written plans, the participation of the students in the design of the project and the results of their work.
Woodworking digital skills include digital work through drawing, calculation and documentation, as well as the use of relevant digital resources in product development.
The evaluation of the process is to be done in Forms.

GOOD PRACTICE 2.: SOCIAL ENTREPRENEURSHIP/CHILDHOOD DISEASES

Representative of the good practice: Merethe Bråthen

Nearpod is a learning program where students can learn at their own pace (from Power Point presentations, videos and assignments) or together at a pace guided by teachers. The program helps educators make lessons interactive, whether in the classroom or virtually. It is an online tool that, thanks to the hybrid layout, allows teachers to use slide-based teaching in the classroom and distance learning system, while also providing feedback to the teaching staff about the learning process of the students. Teachers can create many different interactive learning resources that allow students to learn on their own ICT device or through a single screen. Nearpod allows the teacher to create their own gamified activities or use the embedded activity banks that contain activities that can be easily integrated into the current curriculum. It supports students' understanding and visualizes the curriculum with data and simulations that guide education and improve student results.

Target group: Nearpod can be used by everybody if you have the necessary license.
This plan is for students at level 2 in the healthcare, childhood, and youth development department. The students are attending Vg2 Health Service.

Prior knowledge: Some students have their own experience with diseases, as well as basic knowledge of diseases, healthy lifestyles, and health conditions, but this is not a requirement.

Knowledge about infection prevention, on the other hand, is.

Learning activities:

The activities are all integrated in the program Nearpod.

- Match concepts (like Quizlet integrated in Nearpod)
- Dialogue
- Time to climb (gaming integrated in Nearpod)
- Open-ended questions (the students write their answers in Nearpod)
- Notice board

Developed competencies:

Digital competences, learning to learn, social competences

Content requirements: Students will be able to recognize many well-known childhood diseases, get to know the symptoms, gain knowledge about the causes of diseases, learn how to treat diseases, learn how to treat patients who come to health care, prevent infection, give information and advice to related to diseases.

Duration of activities: 4 lessons (2x90 minutes)

Methodological recommendations: The students need to have their own device (computer or smartphone) and internet connection.

Licence to the programme Nearpod is necessary.

Description of activities:

Lesson 1

Introduction to childhood diseases (0-5 minutes)

The teacher introduces the competence goals to the students.

A film about childhood diseases will be shown. https://www.youtube.com/watch?v=KT8xSuH11Ik

The film is incorporated in the Nearpod as well as the goals.

The different diseases (6-90 minutes)

The diseases are presented by power point slides, movies and tasks.

All of this is in the Nearpod.

In this lesson the first four diseases are presented (whooping cough, mumps, measles and rubella)

Lesson 2

More diseases (0-85 minutes)
The last four diseases are presented (chicken pox, the fourth and the fifth childhood disease and scarlet fever)

Summary (86-90 minutes)
Notice board – using sticky notes digitally in the Nearpod program.

Resources and materials: computers, ICT tools, Nearpod – licenced learning program

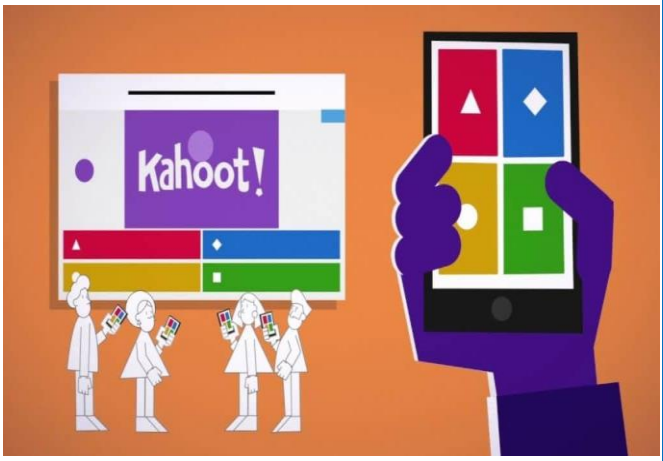
Supporting system: ICT tools, Nearpod, Powerpoint

Monitoring, requirements:

The session includes several tasks between topics. After the session, the teacher can check what the students have created and then make new tasks adapted to the individual. In Nearpod the teacher can get reports of student activity. The teacher can read and assess the student work in Nearpod. This, together with a written test will create the bases for grading the students.

GOOD PRACTICE 3.: PLATFORMS SUPPORTING DIGITAL EDUCATION

1. Kahoot!



Kahoot (widely known) is a game-based learning platform used as an educational technology. It was presented through a Kahoot quiz, which increases knowledge and develops team spirit, but can also be used for monitoring and evaluation.

Kahoot! International As. is based in Oslo, so the method was presented at the company's headquarters.

During the presented session, the quiz was based on basic literacy. Its purpose is to create team spirit, an ice-breaker task. The quiz requires some basic knowledge to complete. If the participants worked together in the guessing task, they were much more effective, which proves that collaborative group work is an effective learning method.

Target group: can be widely used for any age group. Kahoot! offers free and paid packages for use in the classroom, in the workplace - either face-to-face or virtually - or for home, social use or self-study.

Prior knowledge: prior knowledge related to the topic to be processed is required.

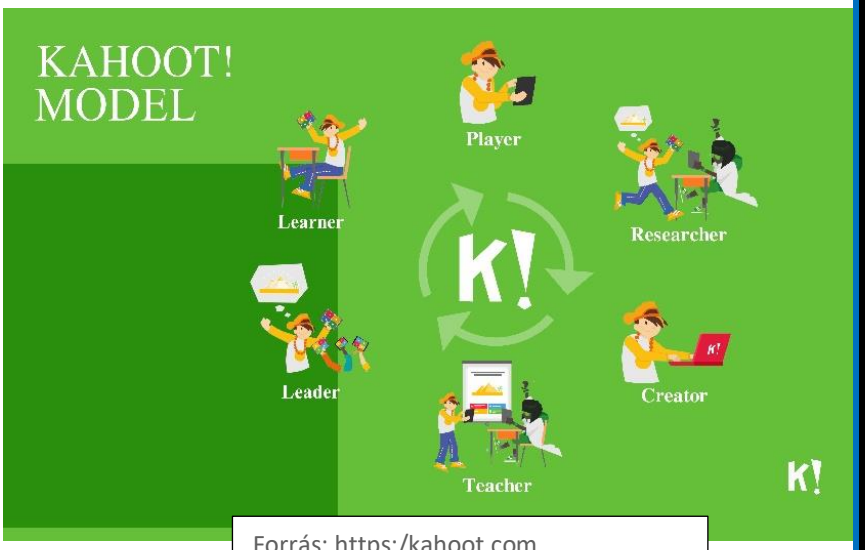
Student activities:

The platform's flexibility allows educators to use it in a variety of ways to support learning outcomes and increase student engagement. At school, Kahoot! can be used for any subject, any age and any device - students don't even need to register. Kahoot! can be used both in class, in distance learning and in mixed education.

Kahoot! is most often used for the following purposes in education:

- Introduction of new topics
- Classroom and home review of learning material
- Involvement of students through distance learning
- Implementation of developmental assessment
- Interactive lessons
- Warm-up and reward activities
- Collecting student opinions
- Development of creativity and teamwork
- Involving colleagues in professional development

The advantages of Kahoot!:



Forrás: https:/kahoot.com

- easy to use from any device (tablet, phone, laptop, desktop),
- student registration is not required,
- provides opportunities for individual, pair and group work,
- internal search interface: the possibility to browse through hundreds of thousands of "documents" created by others,
- several correct answers can be marked during the quiz-type task,
- during the quiz-type task, images and videos can also be integrated with the individual questions,
- shows only the first 5 best performing students after each question.

Developed competencies: independence, digital competence, creativity, positive attitude towards learning.

Methodological recommendations:

There are several application possibilities for the teacher related to the lesson. Kahoots to be used during the activities of the teaching-learning process can be selected, assembled, and filled with content according to the needs of the given student group and the current curriculum and educational goals. When compiling the tasks, signs, images, videos can also be used, and a time frame can also be specified.

1. At the beginning of the lesson: reviewing the learning material of the previous lesson by compiling a series of repetitive tasks and partially connecting to the material of the same day's lesson.
2. During the delivery of difficult course material: a series of Kahoot tasks can be used to measure how well the students understood the course material.
3. Assessment at the end of class: students must answer questions related to the course material of the day. If this form of assessment is used regularly, students will realize that it is worth paying attention in class.

4 types of tasks can be created in Kahoot, two of which can be scored. (The free version contains 2 types of tasks: quiz and true-false).

Description of activities:

Using Kahoot gives you the opportunity to gamify the teaching and evaluation process.

The program is available at https://kahoot.com. Many free-to-use worksheets created by others can be adapted to your own needs. Task types can be used in any number and combination.

Teachers can prepare the tasks using the get!Kahoot application, students can access them through kahoot.it.

Students use the task ID displayed on the teacher's projector and kahoot.it. page, they can join the game by knowing the identification number.

Its best-known function is the quiz, with which even a large number of students can play at the same time. The multiple-choice questions are displayed on the projector, and the students answer them on their own device (app or on the kahoot.it website) by choosing the color of the appropriate answer. After each question, the projector announces the current scores, which are influenced not only by the correctness of the answer, but also by the speed.

In addition to individual play, group work is also possible; students can solve the task individually at any time by the specified deadline, while competing with each other ("Challenge" mode).

The basic functions of Kahoot!:

• Create multiple-choice kahoots on any topic, in any language

• Kahoots can be used in class or via video as part of distance learning

• To create a kahoot faster, the pre-made questions in the question bank can be used

• Several kahoots can be combined with each other

• Assign student-paced challenges for home learning

• A searchable library of millions of ready-to-play kahoots

• Viewable reports that can be used for formative assessment

• When creating Kahoots, you can choose from 2,000 royalty-free images from the built-in image gallery

Resources and materials:

Computer/mobile device, internet, HTML5 browser (for example Google Chrome, Firefox or Safari).

Supporting system:

https://kahoot.com

Monitoring, evaluation:

The performance of the students can be continuously measured and monitored by the statistics running in the background.

2. OneNote based learning

Using the OneNote class book, linked to the class team in Teams, the teacher and the students may organize the subjects the way they want. At Greåker, every class at the health, childcare and development department have structured the OneNote in the same way. This makes it easier for everyone to find all the material belonging to every subject or student. The class book made in OneNote contains the newest subject matters and research so that the students are updated (more than with printed books).

Using a plan for the week, every teacher can insert a link for their teaching materials (text in blue print are links)

Velkommen | Ukeplan | Kontaktlærer | BLOKK 1-9 | E-lærebok | Terminprøver | Ny inndeling 1 | Ny inndeling 2

	Mandag	Tirsdag	Onsdag	Torsdag	Fredag
NIVÅ: Grønt	FRI - 2.PÅSKEDAG				
1.time 08:00 - 08:48	Norsk:	Gym:	Helse: Barnesykdommer, nearpod, fluesmekker. Nearpod	Yff: Vurdering V22	Yff: Praksis
2.time 08:48 - 09:36 Pause: 09.36-09.50	Norsk:	Gym:	Helse:	Kommunikasjon A+B Rom C033: Helse og livsstil Rus Forberedelser til oppgave om tema "Livsstil"	Yff:
3.time 09:50 - 10.41	K- time:	Kommunikasjon: Kap 1 Folkehelse Samarbeidslæring Fagstoff kap 1 Folkehelse-livsmestring	Helse:	Kommunikasjon: Se over Gjennomgang av oppgave Inspirasjon film-snutter for tema livsstil.	Yff:
4.time 10.41- 11:25	Yrkesliv:	Kommunikasjon:	Helse:	Kommunikasjon:	Yff:

When the students start their lesson every day, they open this plan and are guided to the theme of the different lessons. Students who are ill or cannot come to the lesson can work on the subject on their own. It cannot substitute classrooms lessons, but they don't miss it all.

This way of organizing the knowledge the students acquire makes it easy for them to bring studies everywhere, to find the material they need and to gather all theory and documentation at the same place. The program makes teachers distribute tasks, make escape rooms, distribute links and workshops and lots of nice effects and functions.

Escape room in OneNote

Escape room has been a very popular way to solve problems and tasks and to learn or review subjects. To participate, students need access to OneNote. The escape room in OneNote will include everyone belonging to the OneNote class book.

Target group: everyone belonging to the OneNote class book can participate in OneNote escape room activities.

Prior knowledge: prior knowledge related to the topic to be processed may be necessary.

Student activities: At Greåker a type of escape room using the regular platform OneNote is used. With the help of the program contents can be organized in folders. The teacher can close or lock the folders. They can be opened using passwords. When students work with escape room in OneNote they will be given a task which, when thy have solved it, gives them the first password. This password unlocks the first folder, and a new task is given to the students. The task may be going outside to find something, search for answers on the internet, at the library or other places.

Developed competencies: digital competencies, independence, creativity, learning to learn

Methodological recommendations: based on the experience of teachers regularly using this activity, students love this kind of arrangement for resuming a theme or in the end of a chapter.

Description of activities:

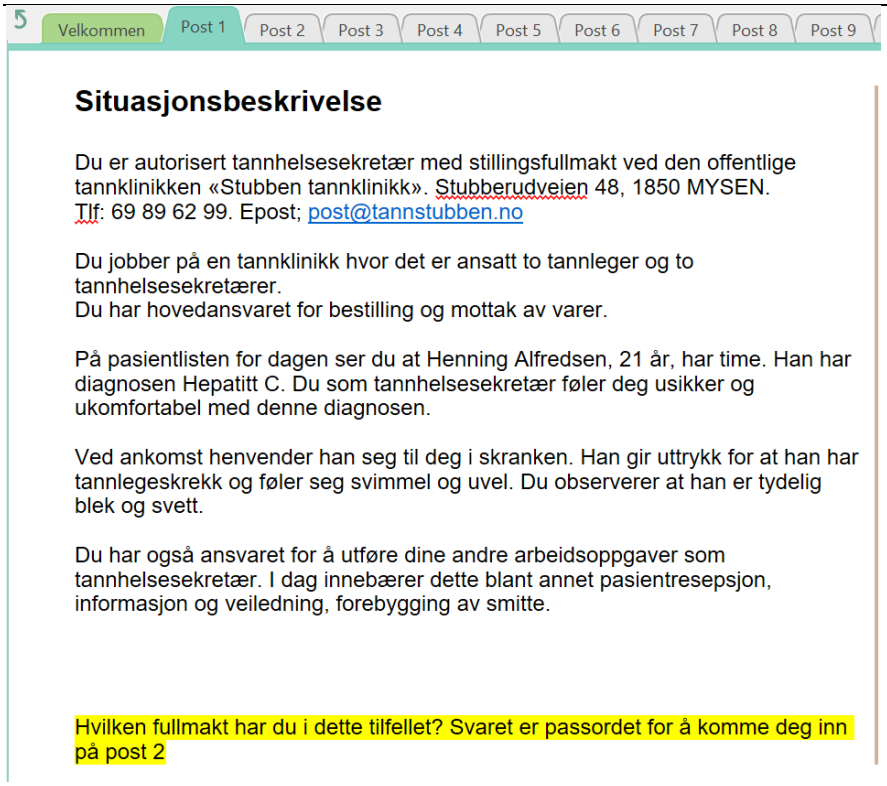
With the help of the program contents can be organized in folders. The teacher can close or lock the folders. They can be opened using passwords. When students work with escape room in OneNote they will be given a task which, when thy have solved it, gives them the first password. This password unlocks the first folder, and a new task is given to the students. The task may be going outside to find something, search for answers on the internet, at the library or other places.

They may be asked to solve practical or theoretical problems. In the end of each task students find a new password for entering the new folder. The escape room can be used in every subject and in different sizes (only a few tasks, or tasks filling a whole day). It is the teacher who determines the size and the look of the escape room.

In this picture you can see that the first folder is green. Here you can find the information and instructions about the escape room. The grey folders are locked until the students find the password. In this case, the students get the first password from the teacher.

Here you can see that the students have moved to Post 1 (the first task). To enter the folder, they need the password from the teacher to start. Then the students are supposed to get to the new folder by solving the task.

When the students have got the passwords and enter Post 1, it looks like this (The yellow marked text leads to the password of folder 2.):



Resources and materials:

computer / mobile device, Internet, HTML5 browser (such as Google Chrome, Firefox or Safari).

Supporting system:

www.onenote.com

Monitoring, evaluation:

The escape room activity provides an opportunity to assess how well the students understand the specific concepts within each folder/escape room and how well they have understood the content of the current learning material. In this sense, it can easily be used as a method of formative assessment.

3. *Minecraft as an educational platform*

After the release of the Minecraft video game, it became one of the most popular games of all time. The concept of the game remains unchanged to this day, not to set goals and objectives for the players, but to let the participants experience the joys of discovery and creativity.

Target group: every student can participate in the activity

Prior knowledge: basic computer skills, knowledge needed to use Minecraft

Student activities: Students and teachers can be a part of a word in Minecraft where they perform different tasks.

Developed competencies: planning, creative thinking, cooperation, problem solving

Methodological recommendations:

Microsoft has launched a separate education platform that allows teachers to integrate this special tool into their education, which is extremely popular with children who are just entering school age. Minecraft Education Edition has extensive tutorials, a rich technological background and toolset. With the help of the program, anyone can create "worlds" that can be used in lessons.

Using games for educational purposes creates an inclusive learning environment. The program is very useful for interdisciplinary work and collaboration, and works well for students with disabilities.

Description of activities:

The students can use block-coding and Java-script to move around in the world of Minecraft, change the weather, get yourself resources such as building materials or fight enemies.

At Greåker the game is used to make our own kindergarten or to build a school. This gives the students a greater understanding of the layout of a kindergarten or a school. Having to plan for purchase of necessary equipment and justify why they would like to make these investments as well as calculating the costs gives students and teachers an opportunity to work interdisciplinary.



Resources and materials: computer, internet, HTML5 browser (such as Google Chrome, Firefox or Safari)

Supporting system: www.minecraft.net

Monitoring, evaluation: The internal assessment functions that are part of Minecraft (e.g.: camera, portfolio, book&quill...) can be used as a formative assessment tool or for giving in-game instructions to students.

5. PROJECT PARTNER: IES F. RIBALTA – SPAIN

5.1 EXTERNAL ENVIRONMENTAL FACTORS OF THE ORGANIZATION

MAIN SOCIAL AND ECONOMIC CHARACTERISTICS

Spain (or the Kingdom of Spain) is in the south of Europe, in the Iberian-peninsula. Its territory is 505.990 square meters with a population of 46,94 millions of inhabitants. Its capital city, Madrid, is the biggest and most populated city with 3,223 million people. Spain is divided into 17 autonomous communities.

The country's population is ageing as a result of the growing number of elderly people exacerbated by the decreasing number of the new-born. The percentage of children, working-age population, and elderly people within the whole population is 14,5%, 65,9% and 19,6%, respectively. The aging index is 134,8.

In 2020, the unemployment rate of those under 20 years old is 54,33%, they are the most affected by unemployment in the country, and 35,14% of the population between 20 and 24 is without a job. Most of this population find a job after studying vocational training studies.

Agriculture plays an important role in the economy of Spain. Its main crops are: cereals, legumes, citrus fruits, grapes and vegetables. The world leader in growing olive, its wine and olive exports are outstanding.

The leading sectors of light industry are textile industry (with Catalonia as the centre), food industry and fish processing.

In the area of machinery manufacturing, the vehicle industry is (with Barcelona as the centre), the manufacture of railway vehicles and shipbuilding, while in the case of chemical industry, sulfuric acid production, fertilizer production, pharmaceutical production, rubber production are important sectors. The main mining raw materials are mercury, coal, iron ore, copper, uranium, crude oil, natural gas and salt. The most important mining centres are: Oviedo, Bilbaou, Sandander and Andalusia.

Spain's diverse culture and beaches attract a large number of tourists, and tourism is a significant source of income. Main tourist centres:

• Catalonia, Costa Brava

• Balearic Islands

• Canary Islands

• Andalusia, Costa del Sol

EDUCATION

The Spanish system of education is compulsory and free for all children between the ages of 6 and 16. The school system can be divided into the following sections:

- Kindergarten (Infantil): until the age of 6
- Lower education (Primaria): age 6 – 12 (compulsory)

- Upper education (E.S.O): age 12 – 16 (compulsory)
- Baccalaureate/Secondary technical school (Bacillerato/Ciclos Formativos de Grado Medio): age 16 – 18
- University/College (Ciclos Formativos de Grado Superior): age 18 – 21+

Spanish children start kindergarten from the age of 3, school enrolment takes place at the age of 6, based on the year of birth, i.e. all children in a class were born in the same year, measured from January to December and not from July to June. Children are admitted to the institutions of the school district where they live, the inclusive education method is typical, competition between the institutions is limited.

Primary school (Primaria or Educación Primaria) consists of six years, in three terms, from the first grade to the sixth grade.

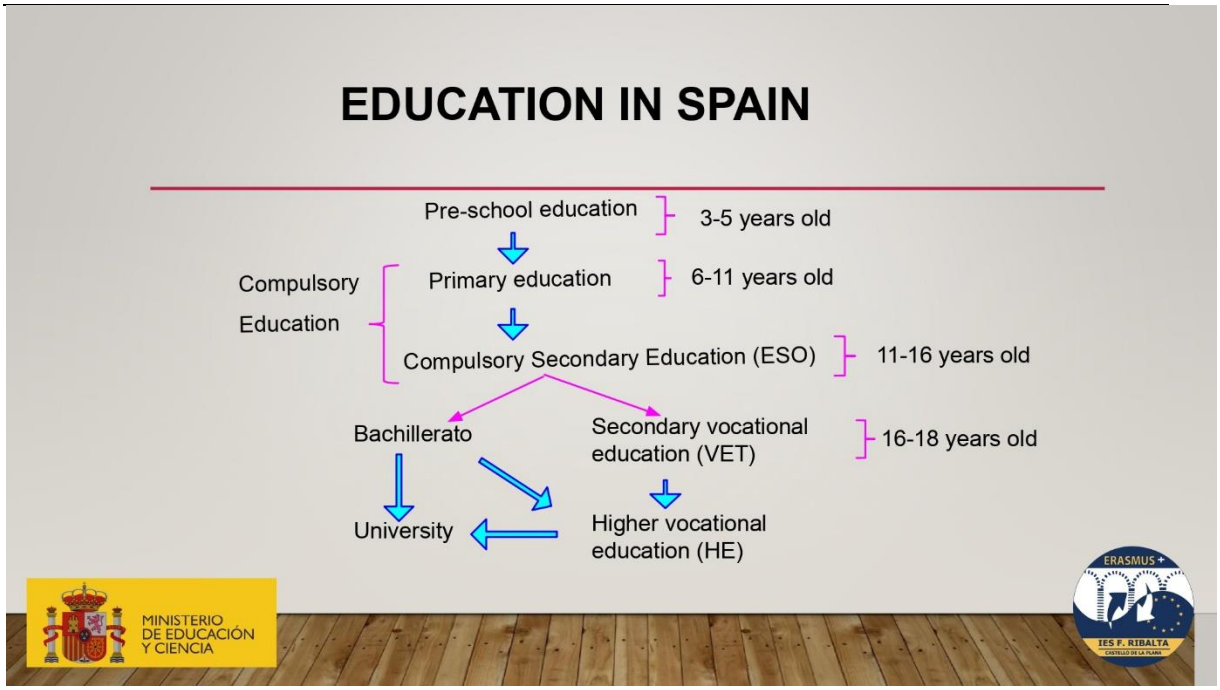
- 1st term: 1. and 2. grade
- 2nd term: 3. and 4. grade
- 3rd term: 5. and 6. grade

Students take part in secondary education between the ages of 12 and 16. This level of education also includes vocational training, in the form of general technical education provided to all students, accompanied by some optional subjects. The purpose of the technical curriculum is to provide students with knowledge and basic skills that are indispensable for a wide range of occupations.
Secondary education (Secundaria vagy Educación Secundaria /ESO/ consists of four years in two terms, from the seventh grade to the tenth grade.

- 1st term: 7. and 8. grade
- 2nd term: 9. and 10. grade

After the compulsory education, students study until the age of 16-18 in the stage called Bachillerato, which prepares them for the matriculation exam, which is considered high school education. Here, students can choose from several specializations. It is divided into four main areas of study - technical sciences, human and social sciences, natural and health sciences, and arts. In addition to optional subjects, students follow a common core curriculum in all four directions.

Students are evaluated according to subject areas, taking into account the requirements and evaluation criteria of the study course. Admission to higher education is only possible if students have a Bachillerato. This training therefore ensures the transition to higher education.



In addition to university education, there are three levels of education to acquire professional skills. These levels are:

- Formación Profesional Básica or FPB (basic vocational training);
- Ciclo Formativo de Grado Medio or CFGM (intermediate vocational training), which can be studied after secondary education;
- Ciclo Formativo de Grado Superior or CFGS (Higher Vocational Training), which can be studied after post-16 education.

In a world market with a high degree of competitiveness and uncertainty, with changing world regulations, with constant demographic movements, with rapid technological changes, with the continuous demand for new needs for capacities and skills to adapt to companies and the emergence of new sources of employment, we should not be surprised by a continuous updating of Professional Training and teachers, being an increasingly attractive, innovative and dynamic Professional Training.

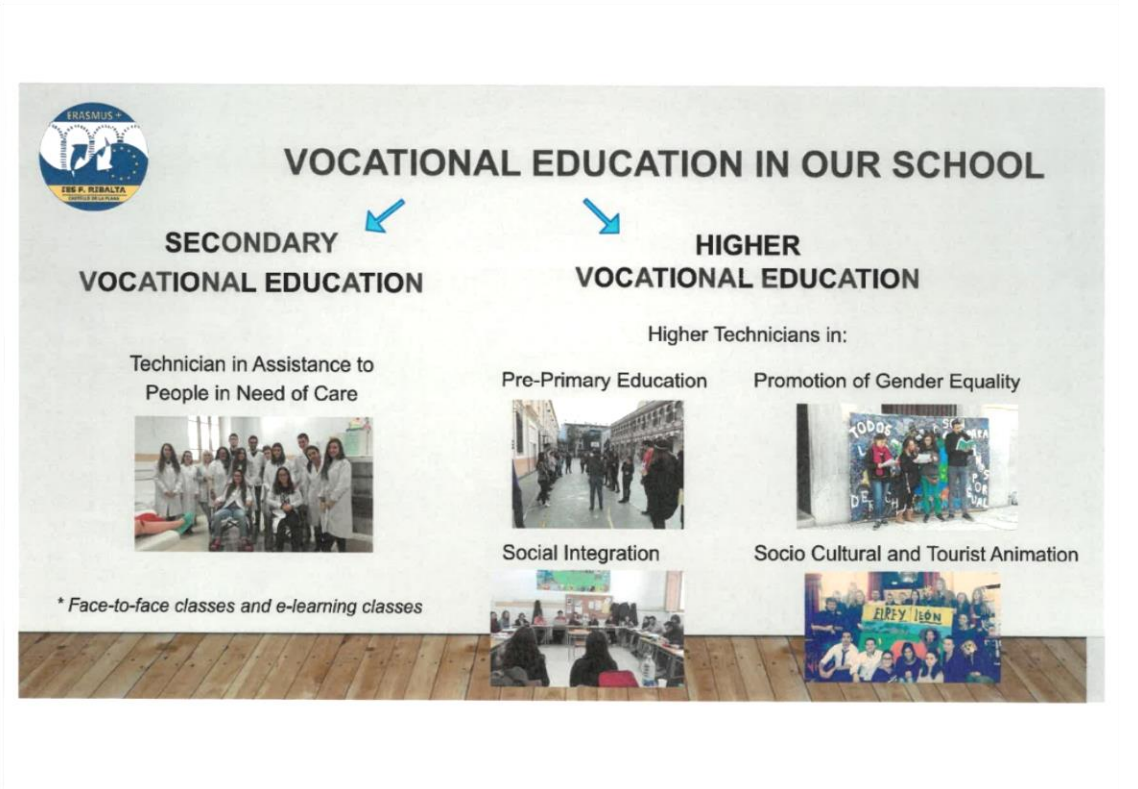
Significant changes in the system of vocational training

Nowadays the Spanish government is preparing a new law for Vocational Training studies.

5.2 THE INSTITUTION'S SCOPE OF ACTIVITIES

Francesc Ribalta Secondary School is a public institution located in the centre of the town of Castelló, belonging to the region called Valencian Community (Spain). Our school offers Secondary Education, Sixth Form Education and Vocational Training Courses within a variety of timetables and modalities (morning, afternoon, evening and distance-learning courses).

Currently, we have a total of 157 staff members and 2010 students, aged between 12 to 18 in Secondary and Sixth Form Education and adults in the Vocational Training Courses. Students come mainly from the town of Castelló, also from nearby villages and from immigrant families, specially from Romania and in less quantity from Spanish-speaking countries or from Magreb. In fact, this immigrant population makes up around 17% of the students. Ribalta Secondary School is the biggest school in town as we offer a wide range of courses and studies and also the oldest, enjoying a centenary building dated from 1917.



As part of European society, we are aware that it is of utmost importance to develop competences not only in foreign languages but also in professional and methodological fields for teaching. Therefore, it is our aim to offer excellence in our education, which will contribute to the development of these competences. In order to achieve this, highly qualified teachers are required.

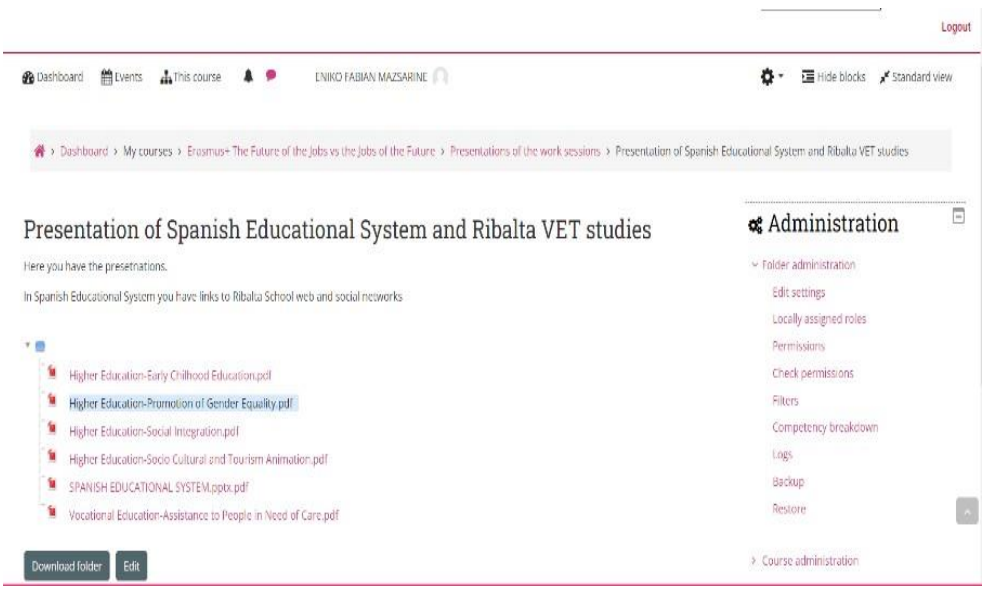
Our aim is that our students achieve not only knowledge, but also professional and personal skills in order to find a job easily on the labour market. After the crisis and with many people being made redundant, we consider it is important to pay attention to the education of adult people as well.

Related to finding jobs and accessing the labour market, our students have in their Curriculum two transversal subjects, which all our vocational training students have to study: FOL (Formation and Labour Orientation) and Entrepreneurship.

5.3 THE PROJECT PARTNER'S GOOD PRACTICES

GOOD PRACTICE 1. – AULES – LEARNING MANAGEMENT SYSTEM

Aules is the learning management system (LMS) of the Generalitat Valenciana for educational centers, with the main focus on online learning, ensuring universality, simplicity and accessibility from any device.



Aules is based on Moodle, which is an open source software with a GPL license. Moodle is the world's most widely used e-learning platform, and it's free.

It is a unified school system in which every teacher and student has a username and password. It has been designed by group and class, it is quick to use, and the interface is clear.

How is distance learning implemented in vocational training?

The purpose of this type of education is to provide lifelong learning with professional content for adults who do not have the necessary professional qualifications.

Target group: adults participating in the training.

Developed competencies:

Adults acquire the professional competencies required by the different occupational levels of the trainings.

Methodological recommendations:

Distance learning vocational training includes students' independent learning activities and personal training activities taking place in the institution (so-called collective training materials).

In this form of teaching, the use of various information and communication technologies, various resources provided by the Internet, and the use of special teaching materials for self-study are of methodological importance.

In mixed or distance learning courses, tutoring of students is provided, if necessary, by the teaching team set up to teach these courses.

Distance learning is an open model in which students determine their own pace of learning according to their needs and availability. Participation in training programs is voluntary, with the exception of those modules that specifically require personal participation due to their practical characteristics.

E-learning methodology:

Basic principles for the design and development of the virtual classroom

• Providing space for students to talk and communicate: forums, chats, e-mails, blogs, etc.

• Definition of tasks that help students' intellectual activity: reading, writing, analysis, search, reflection, development, evaluation, etc.

• Combining individual tasks (essays, diaries/blogs) with other common group tasks (wikis, glossaries, joint assessment, etc.).

• Detailed calendar with course assignments.

• Guides and resources to complete activities autonomously, with precise, step-by-step instructions and references.

• Encouraging students' motivation and participation (posting news, games, video clips, asking questions on the forum, etc.).

• Inclusion of content reference documents in various formats (text documents, pdfs, slides, concept maps, animations, video clips, audio podcasts, etc.).

• Regular maintenance and operation of the teacher notification forum.

• Public definition of evaluation criteria.

• Providing tutoring and continuous feedback between the teacher and individual students, especially in assessment results.

Online classroom methods:

• Chat function: immediate solution to emerging problems

• Video conference

• "Big Blue" button: for webinars: allows students to socialize and record the "class"

• Create answers to various questions that arise (FAQs)

• Create answers to different test questions

• Glossaries: students can compile the most important information

• Blogs: summary of what was learned during the week (own notes)

• Workshops: project proposals and expert evaluation.

WORKSHOP activity

From the wide range of activities that can be developed by AULES, the activity called "WORKSHOP" is presented.

What is the Workshop activity?

The workshop activity module allows the collection, review and expert assessment of student work.

Students can submit any digital content (files), such as text or spreadsheet documents, and can also type text directly into a field using a text editor (within Moodle).

The main features of the WORKSHOP:

Course participants submit their assignments during the Workshop activity. Each participant submits their own assignments, which may include text and attachments.

Submissions are evaluated according to the structured evaluation form determined by the course teacher.

The Workshop supports the partner evaluation process. Course participants may be asked to evaluate a series of partner participant submissions. The module coordinates the collection and distribution of these assessments.

Participants therefore take into account and receive two assessments for each Workshop activity – their submissions (which interpret how good their submissions were) and their evaluations (which assess how well they assessed their peers).

The partner evaluation process and the understanding of the evaluation structures can be practiced in advance during the so-called sample submissions. Workshop participants can rate these examples and compare their ratings to the benchmark rating.

The most important advantages of the workshop activity:

- Makes it relatively easy to perform partner evaluation.
- Increases the level of student participation and responsibility in the learning process.
- After the workshop is implemented, development and evaluation are automatic.
- Allows teachers to modify unexpected results during the workshop and intervene as needed.

Resources and materials:

computer / mobile device, internet, HTML5 browser (such as Google Chrome, Firefox, Safari)

Monitoring, evaluation: It can be continuously measured and monitored in the system.

GOOD PRACTICE 2.: SERVICE-LEARNING

Education is defined as the transmission of knowledge to a person in order for him or her to acquire a certain training. But, in many cases,it is something more. This is the case of service-learning (SL), a typeof education in which students learn at the same time as theyperform a service to the community.

Apart from acquiring knowledge, in service-learning, students identify with a situation in their immediate environment and commit themselves to improving it, developing a solidarity project that brings knowledge, skills, attitudes and values into play. Another fundamental element is added to formative learning: social commitment.

What is service-learning?

It is defined as "a service of solidarity aimed at meeting real and feltneeds of a community, actively led by students from planning to evaluation, and intentionally articulated with learning content (curricular or formative content), reflection, development of competences for citizenship, work and research".

Service-learning is an innovative methodology in which, through the modification of reality, the aim is to improve student learning. It is based on:

- competency-based education
- project-based or problem- based learning
- cooperative and collaborative learning
- the promotion of entrepreneurship, multiple intelligences,
- positive coexistence,
- gamification, etc.

In addition, the promotion of student autonomy is a priority.

ApS has become an innovative tool among those who seek a renewal and a new approach to the current education system.

Education experts distinguish three essential characteristics of Service-Learning:

- Active protagonism: the activity is actively led by children, adolescents or young people and even adults, under the supervision of formal or non-formal educational teams.
- Solidarity service: aimed at meeting the real and felt needs of a community. Specific activities are planned, appropriate and limited to the age and abilities of the protagonists, and aimed at collaborating in the solution of specific community problems.

- Intentionally planned learning in relation to the solidarity activity: the project explicitly articulates the learning of curricular content, in the case of educational institutions, or training, in the case of social organisations.

Advantages of service-learning

Some of the most outstanding advantages of SLA are:

- Developing critical thinking, poblem-solving, leadership, decision-making, c ollaboration and communication skills.
- Building positiverelationships with community members.
- Connecting their experiencesto academic subjects.
- Develop a deeper understanding of themselves and greater empathyand respect for others.
- Apply their energy and creativity to the needs of the community.
- Increase public awareness of major social issues.
- Team and collaborative work.

Applications of service-learning in the classroom

The number of activities that can be carried out thanks to ApS are endless, the most important ones of these are the following:

Documentary film of Maestria

Students of Promotion of Gender Equality show the documentary. Through the subject of Comunitary Development, they made a study of the neighborhood: habits, people, business, tradicions, etc. showing the evolution of a traditional place to a modern district.

Inclusive theatre

Disabled people, workers, graduate students show how theatre works, as a therapy, hobby and help them to feel better, interactuatebetween them, practice their social skills like emphaty, help to others or solve problems, making a service at the same time of learning more and more.

Frater

Frater is a local NGO that works together with disabled people. They have a training centre where their users can follow an educational path, also an occupational centre, where they get help to get on with their social and labor integration. Plus, they also have an intern home for users who live there. They also have an amateur inclusive theater group.

The collaboration with them is very diverse. For example, the school sends them students for internships, they come to the school to give workshops and the school often visits their premises and see how they work.

Beyond day-to-day experiences, service-learning programmes also offer students opportunities to help others in the summer or during school holidays, both in their home environment and abroad. Whether tutoring students, helping at a homeless shelter or ananimal shelter, this type of cooperation is an opportunity to learn in a different way by adding a social engagement component.

GOOD PRACTICE 3.: DEBATE

Debate

Debate is one of the techniques of formal discussion, but it takes place in a controlled manner, the presence of a person moderating the discussion is necessary.

The fishbowl is a form of organizing learning in a way that promotes group discussion, stimulates interest and encourages participation, while focusing on small groups of people and allowing the composition of the group to be constantly changing. This technique is very interesting for organizing discussions and conversations between many people, giving order and meaning to the conversation.

Name of the activity: Fishbowl

Target group: anyone can participate in the activity with a group size of 20-25 people maximum

Duration of the activity: 30-60 minutes depending on the topic and the interest and skills of the group
Prior knowledge: a prerequisite for the effective implementation of the classroom debate activity is the preliminary activity carried out by the students. Depending on the topic to be processed, it may be necessary to review and read a document related to the given topic. During the preparatory activity, the students must extract the main ideas as well as the information they consider relevant.

Developed competencies: learning to learn, reasoning, critical thinking, analytical skills, respect for different opinions, creative thinking, self-confidence

Expected outcomes: with this technique, the aim is for students to find new perspectives on a given topic and at the same time develop communicative competence and confidence, while at the same time improving interpersonal relationships and metacognitive skills.

Methodological recommendations:

All the necessary steps to implement the activity must be planned in advance:

- preparation of the topic to be discussed
- preparing the venue (e.g. arranging the chairs)
- to explain the method to the participants in the activity
- creating a group
- introduction of the topic
- "fishbowl" conversation
- final assessment

During the discussion, the teacher stays outside the circle, acting as an observer of the development of the activity. If necessary, he intervenes as a moderator, ensures that the conversation does not get stuck and that the students respect the rules of the activity, as well as notes any important developments that may be experienced.

Resources and materials:

- a location suitable for the size of the group
- chairs
- a suitable topic to discuss
- audiovisual documents
- pens, sheets of paper

Description of activities:

We place five or six chairs in a circle in the middle of the room, facing the center. This group of chairs will be the fishbowl. Additional chairs are placed outside the inner circle, also facing the center.

Four or five participants sit on the chairs of the fishbowl (the number of participants is exactly one less than the number of chairs, one chair is empty).

These participants are the fish. The other participants sit on additional chairs outside the fishbowl. They are the observers. A facilitator stands near the aquarium. The facilitator's job is to keep the discussion going, make sure the rules of the aquarium are followed, and take notes on interesting points that come up during the conversation.

Only fish can speak. Moreover, they can only speak if there is exactly one free chair in the fishbowl. An observer can step forward and sit in the vacant chair at any time. When this happens, the debate stops until one of the fish voluntarily withdraws and moves into the observers' area.

Any observer can join the conversation at any time, occupying the vacant chair. A participant can change from observer to fish as many times as he wants during the discussion.

A fish can also retreat to the observers' area at any time, even if no one is sitting on the free seat. In this case, the discussion stops until an observer voluntarily joins.

Monitoring, evaluation:

Assessed aspects:

- participation of each person in the group
- clarity in the presentation of ideas
- ability to present ideas
- ability to defend ideas or refute others
- comprehension and assimilation of the content of the readings
- assertiveness

6. PROJECT PARTNER: FORAVE - ASSOCIAÇÃO PARA A EDUCAÇÃO PROFISSIONAL DO VALE DO AVE – PORTUGAL

6.1 EXTERNAL ENVIRONMENTAL FACTORS OF THE ORGANIZATION

MAIN SOCIAL AND ECONOMIC CHARACTERISTICS

Portugal is the westernmost country of mainland Europe, located in the Iberian-peninsula. To the north and east, Portugal borders Spain. The western and southern coastline totals 1240 km in length. Portugal's territory also comprises the Atlantic archipelagos of the Azores and Madeira.

Northern Portugal is mountainous, while southern Portugal is an area of gently rolling hills and plains. Portugal has the twelfth biggest population (10.2 million inhabitants) and the thirteenth largest territory (92 211.9 km2) in the European Union.

Portugal has been a member of the European Union since 1986. In 1999, it was among the fonder members of the euro area. Portugal is a member of both NATO and the OECD.

Vila Nova de Famalicão is situated in the North of Portugal. 32 km from Porto, the second largest Portuguese city. Due to its strategic location, V.N. de Famalicão had a significant population growth for several decades since 1940. However, the aging of the population is visible since 2010, with the decrease of inhabitants younger than 65 years old.

Portugal's economy was hard hit by the economic crisis. The country had difficulties with its rising public deficit and debt. In 2011 Portugal had to apply for financial assistance and obtained a bailout worth EUR 78 billion from the EU and the International Monetary Fund (IMF). Since then Portugal's economy has registered a gradual recovery. The structural reforms introduced with the help of the EU and the IMF have improved productivity and competitiveness. The present government has managed to effectively reduce the public deficit. In 2016, it stood at 2 % of GDP, the lowest level since Portugal joined the euro area in 1999. In 2017 real GDP growth reached 2.8 %, the highest rate since 2000. What is important is that this growth generates new jobs. The unemployment rate has dropped from 16.4 % in 2013 to 7.0 % in 2018 (from 38.1 % to 20.1 % for young people). However, the very high public debt (of around 120 %) is still an important vulnerability of the country's economy.

Vila Nova de Famalicão is the 3rd largest exporter region in Portugal. Economical areas are:

- Metal mechanics
- Agrofood
- Textile and Clothing
- Automotive Components
- Home to branch offices of international companies

The region has a total of 13.932 companies, most of them are included in the following categories:

- Wholesalers and retail (37,31 %),
- Manufacture (20,33%),
- Construction and building (12,61%),
- Transportation and storage,
- Hospitality industry/tourism,
- • Administrative services

99% of these are micro and small-sized companies, as it happens in almost all over the country. However, the percentage of medium and large companies is higher in Vila Nova de Famalicão than in the rest of the country.

The processing industry (food processing, textile, rubber, wood and cork industry, furniture and chemical industry) accounts for about 50% of the total turnover of municipal companies.

During the last decade, Vila Nova de Famalicão has become the municipality with the highest rates of exports in the Minho Region (40% of the total).

Employment and unemployment rate

Most of the economically active population works in the secondary or tertiary sector, and only 1% of it works in the primary sector.

- Major labour groups in Vila Nova de Famalicão:
- Craft and Related Trades Workers (24,44%),
- Service and Sales Workers (14,88%),
- Plant and Machine Operators and Assemblers (13,23%)
- Elementary Occupations (11,49%).

Perhaps due to the characteristics of the labour and the jobs offered by the local companies, 54,67 % of the active population are men.

According to the IEFP-Instituto de Emprego e Formação Profissional, unemployment in Vila Nova de Famalicão is higher in the groups related with:

- manufacture, like the textile industry (16,3%),
- the construction and building industry (13%),
- clerical support workers (11,7%),
- wholesale workers (10,6%),
- social services and education (8,9%).

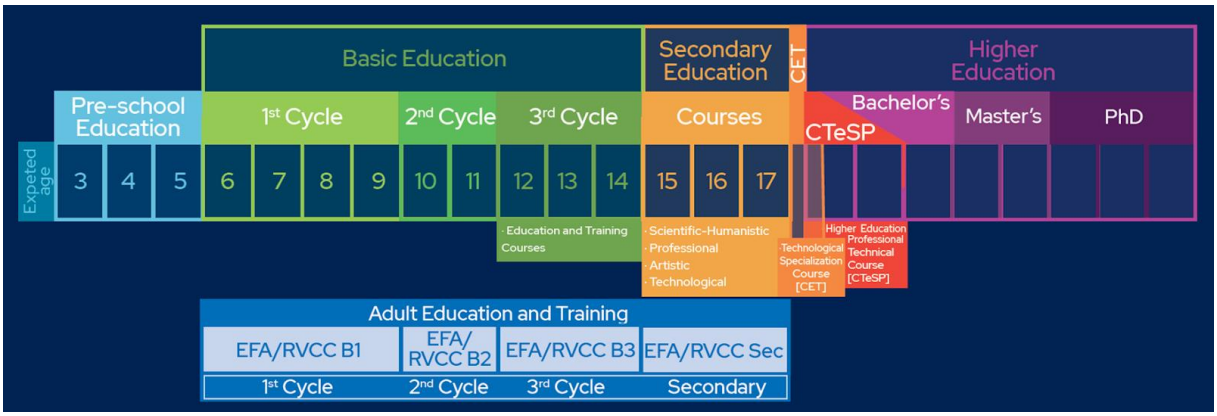
In 2012, the rate of unemployment began to decrease in V. N. Famalicão, followed by the rest of the country in 2013. Nowadays, the unemployment rate is higher in what concerns women; and, in general, the job seeker has low qualifications (low or upper secondary education), is between 35 and 54 years old.

EDUCATION

The Ministry of Education (Direção-Geral da Educação – DGE) regulates the education system in Portugal, starting from pre-school up until secondary school. School groups (agrupamentos escolares) also work closely with local municipalities to assign funding and define the curriculum. The Ministry of Science, Technology, and Higher Education (Ministério da Ciência, Tecnologia e Ensino Superior – MCTES) oversees policies and budgets for tertiary education in the country.

The structure of education in Portugal

- The education system in Portugal consists of four stages, as follows:
- Pre-school education (Educação Pré-escolar): ages 3 to 6
- Primary education (Ensino Básico): ages 6 to 15
- Secondary education (Ensino Secundário): ages 15 to 18
- Higher education (Ensino Superior): ages 18 and above



Children between the ages of 15 and 18 must apply for secondary education in Portugal. This three-year period is the equivalent of upper secondary education in some countries. Secondary schools are known as escolas secundárias and can be either public or private.

There are three main tracks in the secondary education system in Portugal and pupils can choose which one they want to follow.:

- Science-humanities (Cursos Científico-Humanísticos) – prepares children for university with science, economics, linguistics, and visual arts
- Vocational courses (Cursos Profissionais) – this is tied to a specific job and is usually offered at a vocational school
- Specialized artistic (Cursos Artísticos Especializados) – a creative field run by an art school (escola artística) or a music school (conservatório)

In the VET area, it is worthwhile to highlight some recent and ongoing measures:

• Adequacy of education and training offers to the National Qualifications Catalogue;

• Annual adjustment of the VET offers to the dynamics of the labour market, through a Qualification Needs Anticipation System;

• Quality assurance of vocational education according to European standards (EQAVET);

• Modular organization of courses and attribution of credits in line with the European system (ECVET), reinforcing the flexibility, mobility and recognition of training paths;

• Systematization and dissemination of all existing courses and programmes on the ”Portal da Oferta Formativa”, as well as the results obtained by each school in the ”InfoEscolas” website.

6.2 THE INSTITUTION'S SCOPE OF ACTIVITIES

FORAVE – ASSOCIAÇÃO PARA A EDUCAÇÃO DO VALE DO AVE is a vocational/technical private school located in Vila Nova de Famalicão, one of the most industrialized councils of the Ave Valley, in the North of Portugal. Established in 1990, FORAVE aims the preparation of qualified citizens for active life and adult students trying to improve or acquire skills to answer to the demands of the market in the areas of Company Management, Industrial Maintenance, Electronics and Automation, Polymer Industry and Mechatronics.

FORAVE holds the European Quality Assurance in VET (EQAVET) certification nr 275/2021 and its Pedagogic Plan was considered to be the 3rd best pedagogic plan for youth education in 2020, scoring 93% points, in a national assessment from the Ministry of Education on the "application of the European Social Fund (ESF) in favour of strengthening the qualification and employability of young people and adults in Portugal."

Inserted in a highly industrialized region, with a secondary sector activity well above the national average, FORAVE is recognized for the alignment of its educational project with the industrial characteristics of the territory, regarding the 4 major economic clusters in the areas of Automobile, Agro-food, Textile and Metalworking.

The great connection settled between FORAVE and the companies have contributed to the development of training courses, increasingly fitted to the needs of the companies. FORAVE is also recognized for its high rates of employment and for its contribution to the development of the local economy. Our school has cooperated, since its creation, with other vocational or general studies schools, and higher education institutions to promote the exchange of best practices among staff and to provide students with work placements and on-the-job training in their area of expertise.

FORAVE is also a founding member, and board member, of INNOTECS, an international organisation for deans and directors of Technical schools, mainly focused on vocational educational training level and high school level. FORAVE has been involved, as a coordinator or as a partner, in several European projects since 2003 and we were granted an Erasmus+ VET Mobility Charter and an ERASMUS + Accreditation. In addition, FORAVE also hosts students and teachers from European partners to have their WBL, traineeships or job-shadowing periods in local companies.

6.3 THE PROJECT PARTNER'S GOOD PRACTICES

GOOD PRACTICE 1. – ENTREPRENEURSHIP – CREATING A COMPANY

Representatives of the good practice: Ana Silva / José Ramalhoto

Citizenship (Module 2: The individual and the construction of society and Module 6: The development of new skills- entrepreneurship):

- To know the functioning of the sectoral/local labour market, in relation to innovation.
- Analyse the fundamental elements to be entrepreneurial.
- Recognise the importance, nowadays, of social entrepreneurship as a response to social challenges.
- Analyse the economic activities/ institutions in the area where the school is located in order to identify the possibilities of creating a small enterprise related to the activities.

ICT (Module 1: Search, filter and structure information and content in digital environments)

- Use the computer and other digital devices as tools to support the process of investigation and research in digital environments.
- Communicate and collaborate using the potential uses and characteristics of digital applications, to structure the content in documents to support a presentation or interaction through digital technologies.

Prior knowledge:

- EQF level 4 students
- ICT – basic knowledge

Content requirements:

Students should be able to:

1. Regarding the subjects:
   - Use web tools to carry out cooperative work, planning the project, selecting information, sharing knowledge and links to digital content, debating arguments and producing contents in a cooperative way.
   - Develop content in web tools, managing the structure, adding multimedia information and taking into account the purpose that it is intended to achieve and to whom it is addressed.
2. Regarding the learning process:
   - collaborate and work as a team with the aim of completing their work
   - experiment, evaluate and come to conclusions by choosing the appropriate solution to the problem they are studying
   - organize their work autonomously and propose solutions
   - participate actively in the process of learning and building new knowledge
   - utilize the possibilities provided by New Technologies to understand the new knowledge in an attractive and innovative way

Duration of sessions: 4 lessons

Expected learning outcomes:

Students will be able to use digital tools for creating a company, developing research skills, digital literacy skills and fostering creativity using didactic methods of exploratory learning. Students will be asked to create a Company with the aim of solving social problems of their region

Methodological recommendations: Strategies for inclusion - Mixed ability groups according to students' backgrounds and learning difficulties

Description of activities

1. lesson - presentation and Idea of the company

For the implementation of the teaching scenario, the students work in groups of 3 or 4 students (depending on the availability of the IT laboratory).

The teacher will transmit to them the idea of creating a company following all its stages. Through the worksheet with the activities that will be developed throughout the 4 sessions, students try to understand the concepts of planning the constitution of a company.

After the scenario explanation, the brainstorming begins using the Mind Map. Each group thinks of a project with the goal of creating a company that will try to overcome society's problems.

In the first hour all teams must define their company to move on to the next phase.

2. and 3. lessons – Business plan

In this session, the teacher presents Business Plan Canvas Model to Structure the projects. This tool presents as an advantage the Simplicity of creating the business model, since everything is listed on a big board in a straightforward way and without much need to waste time with long and time-consuming entries. It can produce in a very homogeneous way a positive impact on all layers of the business.

To build the Canvas model, you will need to fill in and identify the main topics in the following quadrants:

1. Customer segment - Identify the main types of customers/publics, define who and which are the most important.
2. Value proposition - Value delivered to the customer, differentiating factor. In addition to the product or service delivered what solutions are offered to the customer and what are the benefits that the product/service provides.
3. Channels - Means used to distribute the product/service to the customer. How or where the product product/service is available.
4. Customer Relationship - What are the ways of interaction with the public/customer. Besides thinking about sales, also consider all the contacts that exist with customers and if these forms of interaction are correct.

5. Main resources - Resources needed to run the project: Human Resources, Technical, Material, and Financial resources.
6. Main activities - Specification of the activities developed to satisfy the needs of the client/public (production needs of the client/public (production, after-sales service...).
7. Main partners - Partners (companies or institutions) that can be subcontracted and that help the company to achieve its objectives.
8. Sources of Revenue - How the company earns money, through sales and/or services, which should be specified here.
9. Cost structure - Looking now at the money that comes out, score what are the most relevant costs to the business. Purchase planning, what investments are needed for the company's start-up.

4. lesson – Logo and presentation

In the last session the teams will create the logo and slogan using the site **www.adobe.com,** taking into account some important aspects in its construction:

- a design that conveys the essence of the brand;
- an appropriate choice of style;
- the company name;
- a relevant colour scheme.

The last 20m will be used for the presentation of the teams´ projects. Each team has 3 minutes to present their company.

Used tools and materials:

- Computers
- Worksheets

For brainstorming, students will use a Mind Map application: **www.mindmeister.com**

A mind map is a diagram used to visually organize information, it is hierarchical and shows relationships among pieces of the whole. It is often created around a single concept, drawn as an image in the centre of a blank page, to which associated representations of ideas such as images, words and parts of words are added. Major ideas are connected directly to the central concept, and other ideas branch out from those major ideas.

For project planning of the company, students will use Canvas: **www.canvanizer.com**

The Business Model Canvas reflects systematically on business model, focusing on business model segment by segment. It consists of 9 sections that guide the planning and structure of the project: key partners, key activities, value proposition, customer relationship, customer segment, key resource, distribution channel, cost structure and revenue stream.

To create the logo of the company, students will use **www.adobe.com,** an application that can be used in all levels of education as it is a very easy to use.

Monitoring, evaluation:

Evaluation Worksheet

GOOD PRACTICE2. – ENTREPRENEURSHIP: COMPANY MANAGEMENT

Representatives of the good practice: Luís Cerejeira / José Ramalhoto

ICT (Module 1: Search, filter and structure information and content in digital environments and Module 3: Web page design)

- Use the computer and other digital devices as tools to support the process of investigation and research in digital environments.
- Communicate and collaborate using the potential uses and characteristics of digital applications, to structure the content in documents to support a presentation or interaction through digital technologies.
- Know and use validation criteria for information published in digital environments.
- Understand the characteristics of electronic page editors.
- Implement the different stages of development of a website: planning, design, production, testing and validation.
- Know how to create and update websites.
- Know and use accessibility recommendations, in the context of creating and publishing digital content.

Develop websites and create content in the context of specific situations

Citizenship (Module 2: The individual and the construction of society and Module 6: The development of new skills- entrepreneurship):

- Analyse the fundamental elements to be entrepreneurial.
- Recognise the importance, nowadays, of social entrepreneurship as a response to social challenges.

Prior knowledge: EQF 4 students

Content requirements:

Students should be able to:

1.Regarding the subjects:

- Create a website, going through the phases of the website development process, in articulation with other subject areas like Citizenship, and/or with services and projects of the school
- Implement activities that integrate processing and organization of the contents created or collected, in different formats such as on websites, and learning platforms, among others
- Work in a collaborative environment, planning the project, selecting information, sharing knowledge, debating arguments and producing content in a cooperative way

2. Regarding the learning process:

- Cooperate and work as a team
- Organize their work autonomously and propose solutions
- Participate actively in the process of learning and building new knowledge
- Use the possibilities provided by Information and Communication Technologies to understand the new knowledge in an attractive and innovative way

Duration of activities: 4 lessons

Expected learning outcomes: Students will be able to use digital tools for creating a Timebank, developing research skills, digital literacy skills and fostering creativity using didactic methods of exploratory learning. Students will be asked to create a Timebank, a system that involves earning and spending "time credits".

Methodological recommendations: Mixed ability groups according to students' backgrounds and learning difficulties

Description of activities:

Lesson 1

For the implementation of this lesson plan, the students will work in groups of 3-4 students (depending on the availability of the Multipurpose Room).

The teacher will transmit to them the idea of creating a TimeBank at school and explains the concept.

A TimeBank is a means of exchange used to organise people and organisations around a purpose, where time is the main currency. For every hour participants 'deposit' in a timebank, by giving practical help and support to others, they can 'withdraw' equivalent support in time when they themselves are in need. In each case, the participant decides what he/she can offer. Everyone's time is equal, so one hour of my time is equal to one hour of your time, irrespective of whatever we choose to exchange.

Many timebanks use online time banking software. The software makes it possible to keep track of who are the timebank members, what are the services they offer or seek, and what services they have given or received.

The teacher suggests students to discuss which skills/services they can offer and to set up a Google Form to be sent to all students inquiring about their willingness to participate and about the skills/services they can offer/exchange.

Following the steps on **Worksheet 1**, students create the Google Form (https://docs.google.com/forms - Quiz) and send it to all students.

Lesson 2

In our second session, students will analyse the data from the Google Form (https://docs.google.com/forms - Quiz) answers according to **Worksheet 2** and will begin to create the Wordpress website following the steps of **Worksheet 3**.

Students will design the website structure and its content considering the purpose that it is intended to achieve and to whom it is addressed to.

Lesson 3

In this session, students, following the steps on **Worksheet 4**, will upload the information regarding the participants´ skills/services and the time they are willing to share.

Lesson 4

In the last session, the teacher will explain to students how to grant badges to participants based on the skills/services and the time they are willing to share. Students will update the website with this information following the steps on **Worksheet 5**.

Finally, the different groups share their Websites with the entire class and, using a Google Form, evaluate them and choose the one which will be shared with the entire school as FORAVE´s Online Timebank.

Resources and materials:

Computers
Google Forms
WordPress
Worksheets

Monitoring, evaluation: evaluation worksheet

7. PROJECT PARTNER: I.I.S.S. „CARLO MARIA CARAFA" MAZZARINO – ITALY

7.1. EXTERNAL ENVIRONMENTAL FACTORS OF THE ORGANIZATION MAIN SOCIAL AND ECONOMIC CHARACTERISTICS

Italy (officially the Italian Republic) is a country in Southern Europe. The country includes the valley of the Po River, the Apennine Peninsula and the two largest islands of the Mediterranean Sea, Sicily and Sardinia, as well as many smaller islands. Its territory includes two enclaves, San Marino and the Vatican; its exclave is Campione d'Italia in Switzerland.

The area of Italy is 302.1 thousand km2, its population is 59.45 million people. The capital is Rome, where nearly 4.5 million people live. Within the population, the proportion of the elderly is the highest among EU member states (23.2%), the aging index is 179.3, while that of children is the lowest (13%).

Sicily is situated in the south of Italy, it is the largest of the Italian islands, separated from the Continent by the Strait of Messina and surrounded by the Ionian, the Tyrrhenian and the Mediterranean Seas. It is one of the pearls of Southern Italy and can be discovered, understood and experienced through a series of itineraries dedicated to areas of interest ranging from nature to history and traditions. Its area is 25 711 km2, with almost 5 million inhabitants. The seat of the region is Palermo.

Nature seems to have endowed all its wonders to this land: mountains, hills and above all the sea, with its incredible colours, its crystal-clear water and the beauty of its seabeds.

The symbol of the region is the "Trinacria".

The town of the project partner institution, Mazzarino is a very ancient town, its origin can be traced back to the XIII century. Lifestyle is very quiet. The ruins of an old castle and some ancient churches are the tourist attractions. Agriculture is the main economic activity.

Italy is the seventh most industrialized country of the world. It is divided into a developed industrial north, dominated by private companies, and a less-developed, welfare-dependent, agricultural south, with high unemployment. Unemployment rate among the 15-64 age group was 9,4% in 2020.

Active labour force is formed by about 25 million people, the employment rate was 58,1% in 2020. most of them employed by small and medium-sized enterprises, many of them family owned. 68% of the undertakings is active in the fields of services, while the rate of undertakings working in industrial and agricultural fields are 28% and 4%.

The Sicilian economy is mainly based on agriculture. The main products are wine, dairy products, fruit and vegetables, wheat. Apart from agriculture, fishing plays a large role in Sicily. About 20% of the fish yield in Italy is caught in the waters around Sicily. In addition to tuna and sardines, swordfish are among the most caught species. Almond cultivation is an industry leader, especially in territory of Mazzarino, in the province of Caltanissetta.

Besides some oil, gas and salt, Sicily is relatively poor in terms of raw materials. Therefore, next to agriculture, industry is playing an ever more important role. The industries are focused mainly around the cities of Palermo, Catania, Milazzo, Syracuse and Gela. The focus is on shipbuilding and mechanical engineering as well as the petrochemical industry.

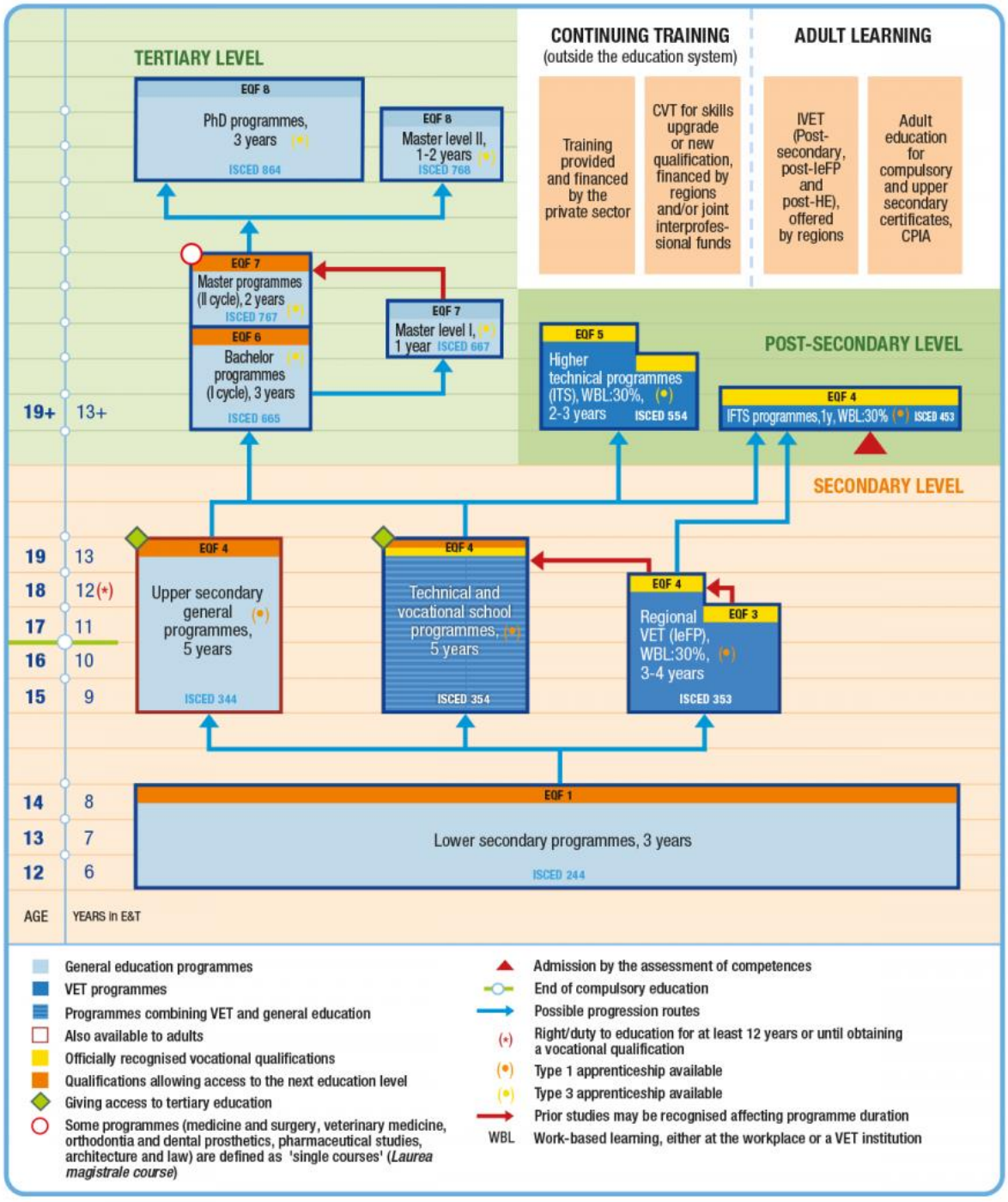
Tourism: Sicily is one of the favourite destinations chosen by Italian and foreign tourists, especially in summer thanks to the magnificent beaches and the climate, its ancient historical monuments and its delicious food.

EDUCATION

A tanév körülbelül 33 tanítási hétből áll, általában szeptember közepén kezdődik és június közepén ér véget. Olaszországban az oktatás 6-16 életkorig kötelező.

Az oktatás öt szintre osztható:

1. Kindergarten (scuola dell'infanzia) – from 3 to 5 years (not compulsory)
2. Primary school (scuola primaria or elementare) – from 6 to 10
3. Lower secondary school or middle school (scuola secondaria di primo grado or scuola media) – from 11 to 13
4. Upper secondary school or high school (scuola secondaria di secondo grado or scuola superiore) – from 14 to 18
5. University (università) – from 19 years of age



NB: ISCED-P 2011.
Source: Cedefop and ReferNet Italy, 2019.

The Ministry of Public Education is responsible for school education. At local level, it is represented by regional and provincial education offices.

According to the legal form, there are State schools or Public schools, Private schools and Officially Recognized schools while the professional education is regulated by the Regions.

SECONDARY SCHOOL LEVEL 1.

The secondary school lasts for 8 years so subdivided:

3 years in the first degree and 5 years in the second. The first degree corresponds to the old "Middle School".

Typically, school time ranges from 29 to 33 hours for week.

The subjects are: Italian Language and Literature, History, Geography, Mathematics, Science, Technology, English language, a second EU language, Art, Music, Physical education and Catholic Religion (optional).

At the end of the three years the students need a school leaving certificate to attend the second degree.

SECONDARY SCHOOL LEVEL 2.

Education in the second degree lasts for five years. The first two years are mandatory or until the student is sixteen.

The mandatory period is governed by special law and local institutions (welfare office or local police), parents must compel the students to let the compulsory education to be completed.

The second degree of the secondary school is divided into four educational typology, according to the education the students want to attend:

- Lyceum (high school),
- Polytechnic school,
- Vocational or arts school.

In the vocational school (professional education) after the first three years the students must do a final qualifying examination that let them to stop the education (getting a professional certificate) or go on till the high school with qualifications getting a Diploma as the students in Lyceum or Technical school. In the Lyceum the education has the purpose to form the students for the academic field.

VOCATIONAL SCHOOLS IN ITALY

The qualifications awarded after successful completion of high school, technical and vocational school are at EQF level 4 and a state leaving exam at the end of them gives access to higher education;

On-the-job training activities (200 hours in vocational schools; 150 hours in technical school, 90 hours in high schools) (especially internships) play a key role and are carried out under the supervision of two tutors, one from the school and one from an enterprise.

Methods include traditional classroom teaching, simulations, role play, and cooperative learning. Active teaching methods are highly recommended to meet learner needs.

high schools (licei)

technical schools

vocational schools

IeFP programs

The IeFP programs offer young people the opportunity to fulfil their right/duty to education and training. The training is designed and organized by the regions.

Over the past few years, increased cooperation between the State, the regions and the provinces has made these programs more flexible. The IeFP programs are organized in modules (also integrated in our institute) and aim to develop basic, transversal and technical-occupational skills. This modularisation allows learners to change areas of study through recognition of credits.

Apprenticeship-type scheme

Apprenticeship in Italy designates a work contract with a specific training purpose; it includes both on-the-job and classroom training. The apprenticeship contract, which is distinct from other work-based learning, must be drafted in a written form. It defines the roles and responsibilities of all parties as well as terms and conditions of the apprenticeship, the probationary period, the occupation tasks, wage increases, both the entry and final grade levels and the qualification to be obtained. The training program is an integral part of the contract. Both the contract and the training program must be signed by the employer and the apprentice.

Technical and vocational school programs

In **technical school programs** (istituti tecnici) our learners can acquire the knowledge, skills and competences to carry out technical and administrative tasks.

In **vocational school programs** (istituti professionali) our learners acquire specific theoretical and practical preparation enabling them to carry out qualified tasks in production fields of national interest.

7.2 THE INSTITUTION'S SCOPE OF ACTIVITIES

The school is located in the countryside, on the outskirts of a small town, Mazzarino that lies in a hilly area, 40 km from the southern coast of Sicily. Students are not only from Mazzarino but also from Riesi and Butera, near towns.

The school is a three- storey modern building, there are 33 schoolclasses,1 gym, 3 IT labs, 1 language lab. The social environment is friendly, relaxed and motivating.

In the school there are the following types of courses:

- Liceo Classico where Latin and Greek are the most important subjects;
- Liceo delle Scienze umane in which students are concerned mainly with Social Studies;
- Tecnico Commerciale (Accountancy and Business)
- Tecnico Geometri (Topography and Constructions)
- 5) High School (predominant disciplines biology, science, chemistry, etc.)
- 6) Hotel Institute address where students are formed for catering and facilities albeghiere
- 7) Textiles Institute address where students are formed in the field of fashion and tailoring

Students are involved in most decisions concerning them. In the last two years the school has arranged a historical parade to celebrate prince Carlo Maria Carafa, the nobleman that ruled in Mazzarino in the XVII century, he was very concerned with the spreading of culture, he founded 2 typographies, he wrote some books, he designed the square of a near town and tried to support education.

There are about 1320 students in our school. Among the others, the Comenius project and Erasmus plus KA 2 projects promote a mentality in European dimension. Our school roles a part in the social life of our town through proactive attitudes (such as the historical parade to celebrate Prince Carlo Maria Carafa) and has good practices in social, environment, migration and cultural assets.

https://youtu.be/JPpU7GjKtTM

7.3 THE PROJECT PARTNER'S GOOD PRACTICES
GOOD PRACTICE 1. – CLIL METHODOLOGY

(Content and Language Integrated Learning)

Representative of the good practice: I.I.S.S. "Carlo Maria Carafa" Mazzarino

During the teaching-learning process realized according to the principles of the CLIL methodology, students learn a subject and a foreign language at the same time. In this way, they not only acquire subject knowledge and content, but in parallel, since the given subject is studied not in their mother tongue, but in a foreign language, the vocabulary and foreign language skills related to the content also develop.

Target group:

Starting from the three-year period, in some courses the teaching of a subject in English is foreseen in the first year. Two CLIL units will be taught in English and French during the next course of study. The knowledge of three CLIL units for each foreign language studied is expected for the last year's classes. All subjects in the final year will necessarily take a CLIL test in a foreign language.

Student activities

CLIL is a dual-focused educational approach in which an additional language is used for the learning and teaching of content and language. At least two languages including the L1 are used to teach different high status content subjects such as Mathematics and History.

- CLIL teachers largely separate L1 & L2 by teaching a given subject primarily through one or the other language.
- The L1, however, is used sparingly and judiciously by teachers teaching through the students' L2, and vice versa, thereby taking into account that the L1 and the L2 continually interact in the learner's mind.
- Content and language learning are systematically supported in both content and language classes.

CLIL language class

Content:

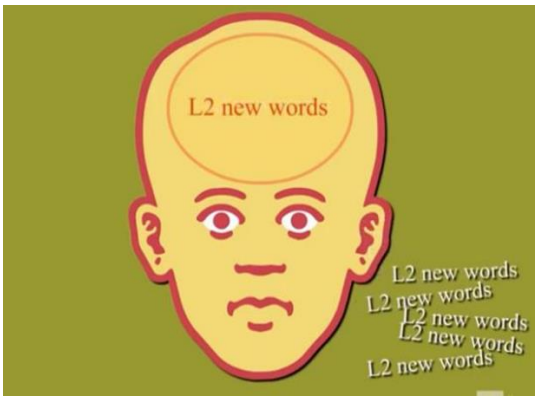
- brainstorming language needed
- surveying student consumption
- group work discussing 1 of 7 statements each
- presenting group conclusions

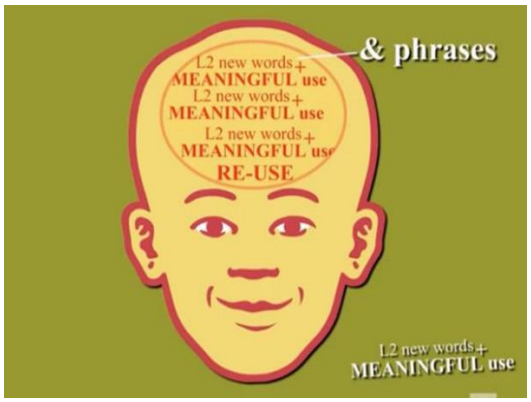
Language: used a model to create a well-structured argument

In the long-term, CLIL aims to support students from diverse socioeconomic backgrounds in developing:

- age-appropriate levels of L1 competence in listening, speak, reading and writing
- grade-appropriate levels of advanced proficiency in L2 listening, speaking, reading and writing

- grade-appropriate levels of academic achievement in content subjects, such as Science or History, taught primarily through the L2, and in those taught primarily through the L1





Content requirements:

CLIL aims to support students in developing an understanding & appreciation of the L1 and L2 cultures, the capacity for & interest in intercultural communication, together with the cognitive & social skills, & habits required for success in an ever-changing world.

Methodological recommendations:

The effectiveness of the session and student motivation are greatly improved if the topic and the method of processing the topic are selected taking into account the interests and age characteristics of the students.

Monitoring, evaluation:

During the language lesson, students' understanding is assessed, a common topic is discussed in group work, and the group's conclusions are presented. With the help of these activities, control and evaluation can be carried out effectively.

GOOD PRACTICE 2. – COMMUNICATION IN TRAVEL (DEVELOPING FOREIGN LANGUAGE SKILLS AND COMPETENCIES)

Representative of the good practice: I.I.S.S. "Carlo Maria Carafa" Mazzarino

The National Operational Program (PON) of the Ministry of Education, University and Research, entitled "For the School - skills and learning environments", financed by the European Structural Funds, contains the strategic priorities of the education sector and has a seven-year duration.

Students are invited to take part on PON lessons during the afternoon as extracurricular program in order to improve their competence and skills because they aim to create a high-quality, effective and fair education and training system by offering schools the opportunity to access community resources in addition to those already established by the "Buona Scuola".

In fact, an overall budget of just over 3 billion Euros is available for the seven years Program, divided as follows:

The PON "For the school" is aimed at nursery schools and schools of the first and second cycle of education throughout the national territory.

It is divided into 4 axes each with its own specific objectives:

• "Axis 1 - Education" aims to invest in skills, education and lifelong learning.

• "Axis 2 - Infrastructure for education" aims to enhance school infrastructure and technological equipment.

• "Axis 3 - Institutional and administrative capacity" concerns the strengthening of institutional capacity and the promotion of an efficient Public Administration (E-Government, Open data and Transparency, National Evaluation System, Management and Official Training).

• "Axis 4 - Technical assistance" is aimed at improving the implementation of the Program by strengthening the management capacity of the Funds (Implementation support services, Program evaluation, Dissemination, Advertising and information).

Target group: students from 14 to 18

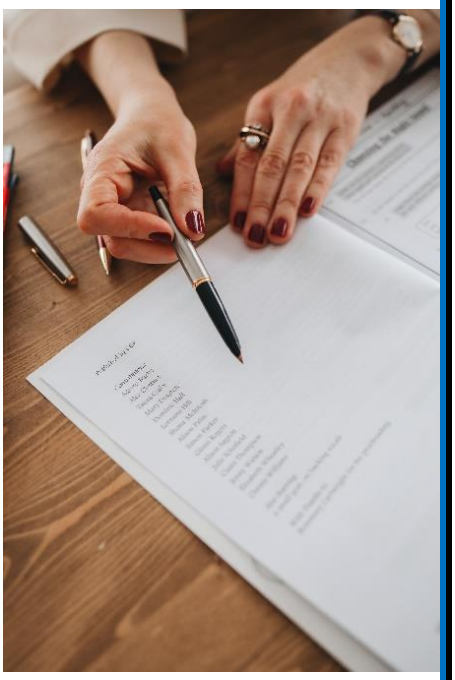
Student activities:

Students attend only two different kinds of PON for a total of 60 hours in a school year. Lessons starts in February and ends in May

With these funds schools and pupils can benefit of extra money and teaching hours in order to reach an efficient preparation and efficient structures in buildings, technology and human resources.

The course will be 30 hours and will be supported by a native teacher within the institute and in order to communicate, students learn to interact in English. The course deals with issues about

daily life and the personal sphere: introduce themselves and present their family, describe habits, preferences, and aims. Know how to tell their past and personal experiences and finally be able to ask daily questions (how to ask and give permissions, ask for information). Therefore, everything serves to improve students' communication skills and know how to compare themselves with others, explain them our society and reality.



Developed competencies: foreign language competence, listening and speaking skills, communication skills, social competencies

Content requirements: students should acquire the knowledge to communicate with foreigners in everyday situations, understand important information in simple, everyday texts related to common life situations. In everyday situations and roles related to travel, they can implement communication intentions appropriate to the task, e.g.: asking for and giving information.

Description of the activities:

During the 30-hour course the main aim is to improve students' communication in English in everyday situations that occur during travel. From buying a plane ticket and booking a hotel room with various simulations of problems that may arise, from arriving at the airport to the transfer to the hotel, as well as room requests and certain complaints (e.g. the TV does not work, lost keys, etc.). After that, booking tickets for shows and tours, and finally communication in the restaurant, giving students the opportunity to learn various words related to food, cooking, desserts, tipping and the bill. The students showed continued interest and commitment despite the final period full of written and oral tests.

Resources and materials: worksheet of topic oriented situations

At the airport:

Domestic / International flights Exit / Transit
Nazionale / Internazionale Uscito / Transito

Sir / Ma'am I have a flight to..connecting in / at.
Sig/ra. Ho un volo per / con scalo a.

I have a window seat but I would prefer an aisle, if possible.
Ho un posto finestrino ma ne preferirei una corridoio, se è possibile.

How many bags are you checking? Checked bags / Suitcases / carry on luggage / baggage.
Quanti bagagli imbarca? Bagaglio in stiva/valigia / bagaglio a mano / bagagli.

Is my bag overweight? How much is it overweight by?
Il mio bagaglio super il peso consentito? Di quanto?

I will take something off | *Toglierò qualcosa*

Is it too late to request a vegetarian meal / gluten free meal?
È troppo tardi per richiedere un pasto vegetariano o senza glutine?

Could you print my boarding pass, please? Boarding gate / Boarding time.
Potrebbe stamparmi la carta d'imbarco per favore? Uscita / Ora d'imbarco

One way / return. Stopover / layover / Direct flight
Biglietto andata e ritorno / solo andata / scalo / volo diretto

HOLIDAY VS VACATION

TRIP: I went for a 5-day trip / Did you enjoy your trip?
/ Can I have a round trip ticket please?
Sono partita per un viaggio di 5 giorni / Ti è piaciuto il viaggio?
/ Posso avere un biglietto di andata e ritorno?

TRAVEL: I am planning to travel a lot.
/ Travel is good for the soul.
Ho in programma di viaggiare molto.
/ Viaggiare fa bene all'anima.

JOURNEY: It was a long journey! (duration of a trip)
/ It was a spiritual journey. (metapharical)
E' stato un lungo viaggio!
/ E' stato un viaggio spirituale.

TOUR:
I took a tour of India.
Ho fatto un giro dell'India

When was your last vacation?
Quando è stata la tua ultima vacanza?

Where did you go?
Dove sei stato?

- **Sede Legale:** Piazza Carlo Maria Carafa, s.n.c. | 93013 | Mazzarino
- **E-mail:** clis007007@pec.istruzione.it | clis007007@istruzione.it
- **Sito Web:** www.iissmcarafa.edu.it
- **Codice Ministeriale I.I.S.S. C.M.C. di Mazzarino e Riesi** CLIS007007
- **C.F.** 90012980851
- **Telefono:** 0934/381664

INDIRIZZI

SEDE CENTRALE DI MAZZARINO:
- Liceo Classico
- Liceo Linguistico
- Liceo delle Scienze Umane
- A.F.M. (Amministrazione Finanza e Marketing) Art. S.I.A. (Sistemi Informatici Aziendali)
- C.A.T. (Costruzioni Ambiente e Territorio)

SEDE STACCATA DI MAZZARINO:
- Professionale Agrario (diurno e serale)

SEDE STACCATA DI RIESI:
- Liceo Scientifico
- Professionale Alberghiero (diurno e serale)

Erasmus+

I.I.S.S. CARLO MARIA CARAFA
Mazzarino e Riesi

Holiday vs Vacation:

What did you like the most/ the least?
Cosa ti è piaciuto di più/di meno?

What was the highlight of your trip?
Cos'era la cosa che più ti è piaciuta?

What was the most unforgettable / memorable moment of your trip?
Quale è stato il momento più indimenticabile / memorabile del tuo viaggio?

Did you enjoy sightseeing?
Ti è piaciuto visitare?

Would you go back there?
Ci torneresti?

Planning a trip:

I'd love to go.. / I dream to go to.. / I am planning to go to
Mi piacerebbe andare.. Sogno di andare.. Sto programmando di andare.

I am going to Spain in August / I'll probably go there too.
Andrò in Spagna ad Agosto/ probabilmente ci andrò anche io.

What are you going to do tonight? / I am going to pack my suitcase and then maybe I'll meet some friends.
Cosa farai stasera? Preparerò la valigia e dopo, forse, incontrerò degli amici

Asking for directions:

We need to reach the city centre, what is the cheapest / fastest way?
Dobbiamo raggiungere il centro città. Qual è il modo più economico / veloce?

How much would a cast to reach the city centre by bus / underground / subway?
Quanto costerebbe raggiungere il centro in bus / underground / metropolitana?

How long will it take? Where can I buy the tickets?
Quanto ci vorrà? Dove posso comprare il biglietto?

Booking a hotel:

Hello, I am calling to have / you have available for two nights
There are 4 of us. We need a double room and a twin please.
Salve, sto chiamando per sapere se avete disponibilità per 2 notti.
Siamo in 4. Abbiamo bisogno di una stanza doppia e di una con due letti separati.

Do you have a room with a view? (sea view/ garden view/ city view)
Avete una camera con vista? (vista mare/giardino/città)

We would prefer a quiet room, far from the lift (elevator).
Vorremmo una stanza silenziosa lontana dall'ascensore.

Is breakfast included? How much more would that cost?
La colazione è inclusa? Quanto costerebbe in più?
E una colazione Americana o continentale?

BB bed and breakfast
FB full board
HB half board
Con colazione
Pensione completa
/ mezza pensione

Are pets allowed?
Is it allowed to smoke in your rooms?
Do you need a deposit? Can I pay by credit card?
Gli animali sono ammessi? È consentito fumare nelle vostre camere
Deve lasciare un accredito? Può pagare con la carta di credito?

Checking in at the hotel:

Good morning, I have a reservation. It's under / it should be under–(name)
Buongiorno, ho una prenotazione. E'/dovrebbe essere sotto il nome..

Do you need my reservation number?
Ha bisogno del mio numero di prenotazione?

At what time / Until what time will breakfast be served?
A che ora / fino a che ora verrà servita la colazione?

Is the pool / gym open 24/7?
La piscina / palestra è aperta 24/24?

I'd like a wake up call / extra pillows / extra blankets / shower gel / shampoo please.
Vorrei una sveglia / cuscini in più / coperte in più / bagnoschiuma / sciampo.

I have an issue with.. the shower. There is no hot water.
Ho un problema con.. la doccia. Manca l'acqua calda.

I have a complaint. The air conditioner doesn't work / The tv set doesn't work / my key card doesn't work.
Ho una lamentela. Devo condividerla non funziona / la tv non funziona / la chiave non funziona.

The room smells. | *C'è cattivo odore in camera.*

The wi-fi password doesn't work. Could I have another one please?
La password del wi-fi non funziona. Posso averne un'altra?

Booking a show/ a tour:

I'd like to book some tickets please, any availability for..(date)
Vorrei prenotare dei biglietti, c'è disponibilità per..

I'd like to sit near the stage.
Are the seats on the sides slightly cheaper?
Vorrei sedermi vicino al palco.
I posti laterali sono un po' più economici?

Can I pay for them when I arrive at the theatre?
Posso pagare a teatro quando arriva?

How much is the total price?
Quanto è il totale?

It is a good place to hang out.
E' un bel posto dove andare in giro.

It's pretty lively. | *E' piuttosto vivace.*

It's a must see! It's a must do!
E' assolutamente da vedere! .. da fare!

There is so much to do and there are so many cool places.
C'è molto da fare e ci sono tanti bei posti.

That monument is massive/huge!
And it is amazing / astonishing / thrilling / impressive at night!
Quel monumento è enorme.
Di notte è meraviglioso / straordinario / pazzesco / impressionante!

BOOKING A SHOW/ A TOUR

That is the most iconic landmark.
E' il posto più iconico/famoso.

That one is off the beaten paths.
Quello è molto meno turistico.

I'm not up for walking / I'm not into / I'm not keen on / I'm not fond of..
Non mi piace molto camminare

See if it's a good fit for you.
Vedi se ti si addice. (se è nelle tue corde)

As soon as the bus comes you hop on.
Appena arriva l'autobus salta su.

You decide to stay as long as you want.
Puoi decidere di starci quanto vuoi.

At the restaurant:

When on holiday one always likes.. to try the local cuisine / to dine out.
In vacanza si vuole sempre provare la cucina locale / mangiare fuori.

I'm into Asian food. | *Mi piace la cucina asiatica.*

Party of how many? There are 4 of us / party of four.
In quanti siete? Siamo in 4.

I'd like something to drink / May I have some tap water please?
Can I have no ice please?
Vorrei bere qualcosa / Potrei avere dell'acqua di rubinetto?
Senza ghiaccio per favore.

Appetizer / Main / Side dish / Dessert / Specials: the catch of the day.
Antipasti/ Piatto principale/ Contorni/ Dessert/ Fuori menù.

How would you like your steak cooked? Rare/ medium/ well done.
Che cottura preferisce per la bistecca? Al sangue/ media/ ben cotta.

Beef, pork, steak, chicken. | *Manzo, maiale, bistecca, pollo.*

My beef is tough! | *La carne è dura!*

My fish is chewy! / Cod, shrimps, prawns, squids, mussles, calamari rings.

AT THE RESTAURANT

Il pesce è gommoso! / Merluzzo, gamberetti, gamberoni, seppioline, cozze, anelli di calamari.

Can I have the bill please? | *Posso avere il conto per favore?*

Is the tip included? | *La mancia è inclusa?*

How did you find your food? Delicious!
Come ti è sembrato il cibo? Delizioso

I'm glad we chose this restaurant
Sono contento di aver scelto questo ristorante

Breakfast:

Eggs: scrambled / hard boiled / sunny side up.
Uova: strapazzate/ sode/ occhio di bue.

I'd like my bacon crispy please, it's mushy.
Vorrei il mio bacon croccante, è molliccio.

Freshly squeezed orange juice.
Spremuta di arancia fresca..

Latte. | *Caffè e latte.*

Food to go. | *Cibo da asporto.*

Does anyone feel like ice cream?
Qualcuno ha voglia di gelato?

I'd like a cone please / a cup please.
Vorrei un cono/ una coppetta.

What flavour? Hazelnut / wholenut / peanut / almond / pistachio / pomegranate / pineapple / strawberry / cherry?
Che gusto? Nocciola / noce / arachidi / mandorla / pistacchio / melagrana /ananas /fragola /ciliegia.

I'd like two scoops please and some whipped cream on top too / as well.
Vorrei due cucchiaiate e anche della panna montata sopra.

To eat here or to go?
Da mangiare qua o da portare via?

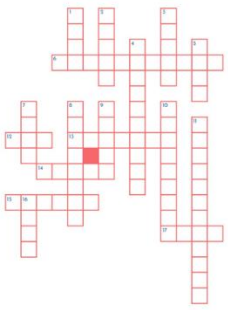
BREAKFAST

Beyond food: | *Non solo cibo:*

It's a piece of cake. (something easy)
E' facile. (lett. E un pezzo di torta)

It's not my cup of tea. (something which does not meet my taste)
Non fa per me. (lett. Non è la mia tazza di tè)

Let'splay!



CROSSWORD PUZZLE

ACROSS:

6. If you have booked in a hotel you have a... number
12. It is what you leave to the waiter for the service.
13. Very big, huge.
14. If something doesn't work you have an... with it.
15. A really famous monument.
17. If you don't eat your food at the restaurant it will be.

DOWN:

1. If you don't want your meat too cooked it has to be.
2. The building where you stay on vacation.
3. If there are 4 of you, you are a... for four.
4. If your luggage is too heavy it is.
5. Make a reservation.
7. A room with two separate beds.
8. Opposit of International flight.
9. If you are not in the window seat you are in the
10. The meal of the morning.
11. Once you give your ticket at the desk you recive a
16. Pay with actual money.

SUMMARY

During the compilation of this publication, we tried to outline the general situation regarding the socio-economic characteristics of the countries participating in the project, the educational and vocational training situation and the relationships with labour market expectations, with the help of which the reader can get a comprehensive picture of the challenges that European vocational training institutions face.

Regardless of geographical, social and economic conditions, all project partners struggle with the same problems for which they are trying to develop solutions based on EU directives in order to make vocational training resilient and respond quickly to dynamically changing labour market needs.

The knowledge sharing of the good practices of the project partners among themselves - by this publication with a wider target audience - made it possible to learn about well-proven methods and innovative tools. They are flexible enough to be partially or fully adaptable at local level and with local conditions. These good practices relate to the following key topics:

- social sensitization,

- sustainability,

- entrepreneurial competence development.

The good practices presented by the project partners are extremely colourful and varied, but they have several common factors; all of them place great emphasis on soft skills, with the help of which students can easily find their place in the world of work. All project partners prioritize trainings that meet the needs of the companies in order to establish a good relationship.

Further information regarding the project and the presented good practices can be acquired via the following contacts:

Project website: https://futurevsjobs.weebly.com

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