



# Liceul Tehnologic „Stefan Hell” Sântana

European VET Conference 2023 "Practice and Succeed!"

Școală acreditată pentru proiecte de  
mobilități Erasmus+ 2021-2027



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**LICEUL TEHNOLOGIC STEFAN HELL SÂNTANA 2022-2023**

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## **CUVÂNT ÎNAINTE**

### **DRAGI CITITORI, STIMAȚI COLEGI**

Deja este o tradiție ca școala noastră să publice anuarul școlii. Și în acest an respectăm tradiția și îmi doresc să fie dusă mai departe. În carte sunt articole care prezintă momente din activitatea școlară de la LICEUL TEHNOLOGIC „STEFAN HELL,, Sântana. Profesorii din această școală dar și elevii au foarte multe provocări la care trebuie să facă față. Activitatea zilnică de profesor sau elev este presărată cu activități extrașcolare interesante, cu proiecte internaționale ERASMUS+, dar și cu rezultate la concursuri și olimpiade școlare. O parte din aceste activități sunt prezentate în diversele articole din carte. Doresc pe mai departe o activitate educativă intensă cu rezultate pe măsură.

**DIRECTOR,**  
**Prof. CĂRUNTU MIRCEA**



# INVITATION

## European VET Conference 2023

### "Practice and Succeed!"

"Stefan Hell" Technological High School Sântana, educational institution with Erasmus + Accreditation for mobility projects in the field of "VET Vocational Training" 2021-2027, no. 2020-1-RO01-KA120-VET-095247 in collaboration with the Arad County School Inspectorate - educational projects department, organizes the European VET Conference "Practice and succeed", which will take place on to the European School Education Platform, the new home of eTwinning. <https://school-education.ec.europa.eu/en/etwinning/projects/practice-and-succeed> during July 2023, in asynchronous online mode.

The conference provides an opportunity to disseminate and share teaching and learning experiences and good practices for skills in the field of VET, as well as to open new collaborations through mobility projects. It will be a virtual meeting (through the proposed articles and contact details of the participants) attended also by entrepreneurs, representatives of the labor market, with different perspectives and approaches on the skills of the 21st century, so that students - future employees and teachers will be aware of the importance of lifelong learning and the important role played by European projects.

Topics addressed:

- The importance of vocational training and technological education for the economy
- The need to adapt and transform the school
- Development of critical thinking and creativity
- Didactic cooperation
- Employee profile from the perspective of the labor market

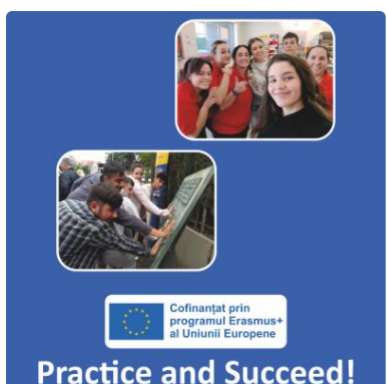
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You are welcome,

School inspector for educational projects,  
prof. dr. Adina C.E. Avacovici

Coordonator,  
prof. dr. Ana Höniges

## European School Education Platform

[Home](#) > [ETwinning](#) > [Rooms](#) > [European VET Conference 2023 "Practice and Succeed!"](#)

ROOM ● Active

## European VET Conference 2023 "Practice and Succeed!"

The European VET Conference "Practice and succeed", which will take place on to the European School Education Platform, the new home of eTwinning. during July-August 2023, in asynchronous online mode, is organized by ...



School inspector for educational projects,  
prof .dr. Adina C.E. Avacovici



Coordonator,  
prof. dr. Ana Höniges

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## 1. SoftComInVET - Bridging the gap of in-company trainers soft-skills competences in the VET sector

*Associação Intercultural Amigos da Mobilidade (Mobility Friends) is a non-profit association based in Braga District, which specializes in European Internships Programs, promotes, organizes and supports international mobility programs, international meetings on topics of mutual interest, multiculturalism and interculturality. The association aims at being a cohesive and dynamic space, creating educational, cultural, social and recreational projects which promote its mission, values and goals. The projects and mobilities promoted by the association are destined to every citizen, and can take place on a local, national and international level, due to partnerships and networks with other public and private organizations. Any citizen, regardless of age, gender, occupation, race and nationality can become participant of mobilities that AIAM organizes. We work as host and a receiving organization and intend to offer to the participants of other countries.*

*In 2020 Mobility Friends was coordinator of the project SoftComInVET, that finished in December 2022. This project had a huge impact in the VET field, and the materials produced are a great tool that can be used in every company that host VET students.*

*Starting Year of the Project: 2020*

*Ending Year of the Project: 2022*

*Partners: Portugal, Spain, Italy, Greece and Bulgaria*

### **About SoftComInVET Project:**

*One of the main aims of the European Union is to ensure a quality frameworks, tools and practices and to enhance the transparency, recognition and quality of competences and qualifications, supporting the mobility of learners and workers at all education levels but with a particular focus on VET. "Small and medium-sized enterprises (SMEs) are important players in VET and lifelong learning and need targeted support. Support measures should help SMEs to overcome external and internal barriers and compensate for the limited capacity of SMEs to identify and respond to their learning needs, where competence development of those who train others in the workplace can be part". (Guiding principles on professional development of trainers in vocational education and training, European Commission) According to*

CEDEFOP Briefing Note “Professional development for VET teachers and trainers” from 2016 teachers and trainers are „crucial to ensuring the quality and labour market relevance of learning, both in VET schools/ centres and in companies. Providing teachers and trainers with access to quality professional development and support is essential to ensuring that both their technical competences and pedagogical skills are up to the highest standards.” The project is relevant to the aforementioned issues and its goals are focused on the educational needs of VET mentors and trainers in SMEs providing work placements for VET learners with regard to boosting their soft skills and thus ensure effective knowledge transfer. The specific goals of the SoftComInVET project proposal are as follows:

1. To provide these mentors with appropriate competencies and tools to monitor and manage their soft skills performance. The project accomplished this objective through the development of IO1- SoftComInVET soft skills self-reflection instrument for in-company trainers in SMEs, providing mobility placements.
  2. To meet mentors needs of soft skills development for guaranteeing their professional welfare. The project accomplished this objective through the development of IO2- SoftComInVET Enhancing Manual for in-company trainers in SMEs, providing mobility placements.
  3. To promote the exchange of good practices and to facilitate the effective collaboration between institutions, providing work placements for VET learners, on translational level. The project accomplished this objective through the development of IO3- SoftComInVET best practices compendium, presenting in-company trainers good practices in SMEs, providing mobility placements.
- The project involved the following TGs:

- VET mentors in SMEs
  - SMEs providing work placements to VET learners, VET intermediary organisations
- TRANSNATIONAL ADDED VALUE

The international cooperation took advantage of institutional complementarities; ensured broad dissemination of project results and reached much larger representation of the target group thus multiplying the impact of the project in geographical perspective. The language diversity of the IOs allowed easy transfer to other countries and usability for people fluent in some of the partner languages. The wide geographical scope ensured EU dimension of the project and that various cultural perspectives are considered in the IOs development.

Website of the Project → <https://softcominvet.eu/>

IO1 → <https://softcominvet.eu/self-reflection-instrument/>

IO2 → [https://softcominvet.eu/wp-content/uploads/2022/10/ENHANCING-MANUAL-FOR-IN-COMPANY-TRAINERS-IN-SMEs-1\\_compressed.pdf](https://softcominvet.eu/wp-content/uploads/2022/10/ENHANCING-MANUAL-FOR-IN-COMPANY-TRAINERS-IN-SMEs-1_compressed.pdf)

IO3 → <https://softcominvet.eu/wp-content/uploads/2022/10/BEST-PRACTICES-COMPENDIUM.pdf>

## **More Opportunities, Less Differences**

*Associação Intercultural Amigos da Mobilidade (Mobility Friends) is a non-profit association based in Braga District, which specializes in European Internships Programs, promotes, organizes and supports international mobility programs, international meetings on topics of mutual interest, multiculturalism and interculturalism. The association aims at being a cohesive and dynamic space, creating educational, cultural, social and recreational projects which promote its mission, values and goals. The projects and mobilities promoted by the association are destined to every citizen, and can take place on a local, national and international level, due to partnerships and networks with other public and private organizations. Any citizen, regardless of age, gender, occupation, race and nationality can become participant of mobilities that AIAM organizes. We work as host and a receiving organization and intend to offer to the participants of other countries.*

*Mobility Friends is part of the consortium of this VET Project and contribute actively in the development of the materials of the project, as well as the general dissemination of the project.*

*Starting Year of the Project: 2020*

*Ending Year of the Project: 2023*

*Partners: Portugal, Romania, Spain, Lithuania, Turkey and Bulgaria*

### **About More Opportunities, Less Differences Project:**

*The main goal of the project MORE OPPORTUNITIES LESS DIFFERENCES is to create conditions for better involvement of students with fewer opportunities in mobility experiences and raise awareness on the challenges faced by the European community in organizing inclusive mobilities.*

*The project sets the following specific objectives:*

*1) to reach out to students facing social obstacles, economic difficulties and educational challenges and encourage their involvement in mobilities;*

*2) to deliver tools for sending and intermediary VET organizations that ensured quality in mobilities and facilitate the inclusion of students with fewer opportunities;*

*3) to equip mentors in SMEs hosting mobilities with an adequate tool to monitor the mobility experience of VET students with fewer opportunities.*

*The target groups of the project are:*

- Sending and intermediary VET organizations managing mobilities;*
- VET schools sending/receiving mobilities;*
- SMEs providing work placements for mobility participants;*
- VET students facing social obstacles, economic difficulties and educational challenges;*
- VET professionals taking part in mobility projects.*

*The project stipulates the delivery of 4 Intellectual Outputs each aiming to support a particular interested party of those involved in organizing VET mobilities:*

*1) IO1 Quality Assurance Framework for sending VET organizations: the output present a number of indicators and quality criteria that served as a reference point for sending VET organizations to organize and manage safe and high-quality mobility experience for students facing social obstacles, economic difficulties and educational challenges.*

*2) IO2 Self-assessment tool: the tool step on the quality assurance framework and served as an online self-diagnostic instrument that helped sending VET organizations to identify areas for improvement as regards their work with students facing social obstacles, economic difficulties and educational challenges. It enables them to make a change by specific recommendations resulting from their score from self-assessment.*

*3) IO3 Handbook for mentors in SMEs hosting mobilities: the handbook delivered tips and practical advice on particular situations that may occur when hosting mobilities with students with fewer opportunities. It served as a tool to prepare mentors in SMEs hosting mobilities to organize better*

*mobility experience for students facing social obstacles, economic difficulties and educational challenges and guarantee that they are adequately involved in work placement tasks and social activities.*

*4) IO4 Board game for students: the board game is the tool to reach out to students facing social obstacles, economic difficulties and educational challenges in a non-threatening manner and, through a game, both prepare and educate them on what a mobility abroad looks like. The players of the game encounter different situations and obstacles and “lived” a period abroad including work placement, life in a different cultural environment, interaction with employers and fellow students. Thus, the students are better prepared and build confidence that they cope with the challenges occurring from a mobility.*

*The IO are designed in a way that takes into consideration each of the actors involved in mobilities. The partnership believes in applying a comprehensive approach that requires efforts from all parties to make mobilities a positive experience. Therefore, the project aims to provide tools to all concerned groups and build capacity in each of them.*

*The IO are intended to facilitate transnational cooperation between sending and hosting organizations. They are not only about encouraging the inclusion of students with fewer opportunities, they are about including them in trans-European activities. The availability of tools to prepare adequately all actors in organizing inclusive mobilities reaffirmed the organizations’ credibility and encourage mutual trust and reliability. The project outputs are widely applicable and can be used well beyond the countries involved in the project.*

*They are freely available in 7 languages and because of their nature may serve as a basis for further development and adaptation to other disadvantaged groups. Hence, an unlimited number of mobility organizations can apply and benefit from the project results, creating more favourable European environment for inclusive mobilities. The improved experiences have as a result the higher number of mobilities involving students with fewer opportunities carried out throughout Europe. Thus, another impact of the project is the improved cooperation between EU institutions in addressing common issues and challenges. This contributed to the creation of a European space educating young people in tolerance towards “the other” and encouraging interaction between people with different backgrounds.*

*Website of the Project → <https://moledi.org/>*

*IO1 → <https://moledi.org/output-1/>*

*IO2 → <https://moledi.org/output-2/>*

*IO3 → to be updated*

*IO4 → to be updated*

## **Give Them a Second Chance**

*Associação Intercultural Amigos da Mobilidade (Mobility Friends) is a non-profit association based in Braga District, which specializes in European Internships Programs, promotes, organizes and supports international mobility programs, international meetings on topics of mutual interest, multiculturalism and interculturality. The association aims at being a cohesive and dynamic space, creating educational, cultural, social and recreational projects which promote its mission, values and goals. The projects and mobilities promoted by the association are destined to every citizen, and can take place on a local, national and international level, due to partnerships and networks with other public and private organizations. Any citizen, regardless of age, gender, occupation, race and nationality can become participant of mobilities that AIAM organizes. We work as host and a receiving organization and intend to offer to the participants of other countries.*

*Mobility Friends is part of the consortium of this VET Project and contribute actively in the development of the materials of the project.*

*Starting Year of the Project: 2021*

*Ending Year of the Project: 2023*

*Partners: Portugal, Italy, Poland, Spain, Austria.*

### **About Give Them a Second Chance Project:**

*SMEs have been the lifeblood of the European economy, accounting for more than two-thirds of the workforce and more than half of the economic value added (Eurostat). Yet the results of a recent McKinsey survey, conducted in August, 2020, of more than 2,200 SMEs in five European countries—France, Germany, Italy, Spain and the United Kingdom—indicate just how hard their prosperity has been hit by the COVID-19 crisis and more than half of those surveyed worry they might not be in business in 12 months. However, already before COVID pandemic, every year in the EU 200 000 firms go bankrupt, resulting in over 1.7 million people losing their jobs (EU Directorate-General for Justice and Consumers). Thus, encouragement of continuing entrepreneurship, even after failure which is not due to dishonesty, is seen as essential to the health of Members States' economies. Moreover, despite previous business failure, many ex-entrepreneurs would like to create a new business, but they face numerous obstacles in doing so. Many ex-entrepreneurs feel discouraged to re-start due to the stigma of failure*

and/or difficulties or discrimination faced after a bankruptcy. In addition, “failure” has an important secondary effect on entrepreneurship: many “would-be entrepreneurs” do not start a company because of their fear of the consequences of business failure. Consequently, it produces negative effects on economic growth and employment creation in the European economy. EU Internal Market and SMEs supporting entrepreneurship already contains some references to second chance policies. However, until now this concept is almost completely absent from VET provision. Indeed, many times VET providers offer uniform services to both failed and first time entrepreneurs while different situations should require a different approach. Consequently, the main aim of “Give them a second chance (G2C)” is to support the development of second-chance entrepreneurship attitude and initiative and provide a path for entrepreneurs whose first businesses have failed or been not successful to re-enter the market. G2C specific objectives:

- Encourage failed and ex-entrepreneurs to learn from their past experience by providing them with the right tools for understanding reasons behind their failure, their entrepreneurial potential and attitude. The Online self-assessment tool (PR2), that is an online interactive tool, that help them to identify their strengths and weaknesses, with potential of improvement for the purpose of continuous learning.
- Support failed and ex-entrepreneurs in developing their competences for re-build a successful business. This was achieved through the use of innovative digital education contents and digital technologies, partners will create an online course in the forms of eLearning modules (PR3) accessible through an Online Platform (PR1).
- Provide VET teachers, educators, trainers and mentors with a full set of educational resources for helping and mentoring failed and ex-entrepreneurs (e.g. Manual to be a mentor (PR4)).
- Promote and support the creation of SMEs support policies by policy makers, for facilitating the return of failed and ex-entrepreneurs back to business. This was achieved through the realization of the Guide - How to keep entrepreneurs healthy and alive (PR5).

G2C bring together a consortium of partners involved in VET and enterprise education such as SMEs, NGOs and Chambers of Commerce committed to provide a positive, friendly and incentive environment for second-chance entrepreneurial activity. G2C have two main target groups:

- Failed entrepreneurs (who went bankrupt with their company and/or are in the process of restructuring) and ex-entrepreneurs (who did not fail but close their activity due to no success).
- Mentors, teachers, trainers, educators working on VET centers/institutes, business association/chamber of commerce, vocational schools and NGOs providing VET and entrepreneurial education.

*Website of the Project → <https://givethem2chance.eu/>*

*IO1 → <https://givethem2chance.eu/online-platform-pr1/>*

*IO2 → <https://givethem2chance.eu/online-self-assessment-tool-pr2/>*

*IO3 → <https://givethem2chance.eu/online-platform-pr1/>*

*IO4 → to be updated*

*IO5 → to be updated*

*Sara Oliveira Penouço – European Project Manager*

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## 2. FLIPPED CLASSROOM AND ECONOMIC SUBJECTS

**Mihaela Tarce**

**Liceul Tehnologic "Stefan Hell" Sântana**

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*Flipped classroom – a challenging concept that will allow me:*

- to teach my lessons in an attractive way for students;
- to think of my teaching subject in a whole new way, using innovative teaching techniques;
- to encourage students to discover the economic terms in a new way, more accessible to them.

*Keywords: New programs; New concept; Flipped learning; Innovative teaching techniques; Challenge*

My path in teaching career began more than twenty years ago and since then and until now things have changed enormously. I managed to adapt to the new requirements along the way, but the last years, especially the years of the pandemic, have been a real challenge for me as a teacher of Economic Subjects.

Even if in recent years the ninth grade students who choose the economic profile have a minimum of knowledge in the field of Economics, studying in the eighth grade a subject called Financial Education, however, Economic Subjects in general require a lot of attention and involvement, young people being forced to get used to a specialized vocabulary, with many terms never seen before, a major problem being the fact that in the first two years of high school the specialized subjects are very stiff, they contain a lot of theory and little practice, which can be unattractive to them.

My students are part of Generation Z, meaning that they are digital natives, used to the electronic devices since childhood and the information which is just a click away, observing over time the ease with which they learn with the help of electronic devices ( computer, tablet, phone ) and how much they use them. Consequently, all these findings made me realize that I need to prepare intensively for the classes I teach, to attend training courses, to be able to keep up with them and to adapt my lessons and my teaching style to the new reality. So, this year, when the opportunity to attend a course in Valencia, Spain came up, an Erasmus + project course , offered by the school where I teach, I never thought twice about it. The course was called

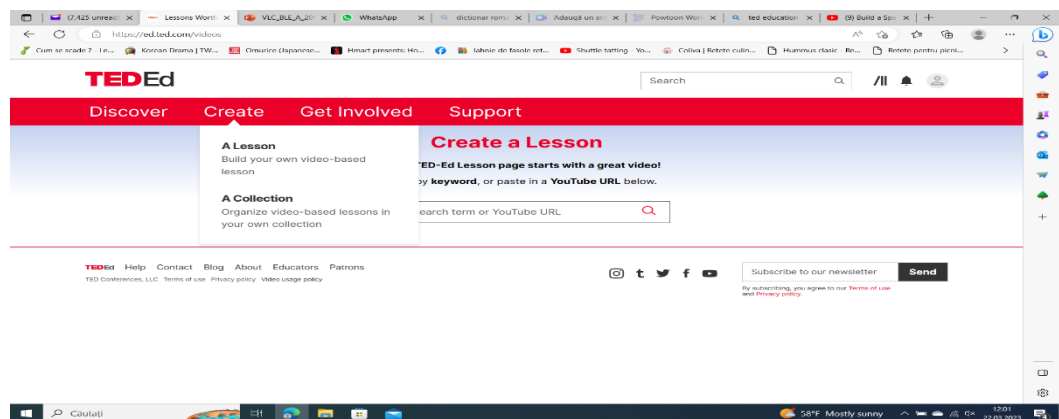
"Blended Learning: Connecting Remote and Face-to-Face Teaching ", the main aim being the way we can combine face-to-face teaching with the tools used for online teaching. These courses were attended by eight teachers from three countries, teachers who teach different subjects, but we all had one thing in common: we wanted to learn concepts, new methods and programs that allow us to turn our classes into attractive activities for our students.

The interesting part was that the course trainer provided us with the necessary tools to rethink the way we can support our classes that is digital programs, but we had to choose the ones that best suit the subjects we teach. Obviously, the time spent in class was not enough to master these tools to perfection, but we were given the opportunity to deepen their knowledge back home. Yes, this deepening involves our effort, the teachers, getting used to the programs at home, in our free time and then adapting our lessons using these programs, but I think it is worth all the effort, especially after noticing the satisfaction of my students and the fact that the new teaching methods make them interact more.

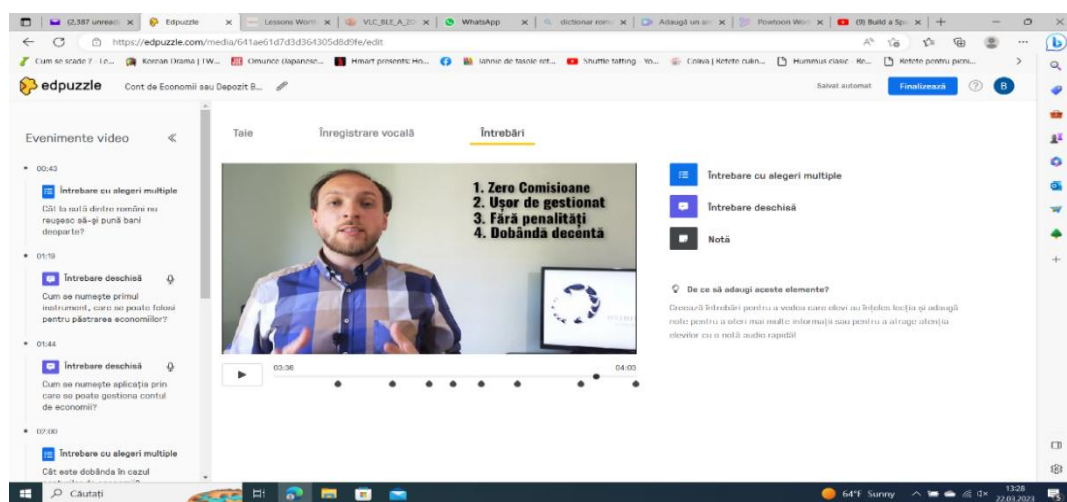
During the course I attended, a concept aroused my special interest, namely Flipped Classroom, which appeared in the 2000s when it was popularized by two American teachers, Jonathan Bergmann and Aaron Sams. What does this new learning method entail? Students learn a new content before the actual teaching stages (the materials being pre-selected and sent to the students by the teachers), and afterwards during the class, they discuss what they have learned or read beforehand.

What happens in Flipped classroom ( the teacher sends materials, the student prepares, and afterwards during the class the new material is explained and the new knowledge deepened, consolidated and applied) is exactly the opposite of what happens in the traditional class ( the teacher teaches the new knowledge and the student learns it at home). Through this method the teacher can figure out what are the notions that each student did not understand, discuss with them and can focus on practical applications. The programs that can be used for this concept are: Ted Education, ED Puzzle and Genially.

Examples: Ted Education



## ED Puzzle



When this new method of teaching was presented to us, my first thought was this: how can I apply it to my subjects? But thinking about it, more and more possibilities came to mind, more and more lesson scenarios that I can apply to students, from the ninth grade to the 12th grade. Emphasis must be placed, however, on the materials sent by the teacher to his students which must be easy for them to understand, and the challenge comes mainly from making students read the material at home before the lesson, but there are also methods for this as well. So I can certainly state that the moment I got in touch with this concept was like a revelation to me, because I realized that I had found what I had been looking for, for some time for my classes, so that my students feel useful, having at the same time the opportunity to communicate new knowledge much more easily, to exchange views on the proposed topics or to become the moderators of a lesson themselves.

### 3. EQUAL ACCESS TO EDUCATION AND INCREASED CHANCES OF INTEGRATION INTO THE LABOR MARKET AND SOCIETY

Vereșezan Oana Doina

TorkosAntonela Iulia

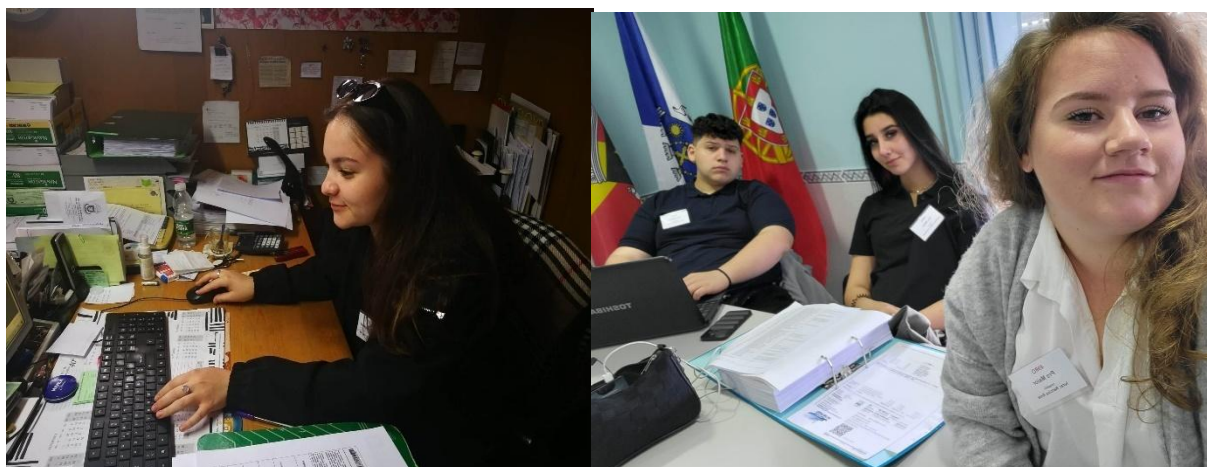
Vereș Georgiana

"Ion Creangă" Technological High School Curtici

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*Between 18.03.2023–08.04.2023, 14 students and three teaching staff from the "Ion Creangă" Curtici Technological High School took part in a training course in the city of Barcelos, Portugal. The project was financed by the ERASMUS + Program, Key Action 1 - Vocational Education and Training, VET, from European funds. The objective of the project was the development of technical and transversal skills in a competitive, multicultural environment in order to increase the chances of socio-professional integration as well as the development of linguistic, organizational, intercultural, sustainable development skills. In other words, the 14 students, with the Technician in economic activities profile, spent three weeks in three Portuguese companies where they observed and got involved in everything that the correspondence of a company means.*

During the three weeks, the students, accompanied by the principal and two other teachers, were hosted in the Mobility Friends campus, a special world where time seems to stand still. Here, nationality and language do not matter and the desire to communicate and make friends go beyond any barrier. It's a world where you rediscover your purpose as a teacher, as a student, as a member of the European Union. This is what the 14 students understood from the unique experience of the three weeks.



Students at work

In their free time, that is, on weekends, the students got to know a little bit of beautiful Portugal through the cultural visits organized by the host institution. We mention a few tourist objectives visited, namely: Valenca, a city in Portugal located on the border with Spain; Viana do Castelo, Ponte de Lima, "the oldest city in Portugal", Arcos de Valdevez and last but not least the city of Porto – the second largest city in Portugal.

If we were to list the results of this experience, there would certainly be many, but we reduce them to simple words: unity, new skills, new relationships, communication and spiritual enrichment.

## 4. OPPORTUNITIES TO DEVELOP PERSONAL AND PROFESSIONAL SKILLS THROUGH ERASMUS+ MOBILITIES

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### **ABSTRACT**

*By implementing project no. 2022-1-RO01-KA121-VET-000052940, the Erasmus+ program supported Chişineu Criş Technological High School in the process of improving the quality of the project, by integrating a participatory dimension and offering students relevant opportunities for involvement and active participation to the implementation of project activities, which allowed them to acquire personal and professional skills in a European context.*

**Keywords:** *mobility, inclusion, qualifications, opportunity, training*

The Erasmus+ experience started in 2014 and over the years has offered the chance for hundreds of students of the Chişineu Criş Technological High School to learn, work or train abroad in VET institutions or companies with which we have collaboration partnerships have been concluded. For approximately 9 years, the implemented mobilities have helped the participating students develop the skills and professional competences they need to lead as independent and fulfilling a life as possible. Also, the mobilities gave the participants experiences of European dimensions and the feeling of belonging to a community. For this reason the development of European partnerships for internships with vocational training centers and experienced companies to stimulate students' interest in further career development and contribute to the development of professional competences and practical skills, were seen as medium and long-term opportunities for our high school students especially for those who come from socially and economically disadvantaged families.

In the 2022-2023 school year, the Erasmus+ project no. 2022-1-RO01-KA121-VET-000052940, 46 SHORT-VET mobilities with a duration of 3 weeks at companies in Portugal, Poland and Cyprus and 2 mobilities of the job shadowing type in the economic field, with a duration of 6 days, in Cyprus. SHORT-VET mobilities addressed the following specializations: technician in

economic activities, technician draftsman for constructions and installations, mechatronics technician, car mechanic, merchant seller and ecological technician and environmental quality protection.

The purpose of the implementation of these mobilities was to facilitate the acquisition of the professional skills described by the SPPs for all participating students (Performing basic operations in the laboratory, Measuring technical quantities in the field of environmental protection, Investigating ecosystems/Using accounting methods, procedures and principles, Consumer protection , of personnel and the environment/Ethics and professional communication, Organization of the activities of the commercial unit, Application of commercial techniques, Use of accounting software/Installation of mechanical systems for the transmission and transformation of movement, Mechanical assemblies, Execution of surveys for carrying out renovations and some changes in constructions) .



Finishing and painting works at Homefix, Wroclaw

The receiving organizations from the host countries were: Instituto Nacional De Saude Dr. Ricardo Jorge and Modelo Continente from Lisbon, Portugal, for the qualifications of technician ecologist and environmental quality protection, and technician in economic activities; It Serwis Marcin Ladowski and Homefix from Wroclaw, Poland, for the qualifications of construction and installation draftsman, auto mechanic, mechatronic technician; Spiros Theofanous of Paphos, Cyprus, for the merchant sales qualification; E Leclerc from Montijo, Portugal, for the qualifications tradesman salesman and technician in economic activities. The project aimed at

the development of short-term mobilities of VET trainees in companies or VET institutions, the creation of opportunities for mobilities of VET staff for continuous professional development in an international context in order to increase the quality of the training offered to students, the creation and development of stable international partnerships that offer the opportunity for professional training to the standards required on the labor market and a European dimension to the educational act.



Determination of correction factor F of solutions in INSA laboratories

By fulfilling the objectives, the Erasmus project contributed to supporting the institutional development strategy by increasing the quality of internships, respecting the needs of the labor market and facilitating the evolution of social cohesion and inclusion. Achieving the objectives was done respecting the principle of gender equality, promoting equal treatment, without achieving any distinction, exclusion, restriction or preference, regardless of nationality, ethnicity, language, religion, social category, beliefs, gender, sexual orientation, disability or belonging to disadvantaged categories. The Erasmus experience has a positive impact on the students' personal development and in particular on intercultural understanding and knowledge of foreign languages, but also on their professional development.



#### Assembly and disassembly operations of chain transmissions at JT Serwis

At the institution level, the project facilitated the internationalization of the institutional development strategy, by strengthening the European development component with clear objectives and concrete targets, by improving the educational management capacity and increasing the school's capacity to produce a quality educational offer, suitable for a market economy constantly changing.

## 5. DEVELOPMENT OF CRITICAL THINKING AND CREATIVITY IN CLASSROOM AT BUDAPEST MOBILITY

**Marzena Beata Oltean, [giowanowicz.m@gmail.com](mailto:giowanowicz.m@gmail.com)**

*Budapest Mobility is a thriving and quickly growing education center specializing in vocational education and training. Teachers have an excellent opportunity to enhance their skills and professional development through various courses related to:*

*Innovative Teaching Methods for VET*

*Industry-Specific Training*

*Cross-Cultural Competence*

*Internationalization*

*Pedagogical Leadership*

*Professional Development*

*Assessment and Certification in VET*

*...and many other*

*By participating in these courses teachers can broaden their horizons, acquire new teaching methods, and enhance their effectiveness in preparing students for successful careers*

**Vocational Education, Life-Long Learning**

In the ever-evolving landscape of vocational education, critical thinking and creativity development has emerged as pivotal factor in preparing students for the skills demanded in the 21st century. This article explores the importance of fostering critical thinking and creativity among vocational education teachers, highlighting the role of lifelong learning and the transformative impact of European projects.

Critical thinking skills enable educators to engage students in thought-provoking discussions, challenge assumptions, and promote evidence-based reasoning. By nurturing critical thinking, vocational education teachers empower students to analyze complex problems, think independently, and make informed decisions. The courses offered by Budapest Mobility explore practical strategies and gain fresh

perspectives, through which participants can integrate problem-based learning, case studies, and collaborative projects to cultivate critical thinking skills within their classrooms.

Creativity is a vital skill that enables students to explore new possibilities, generate unique ideas, and develop innovative solutions. Vocational education teachers play a pivotal role in nurturing creativity by fostering an environment that encourages risk-taking, experimentation, and the integration of interdisciplinary approaches. By leveraging European projects, teachers can inspire students to think creatively, develop their entrepreneurial mindset, and embrace their innovation potential.

Lifelong learning lies at the core of professional growth for vocational education teachers. Budapest Mobility emphasizes the importance of continuous professional development, enabling teachers to stay updated with the latest pedagogical approaches, emerging technologies, and industry trends.

By tapping into the power of lifelong learning and engaging in European projects, vocational education teachers can enhance their instructional practices, inspire students, and prepare them for the demands of the 21st-century workforce. Through collaboration, knowledge exchange, and exposure to diverse perspectives, teachers play a vital role in shaping their students' future employability and success. By embracing this conference and the opportunities it presents Budapest Mobility encourages to take the opportunity and become part of the offered courses for the development and improvement of curricula in vocational education and training:



- Innovative Teaching Methods
- Assessment and Evaluation Strategies
- Inclusive Education
- Carrere Guidance and Counseling
- Green Skills and Sustainability
- and many others....



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## 6. DEVELOPMENT OF CRITICAL THINKING AND CREATIVITY THROUGH EUROPEAN PROJECTS

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### **Abstract**

*The importance of vocational training and technological education is evident by the growing need for specialists in different sectors of the economy. Therefore, the school must respond to the demands of a society in continuous transformation, of technology and information. Development of critical thinking and a creativity has become a necessity, as ways of adaptability to the context of contemporary life. European projects have an important role, given that they put students in a position to communicate, to work in a team, to adapt to new environments for them, to take examples of good practice, to make comparisons, to discover opportunities that they had not considered. In a word, European projects provide the framework for personal development. In the Agromontan Technological High School "Romeo Constantinescu", or. Vălenii de Munte has carried out, especially in recent years, several Erasmus+ projects, but also transnational projects, with schools from the Republic of Moldova as partners. The last category, in addition to the objectives regarding European citizenship, also aimed at strengthening ties between Romanianspeaking students. Because in previous articles I referred to the other Erasmus projects, in the present one I referred to those carried out with Moldovan partners and which I coordinated in the 2023-2024 school year. The focus in these two projects was on the development of creativity and the integration of students with SEN, as well as on the development of critical thinking through activities that would challenge students' motivation.*

**Keywords:** *Projects, critical thinking, good practice, motivation, creativity*

## **Motivation**

The importance of vocational training and technological education in contemporary times is already recognized by the growing need for specialists in different sectors of the economy. This is why, the need to adapt and transform the school has already been identified so that it meets the requirements of a society in continuous transformation, whose representatives are highly dependent on technology and information. Development of critical thinking and creativity has become a necessity, given that adaptability has acquired more than ever a major importance in the previously mentioned context. European projects have, in this context, a role that cannot be neglected, given that they put students in a position to communicate, to work in a team, to adapt to new environments for them, to take examples of good practices, to make comparisons, establishing similarities and differences, to discover opportunities that they had not considered. In a word, European projects provide the framework for personal development.

In the Agromontan Technological High School "Romeo Constantinescu" in the city of Vălenii de Munte, several Erasmus+ projects, as well as transnational projects, have been carried out, especially in recent years, with schools from the Republic of Moldova as partners. The last category, in addition to the objectives regarding European citizenship, also aimed at strengthening ties between Romanian-speaking students. Because in previous articles I referred to the other Erasmus projects, in the present one I will choose to focus on the ones carried out with Moldovan partners and which I coordinated in the 2023-2024 school year. The focus in these two projects was on the development of creativity and the integration of students with CES, as well as on the development of critical thinking through activities that would stimulate students' motivation.

## **Description of projects**

It is important that students know how to properly evaluate what they hear, see and read in order to form their own opinions and beliefs. Creativity is an indispensable attribute of the man of tomorrow. Critical thinking is an important skill, a cognitive "tool" with the help of which people can give meaning to information, analyze and evaluate information from the point of view of its integrity and validity, can compare different aspects to form their own opinions and ideas. Critical thinking helps the child to define problems, identify hypotheses, analyze ideas

and opinions, use critical and logical reasoning, identify the causes of problems, create solutions and evaluate their correctness, make creative connections between ideas and different fields. This ability helps them understand people better and realize the types of relationships they can develop with them. The formation of a reasoning focused on logic involves explaining the motivation of certain actions, not imposing them, encouraging "uncomfortable questions", stimulating curiosity, encouraging and engaging in various activities, especially in the search for information, reading, expressing points of view, etc.

The first of these projects aimed at the development of creativity and the integration of students with CES in the collectives in which they were learning, so that they feel part of the community to which they belong and are valued. The name of the project is explicit - "Integration of students with CES". Our partners were students and teachers at the "Nicolae Donici" Theoretical High School in Dubăsarii Vechi, Criuleni district, the coordinator being my colleague, teacher Muravschi Maria. The aim of the project is to create a learning environment for all students. Although simple in essence, "Integrating Students with CES" is an example for the development of creativity, cooperative work and integration. The objectives are relevant: the development of creativity through non-formal activities, the expression of opinion in front of others without fear of being criticized, the stimulation of interest in learning, the formation in students of their own thinking in relation to those around them and with themselves, increasing the level of participation of students with disabilities in didactic activities.

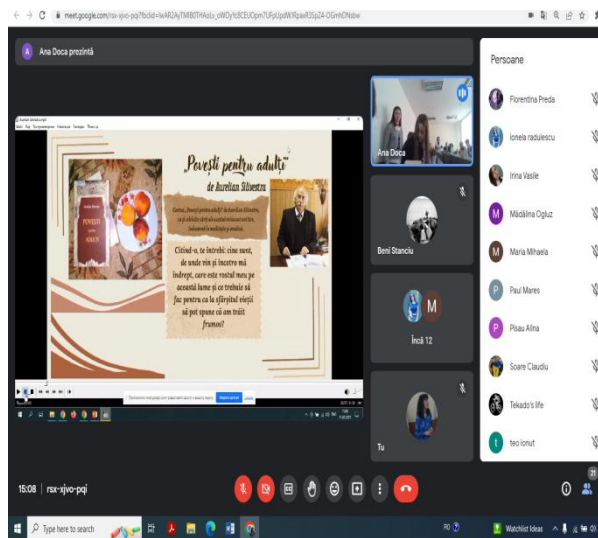
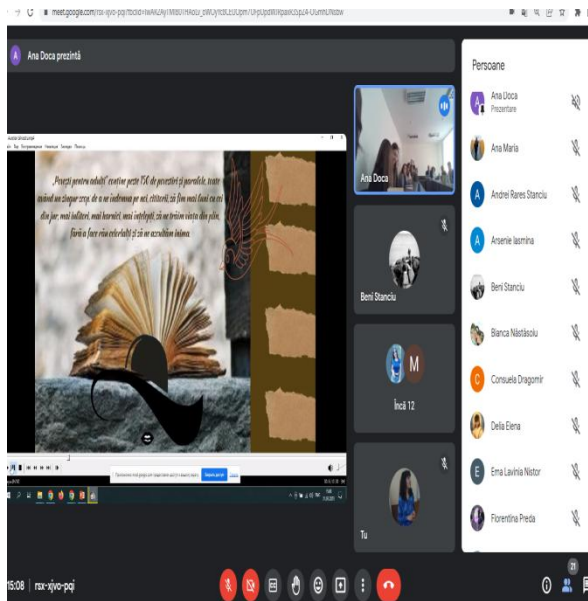
All significant events in the life of the school were shared with students and teachers across the Prut through online meetings. In the collaboration stage, we carried out, for example, activities related to NATIONAL CULTURE DAY - JANUARY 15, students creating poems, representative drawings or reciting from the creation of the great poet, on Women's Day, when students made small gifts for expectant mothers from recyclable materials, but also on Children's Day, when they offered gifts to other children. It was a pleasure for us to present the materials, the final products made in classes where students with CES were integrated. We discovered common hobbies, passions that our students had, as well as students from the Republic of Moldova. Most students with CES get involved in activities that involve physical work, but it is obvious that they do it with great pleasure and then the result of their work materializes in objects with which they can beautify the environment or that find different uses in their everyday life.



The second project on which I propose to focus our attention was carried out between the months of February 2023 and May 2023, also within the Transnational Project "ONLINE EDUCATION WITHOUT BORDERS" and was entitled the Virtual Cenacle "Literary Conversations". This time, the focus was on the development of critical thinking and we had as partners the students and teachers from the "Raisa Pacalo" Center of Excellence in Medicine and Pharmacy, Chisinau, Republic of Moldova, the coordinators being teachers Ana Doca and Cupcea Iulia.

The objectives of the project were: the development of creativity through the creation of literary texts, the expression of opinion in front of others without fear of being criticized, the cultivation of students for pleasure in reading and its analysis, the stimulation of interest in literature, the formation of their own thinking in relation to those around them and with themselves, the formation of the student's taste for reading, the formation of his own axiological criteria by which he can distinguish for himself what and when to read, the formation of an inventory of tools for the analysis of a literary creation or artistic to help him communicate better with himself and those around him, creating a digital magazine with the students' creations.

Through this project, the students wanted to know the mechanisms of the Artistic Act, wrote their own texts, with a free theme, recited poems and received advice from one of the most beloved poets, Aurelian Silivestru. The distinguished poet presented them with some of his own works, listened to the students' creations, urged them to write and be persistent readers. Another memorable meeting was with a distinguished writer of children's literature from Romania, Vălenii de Munte, Mrs. Manuela Dinescu. She spoke to the students about the challenges of a writer's life, the motivation to write and the search for sources of inspiration, answering their inspired questions.



### Cenaclu virtual

**Iumac Ionela, studentă C.E.M.F., „Raisa Pacalo”, gr. 11**

...este viața?

„Ne-am născut cu un scop pe acest pământ, nu să supraviețuim, ci să trăim; să trăim, să visăm, să iubim.

**Dabija Maxim, student C.E.M.F. „Raisa Pacalo”, gr.111. Un actor anonim**

O, oameni pierduți-n furtună,  
Văd cum vă zbateți în neputină,  
Mai presus de lumea cea muritoare,  
Căutați un sens, un rost, o rază de soare.

**Dihor Cezara, studentă a C.E.M.F. „Raisa Pacalo”, grupa 120**

De la o vârstă fragedă suntem încurajați să visăm, punând ca temelie a propriului viitor poveștile cu care am crescut sau realitățile altora. Vise controlate, ahidate...

**Untilov Gabriela elevă CEMF „Raisa Pacalo” Grupa 214**

Vizualizez lumea prin ochii mei proprii, fundalul ce mi-a fost pictat: aparține celor ce au creat. Căci eu...

**Nicolae Ionela, eleva grupei 214, C.E.M.F. „Raisa Pacalo”**

Dacă ai eșuat nu renunța. Ai încredere în tine. Viața îți oferă mereu a doua șansă, se numește ziua de mâine. Fiecare zi va fi mai promițătoare decât precedenta, deci ai ocazii nelimitate de a descoperi cea mai bună variantă a ta. Nu îți limita provocările ci fă-o invers, provoacă-ți limitele, doar...

**Ana Doca, profesoară la disciplina limba și literatura română, Republica Moldova**

„Urmând căile medicinei sufletului de care vorbea Noica, o medicină ce răstoarnă sensurile tradiționale, scopul unui astfel de cerc ar fi de a îmbolnăvi, de a transmite elevilor...

**Cea mai frecventă caracteristică pe care am întâlnit-o la oamenii de succes este aceea că își înving tentația de a renunța. Ceea ce ne îndeamnă să muncim pentru a obține scopurile dorite.**

„Fericirea este un rezultat direct al felului în care percepi tu tot ce te înconjoară.”

3

**Creția e puterea lui Dumnezeu, a naturii, dar și a artistului de a da viață unor elemente ce se diferențiază prin forme întotdeauna unice. „A crea înseamnă a trăi atât visul, cât și viața”- Romain Rolland.**

**Uneori, trebuie să căutăm sprijin pentru a ne putea vedea cu ochi mai buni sau pentru a găsi o interpretare mai optimista și mai semnificativă a experiențelor noastre, iar acest ajutor poate fi găsit în cuvintele celor care ne încurajează.**

„Veți continua să suferi dacă îl o reacție emoțională la tot ce vă se spune. Adevărata putere stă pe spate și observă totul cu logică.”

**Vitorul este al oamenilor care creează ceva de valoare. Creția este a dovedă de curaj, de a merge până în miezul lucrurilor. Acțiunea de a crea este un produs al muncii creatoare.**

Mircea Eliade afirma: *Sensul existenței și datorită fiecărui om este creția*

5

## **Conclusions**

There are teachers who avoid implementing some projects in school life. It is not only about conservatism, but also about a more pragmatic motivation: in the context where the teaching material is still quite loaded, the projects are chronophagous. However, I would invite them, when they are reluctant, to think twice about the advantages that the projects bring, about how the activities within them, those more "different" than the daily routine, bring the motivation that today is increasingly difficult to find. For sure, they will change their mind and realize such projects.

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## 7. PROGRAMMING THE FUTURE

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Liceul Teoretic "Callatis", Mangalia

*Learning is a journey into the fascinating world of treasures of personal experiences, achievements and universal wisdom expressed in various ways. From theory to practice, from adventure in the good sense to learning - this was the ERASMUS project for the students of class 11<sup>th</sup> grade B from the THEORETICAL HIGH SCHOOL "CALLATIS" MANGALIA.*



Figure 1 Trinity Square - firstday



Figure 2 Trinity Square Lastday- Graduation

The ERASMUS+ project "Development of practical skills of programmer analysts, through learning techniques", no. of reference 2022-1-

RO01-KA121-VET-000054141

professional training techniques, took place from April 24 to May 13, 2023 in Granada in Spain. 20 students participated out of 27 students from 11<sup>th</sup> grade B MATHEMATICS-INTENSIVE COMPUTER SCIENCE who started

from October 2022 to prepare for the selection contest for the ERASMUS project. It was an atmosphere of emulation, of applying theoretical knowledge about making a CV and creating it, about writing a motivation letter, about respecting a content and about the rigor with which the

necessary documents were ordered in the selection participation file. Then followed the knowledge tests: IT, English, general culture. Also, the students' files were evaluated and they obtained a score that, together with the test scores, formed the overall score, after which 20 students and 3 reserve students were admitted, only 20 students actually participating in the project. From this first experience, the students learned that to access something you want, it is necessary to be prepared in the mentioned fields, to be fair, to have team spirit and fair play, to accept with serenity that although you may not have succeeded in entering the project, you can still be happy for the success of your colleagues and understand that the experience helps you to evolve even if it ended differently than you wanted.

For those who succeeded, it was the beginning of a path that opened wonderful learning perspectives for them by observing on the move many aspects that bring together or differentiate the educational, cultural, technological systems specific to Romania and Spain. This fact represented for each member of the group of students a stage of personal, professional and social educational development. Through interactions with other young people from Europe, social cohesion is achieved, the formation and consolidation of European identity, jobs are created in order to obtain innovative and high-quality products. All this aims to establish a European education space, to stimulate sustainable economic growth and the development of the European civic spirit.

The students arrived in Granada after going through the preparation stages of the project, after going through the general culture questionnaire, through several joint meetings of students, parents, accompanying teachers and the project coordinator regarding the organization of the group.



*Figure 3 WordPress Installation*



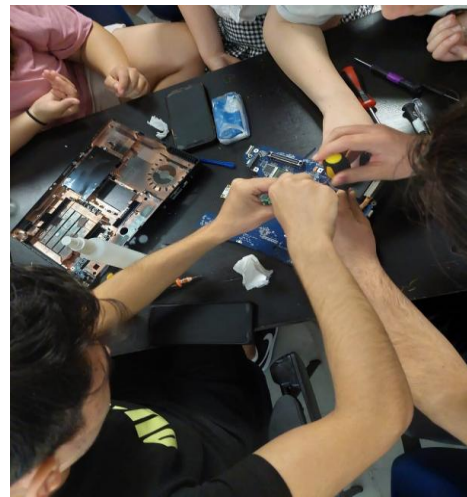
*Figure 4 Disassembly and Assembly*

Next came the plane flight, for some students - the first flight in their life! What came next? A different world from the one everyone was used to, which meant living with colleagues, following unwritten rules, solving all problems so that participating in the daily schedule was self-evident.

After the presentation of the program, after getting to know the members of the coordinating team from Granada, the courses began which had as their specific the practical part in the field of informatics. The students disassembled and reassembled laptops, changed the thermal paste, wired, installed and worked in WordPress, got to know Photoshop. Everything was based on self-discovery of ways to optimally and efficiently solve a situation presented by the tutor. This approach was surprising to the students. It has greatly transformed their perception of the use of digital technologies in training and education activities. Beyond words the digital domain was a common ground of understanding and communication. It also includes developing students' digital skills and competencies through appropriate programs and initiatives.



*Figure 5 Disassembly and Assembly*



*Figure 6 Disassembly and Assembly*

Special attention was given to promoting gender equality and addressing disparities in access to technology. The program supported the use of methods regarding the acquiring of the digital skills of the participants and of the organization they will be a part of in the future, namely the emphasise of common values such as: creativity, innovation, cooperation, inclusion, fairness, diversity.

The idea that comes through refers to the need to adapt the pedagogical methods so that the transmission of knowledge is carried out based on a scenario in which the emotion, the element of surprise, has an essential role in capturing the attention of the subjects.

The experience the students tried in the knowledge process proved that they appreciated and recognized this fact as beneficial. Within the project, the specialized lessons were spiced up with wonderful excursions. They supported the formation of a broad vision of culture, traditions, history, economic environment, and the environment. Also, special importance was given to the formation of the mentality of teenagers in relation to the responsibilities of each one in the activities they carry out in the organization, respectively in their free time.

Certainly the students participating in the Erasmus+ project will bring change through their behaviours, preferences, through their manifestations as adults with a different standard of living than their parents.

Education will be part of this profound change of the world by programming the future with the algorithms of the present.



*Figure 7 Visit Malaga*

## 8. eTWINNING ȘI IA ÎN EDUCAȚIE: NAVIGÂND CĂTRE TRANSFORMARE

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*In an era characterized by advanced technology and rapid changes, the educational system faces significant challenges in remaining relevant and efficient for students and society. To address these challenges, two key elements have become essential pillars in the transformation and adaptation of education: eTwinning and Artificial Intelligence (AI). eTwinning, an initiative of collaboration between schools from different countries, offers previously unexplored educational opportunities. On the other hand, Artificial Intelligence has brought innovations and profound changes to the methods of teaching and learning. AI-based systems can analyze data and identify specific patterns, enabling the customization of educational content according to individual students' needs. Thus, each student can learn at their own pace and in the most suitable way, increasing the efficiency and relevance of the educational process.*

*The author emphasizes that participating in a Contact Seminar about eTwinning provided an exceptional opportunity to learn and explore new concepts related to innovation in education and the use of the eTwinning platform. Additionally, it allowed for connecting with teachers from various countries and developing skills in utilizing technology in the learning process. Through the effective use of eTwinning and Artificial Intelligence, education can become more adaptable and relevant to the demands of the 21st century.*

*Tags: eTwinning, Artificial Intelligence (AI), Education transformation, Innovation, Global collaboration*

În era tehnologiei avansate și a schimbărilor rapide, sistemul educațional se confruntă cu provocări semnificative în a-și menține relevanța și eficiența pentru elevi și societate. Într-un astfel de context, eTwinning și Inteligența Artificială (IA) au devenit piloni esențiali în transformarea și adaptarea educației către noile cerințe ale secolului XXI. Eforturile concertate pentru a combina puterea tehnologică cu colaborarea internațională au deschis drumul către o nouă paradigmă educațională, încurajând învățarea personalizată, inovarea și interconectarea globală.

eTwinning, inițiativa de colaborare între școli din diferite țări, a deschis uși spre oportunități educaționale neexplorate anterior. Prin intermediul programului eTwinning, profesorii și elevii au posibilitatea de a interacționa cu colegi din alte țări, schimbând idei, proiecte și experiențe educaționale. Această colaborare internațională încurajează toleranța, diversitatea culturală și deschiderea către noi perspective asupra lumii. Astfel, eTwinning devine un instrument puternic în dezvoltarea competențelor sociale și culturale, pregătind elevii pentru a deveni cetățeni globali responsabili.

Pe de altă parte, Inteligența Artificială a intrat cu pas hotărât în sfera educației, aducând cu sine inovații și schimbări profunde în modul de predare și învățare. Sistemele bazate pe IA pot analiza datele și identifica modele specifice, permițând astfel personalizarea conținutului educațional în funcție de nevoile individuale ale elevilor. Această adaptabilitate permite fiecărui elev să învețe în ritmul și modul cel mai potrivit pentru el, sporind astfel eficiența și relevanța procesului educațional. Mai mult decât atât, inteligența artificială facilitează accesul la educație pentru elevii din medii defavorizate sau zone rurale, oferindu-le astfel o șansă egală de dezvoltare și succes.

Pentru mine, o ocazie excepțională de a învăța ceea ce este eTwinning a fost Seminarul de contact “Innovation and Education –Being Creative with eTwinning”, care s-a desfășurat în perioada 11-13 mai 2023 în Limassol, Cipru. Evenimentul a fost creat pentru profesorii de gimnaziu începători în acțiunea eTwinning. Au participat un număr de 51 de profesori din 11 țări, iar activitățile s-au desfășurat în cadrul complexului Atlantica Miramare Beach Hotel din Germasogeia, o suburbie a orașului Limassol.

Organizarea seminarului a fost impecabilă. Activitățile propuse s-au desfășurat conform agendei seminarului, iar materialele suport au oferit informații precise și detaliate și au inclus

prezentări în format electronic și resurse online relevante pentru subiectele abordate. Subiectele abordate au fost diversificate, iar conținuturile au fost concentrate pe a prezenta elemente de noutate, de inovație ce pot fi aplicate în educație. Fiecare speaker a avut un discurs coerent, accesibil și foarte natural, informațiile fiind primite cu deosebit interes și entuziasm de către participanți.

Trainerii implicați în seminar au fost experți recunoscuți în domeniul inovației și educației, cu o vastă experiență și care ne-au arătat cum putem să utilizăm noua platformă eTwinning. Aceștia au abordat diverse subiecte legate de inovare și creativitate în educație, de evoluția fantastică a utilizării instrumentelor TIC în perioada pandemică, dar și cea post pandemică. A fost adusă în discuție utilizarea inteligenței artificiale în educație, și au fost oferite exemple concrete, soluții și sugestii practice pentru profesorii prezenți.

Pe parcursul seminarului, au fost realizate prezentări interactive, ateliere practice și sesiuni de lucru în grupuri mici. Participanții au fost încurajați să participe activ în discuții, să-și împărtășească experiențele și să dezvolte idei inovatoare în domeniul educației, prin realizarea de noi propuneri de proiecte eTwinning.

Pe lângă activitățile de învățare, seminarul a oferit, de asemenea, oportunități de networking și schimb de bune practici între profesori din diferite țări UE dar și non-UE, cum ar fi Liban sau Iordania prezenți la Seminarul de contact. Aceste momente informale au fost valoroase pentru a întări colaborările viitoare și pentru a dezvolta parteneriate în cadrul proiectelor eTwinning și chiar am discutat despre posibilitatea implementării acestor proiecte eTwinning în cadrul unor parteneriate Erasmus+.

Deoarece acest seminar a fost realizat pentru profesorii care au experiență redusă în eTwinning, din punct de vedere personal, am evaluat domeniile în care doresc să-mi îmbunătățesc cunoștințele și abilitățile legate de inovația în educație și utilizarea platformei eTwinning. Am identificat aspectele-cheie pe care doream să le explorez și să le înțeleg mai bine în cadrul seminarului: inovația în educație, aprofundarea cunoașterii și utilizării noii platforme eTwinning, stimularea creativității pentru realizarea de proiecte eTwinning, explorarea modalităților în care pot interacționa cu profesori și elevi în cadrul proiectelor eTwinning, precum și de modalitatea de integrare eficientă a tehnologiei în procesul de învățare.

În prima zi a seminarului, activitățile au avut loc în Sala "Mermaid" a hotelului. Participanții s-au înregistrat și au fost repartizați în grupe de interese exprimate în răspunsurile

din chestionarul completat înainte de sosire la întâlnirea eTwinning. Dr. Onisiforos Iordanou, Președintele Consiliului de Administrație al Fundației pentru Managementul Programului European LLP, a susținut discursul de deschidere, iar Dr. Stylianos Mavromoustakos, Directorul Fundației pentru Managementul Programului European LLP, a prezentat obiectivele seminarului. Doamna Noni Hadjicharou, reprezentant eTwinning Cipru, a făcut o introducere în eTwinning. Dr. Gregory Makrides, profesor de STEAME2Education la Universitatea Pedagogică din Krakovia și membru al Societății Matematice din Cipru, a vorbit despre "Noi inovații și instrumente pentru învățarea STEAME2 în școlile viitorului". Profesorul de matematică Yiannis Lazarou a prezentat o metodă ingenioasă de a capta atenția elevilor și de a le stimula creativitatea în procesul de învățare a matematicii și științelor, utilizând o abordare STEAM.

A doua zi a început cu o prezentare susținută de Noni Hadjicharou, urmată de trei ateliere interactive care s-au desfășurat simultan. Participanții au avut ocazia să participe la toate cele trei ateliere. Tematica atelierelor a fost: "Calitatea în proiectele eTwinning", "Utilizarea TIC în eTwinning & Instrumente TIC" și "Introducere în Twinnspace". După-amiază, au avut loc sesiuni de lucru în echipe pentru a începe crearea de proiecte. Seara a fost dedicată activităților culturale și de socializare, organizatorii oferind o cină impresionantă cu mâncăruri tradiționale cipriote, astfel, toți participanții au avut parte o experiență gastronomică autentică și memorabilă.

În ultima zi, profesorii, grupați în echipe de proiect, au continuat crearea de proiecte eTwinning. Cu ajutorul specialiștilor eTwinning prezenți la seminar, multe dintre aceste proiecte au fost deja înregistrate și acceptate pe platforma eTwinning. Discursul de închidere al seminarului a fost susținut de Dr. Stylianos Mavromoustakos, oferind o perspectivă originală și profundă asupra evoluției educației și proceselor de învățare. După-amiaza a fost rezervată unei vizite culturale în apropiere de Limassol, în care s-a prezentat regiunea Limassol și au vizitate câteva repere importante din istoria Ciprului (castelul Kolossi și Archaeological Site of Ancient Kourion).

Activitatea de formare desfășurată în cadrul seminarului "Innovation and Education – Being Creative with eTwinning" a răspuns unor nevoi de dezvoltare profesională și personală. Astfel, din punct de vedere al dezvoltarea profesională pot spune că seminarul a oferit oportunitatea de a explora noțiuni și concepte legate de inovația în educație și integrarea tehnologiei în procesul de învățare. Am obținut informații și resurse relevante pentru a îmbunătăți practica mea pedagogică și pentru a aduce inovație în procesul de predare și învățare.

Am avut acces la experiența și expertiza trainerilor, a ambasadorilor eTwinning și a participanților din diverse țări, ceea ce a facilitat schimbul de bune practici și idei inovatoare în domeniul educației. Această interacțiune și colaborare cu profesori din alte țări mi-a oferit perspective noi și inspirație pentru dezvoltarea mea profesională. Am avut ocazia să particip la ateliere interactive și să aplic în practică cunoștințele și abilitățile dobândite în cadrul seminarului. Acest aspect practic m-a ajutat să consolidez înțelegerea și să dezvolt competențe relevante în utilizarea platformei eTwinning și a instrumentelor digitale în procesul de învățare.

Din punct de vedere al dezvoltării personale, participarea la seminar mi-a oferit oportunitatea de a-mi extinde rețeaua de contacte profesionale și de a interacționa cu profesori din diverse medii și culturi. Acest lucru mi-a deschis orizonturile și mi-a oferit perspective noi asupra educației și învățării. Activitățile de lucru în echipă și colaborarea în cadrul proiectelor eTwinning m-au ajutat să îmbunătățesc abilitățile de comunicare, colaborare și leadership. Am exersat munca într-un mediu multicultural și am valorizat diversitatea de idei și de abordări. Experiența de a participa la un seminar internațional și de a explora tematici inovatoare în educație mi-a stimulat curiozitatea intelectuală și mi-a satisfăcut dorința de a fi mereu la curent cu noile tendințe și practici în domeniu.

În concluzie, seminarul de contact "Innovation and Education –Being Creative with eTwinning" a fost un eveniment deosebit care mi-a oferit noi cunoștințe, conexiuni și inspirație. Recomand cu căldură participarea la astfel de evenimente pentru toți profesorii pasionați de meseria lor, dornici de dezvoltare profesională și de explorarea unor noi abordări în educație.

Conceptul de "Inovație și educație" ne amintește că procesul de învățare este unul dinamic, care evoluează odată cu societatea. Este important să fim deschiși către schimbare și să adoptăm practici și strategii inovatoare pentru a asigura o educație de calitate, care să pregătească elevii pentru viitor. Navigarea către transformare în educație necesită viziune, curaj și deschidere către schimbare. În măsura în care eTwinning și Inteligența Artificială continuă să se consolideze ca resurse valoroase, educația va deveni mai adaptabilă și mai relevantă pentru cerințele secolului XXI, pregătind astfel elevii pentru o lume complexă și în continuă schimbare.

## 9. The opportunity for diversified practical activities

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### **Rezumat**

*The complexity of practical activity knowledge in the technological domain requires a large amount of time dedicated to the specific works. Due to the diverse activities chosen by each high school for the practice, the students can benefit to enlarge their abilities by exchange period during practice program.*

Cuvinte cheie: Erasmus, diversified practice, welding, masonry, environmental protection

Technological high schools have the major advantage of being close to everyday activities through the subjects studied in the specialized Modules, both in class but especially during practice in the laboratory or at economic partners.

Whether we need to install an accessory on a bicycle, whether we need to replace a gasket on a faucet, take water or soil samples to check if the environment around us is healthy or change a lighting object, we encounter situations studied at schools with a mechanical, construction, environmental protection or electrical technology profile, respectively.

Each of the specializations in turn includes other subfields, thus there is a diversification of knowledge such as in the field of construction: construction works, installation works, roadworks, bridges and railways, or in the field of environmental protection biodiversity conservation, waste management or the collection and analysis of water, air or soil samples.

The technological advance in each field has led to complex equipment, tools and working devices, to complex knowledge in the field but also of knowledge of how to use the equipment. Due to the same number of hours dedicated to practical activities, the process of teaching and learning information fails to cover all the basic information of the activities carried out within a specialization.

For students, the exchanges offered by the Erasmus+ program represent a first chance for a trip outside the country but more importantly a necessity for the enlargement of the students interaction with a diversified environment.

Within the Technological High School of Construction and Environmental Protection Arad (LTCPM Arad), in the school year 2022-2023, 16 students participated to an exchange in Cyprus, 059996-MOB-1464507. During the mobility, the students from the Construction specialization were able to find out the methods of construction execution, the materials used and the production technology, and the students from the Environmental Protection specialization learned about the problems faced by the local authorities regarding the protection of the environment, especially the water that surrounds the island.

Of course, this exchange improved the students general view of the fields of study from each specialization, but there is a desire to diversify the practical activities even more.

In this way, we highlight the usefulness of education fairs. Between May 3-5, 2023, in Arad, the 2023 edition of the Education Fair was held, with the support and in partnership with the Arad Chamber of Commerce, Industry and Agriculture, the Arad City Hall, the Arad County Council. More than 4,000 students from both secondary and high school levels were able to find out information related to the fields of specialization of the educational units, with 54 stands available.



Figure 1 – The exhibition stand of the Technical High School for Constructions and Environmental Protection of Arad

In addition to the benefits of disseminating information about the knowledge that is transmitted in each field, this year's Education Fair brought an additional chance for the students of LTCPM Arad. The chance lies in the initiation of a collaboration between the Moravaroși Technological High School and Vocational School in Szeged and the Technical High School for Constructions and Environmental Protection in Arad. After a short discussion, a visit to Szeged was carried out where complementary activities could be established to diversify the practice within the institutions.

Thus, it was established that students from Szeged can come to Arad in exchange for experience to specialize in masonry work, Figure 2, or carpentry, Figure 3, and students from LTCPM Arad can learn to build steel constructions by welding, Figure 4.



Figure2 – Practical activities at LTCPM Arad: a) mortar mixing, b) plastering.



Figure 3 – Carpentry activities at LTCPM Arad.

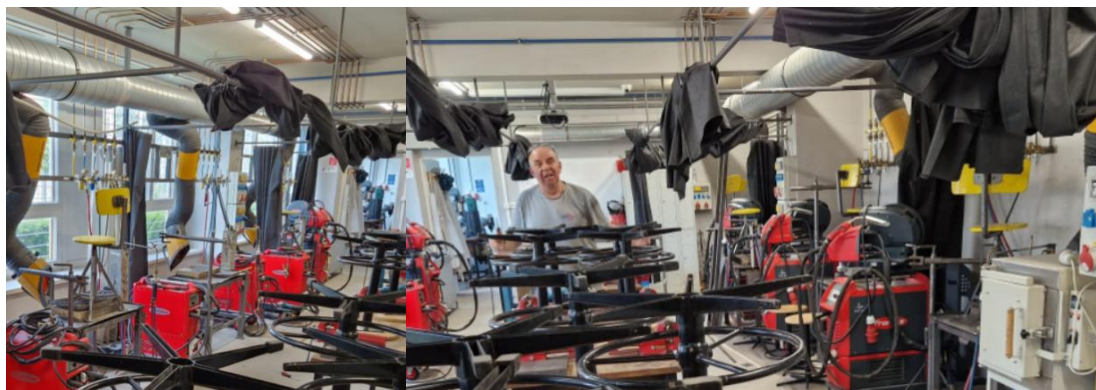


Figure 4 –Moravaroși High school welding laboratory.

Similar, through the fields of study of the high schools, Industrial Chemistry and Environmental Protection, students benefit from a common but diversified point for the specific applications of the previously mentioned fields.

In the field of environmental protection and industrial chemistry, LTCPM Arad has as a partner for practical activities the Lunca Mureșului Natural Park, which benefits from a very well-equipped laboratory, where students can proceed their practice hours, Figure 5.



Figure 5 – Laboratory activity for environmental protection study.

We hope that in the near future the collaboration can be officialized within an Erasmus agreement benefiting from the advantages offered by this program even if the distance between the educational institutions is close.

In conclusion, the technical field of high schools presents a multitude of activities that can be carried out to acquire practical knowledge. The complexity of these activities is hardly covered by the present school curriculum. Exchange programs are beneficial because, in a short period of time, students can diversify their skills by participating in different practical work carried out by the exchange partners.

## 10. Erasmus+ VET – importance and chance for the schools

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### *Abstract:*

*The aim of this short article is to draw attention to the problems of vocational schools in Poland and to partially solve them through the correct use of the Erasmus+ - Vocational education and training programme.*

**Key words:** Erasmus+, Vocational Education and Training, VET

Vocational education is currently quite a challenge for schools. Vocational education (at least in Poland) is underfunded. School principals are struggling to hire specialists willing to work for the rates the Ministry offers. There is a shortage of practitioners from the world of work (from industry), and thus a shortage of quality education. So what if the school is able to obtain funding to purchase modern laboratories, if the staff is unable (or unwilling) to operate the laboratory stations.

The apprenticeship system in Poland allows to spend only eight weeks with the employer throughout the entire education cycle (a few years ago it was only 4 or even 2 weeks). This is not enough to encourage entrepreneurs to cooperate effectively, where the trainee is expected to stay in the company for 3-6 months. This is a big problem for people responsible for organizing internships. Vocational schools themselves lack practical classes, often there is too much theory. There are currently no (as it was before) the so-called. workshops, during which students acquired a lot of key competences and performed simple manual activities. Mechatronics, IT or electronics technicians can, for example, program the device, but they are not able to hammer a nail or cut a board with a hand saw. In my opinion, vocational education has become “too modern”. In primary schools, during technical classes, teachers conduct theoretical classes and simulators are used. There is no workshop, no tools, too strict safety requirements, teachers are

afraid of liability in the event of an accident. As a consequence, young people are not prepared for normal functioning after finishing education.

It is obvious that every form of support is needed and schools are looking for means to give vocational education a chance to be promoted and the quality of education to be high. One of the ways are EU programs, in particular Erasmus + VET, in which the Technical School Complex participates.

There is no doubt that such programs are needed, provided that they are implemented responsibly, where quality is the focus. The key role here is played by partners (the so-called intermediary institutions), which are not always able to meet their obligations, accepting, for example, too many groups at the same time, organizing courses in rented rooms that are de facto theoretical lessons, instead of providing an internship in a real company. Intermediary companies do not always know (or do not understand) the realities of schools sending their students for internships abroad. There is too much simplification and marginalization of important matters (e.g. they do not understand that a mechatronics technician is not the same as a mechanics technician, or that each profession has its own apprenticeship program and cannot be changed). Therefore, an important role of the coordinator is to talk to the partner, to get his/her way and to be consistent in his/her actions. Otherwise, it may turn out that internships will not bring the expected results.

Of course, the coordinators are aware that the organization of internships is not easy, in particular, that there are language barriers, the duration of the internship is short, or there are bureaucratic or logistical problems. However, the organizers are not expected to perform any very complicated (responsible) tasks in the host company. On the contrary, the practice may touch on simple problems (simple tasks) indicated at the beginning of the article, which will certainly be good for the mobility participant.

Evaluation of recently implemented projects by ZST shows that mobility participants clearly indicate that they have acquired and improved practical skills that will most likely increase their chances of finding a satisfactory job after finishing school or university. They are realists,

because they know perfectly well that their mobility will not increase their chances of getting into university, but it can contribute to choosing the right field of study. Thanks to the internship, they gain a better idea of their goals in personal and professional life; they become more self-confident and convince themselves that their skills are at a high level. They become more independent and responsible; stop being afraid of making decisions. Some of them learn to find solutions in difficult and unusual situations. They learn more about new and useful ways of using digital technologies and they are more willing to use modern, specialized digital technology in learning vocational subjects. The completed internship positively affects the result of the professional qualification exam.

Participants of the internship, thanks to the completed mobilities, can imagine working in another country, as well as working in an international environment. They also point out that they are more aware of the values of other cultures, better understand concepts such as democracy, justice, civil equality and civil rights, are more tolerant towards other people and behaviours, are able to cooperate with people from other backgrounds and cultures as well as those with different views.

Personally, I believe that such projects are invaluable help for young people, because they teach soft skills that our education system has so far forgotten, and labour market research suggests that the demand for such skills is constantly growing. Until recently, these immeasurable skills such as assertiveness, communicativeness, the ability to work in a team, good work organization or resistance to stress were not taken into account on the labour market, now employers appreciate them more and more. And these are the competences taught by projects implemented with the financial support of the European Commission under the Erasmus+ program.

## 11. THE INTERNSHIP OF THE STUDENTS FROM THE TECHNICAL COLLEGE „ION HOLBAN” IASI

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**Abstract:** *In the context where vocational and technical education requires a genuine openness of schools to the labor market, the Erasmus program comes to meet the need for students' professionalization to improve their professional skills and graduates' employability in a labor market shaped by technological progress and internationalization. The internships conducted in European companies have had a significant impact on the participants from "Ion Holban" Technical College in Iași, contributing to the development of their professional, social, civic, and digital competencies.*

*The necessity for curriculum flexibility at the school level can be achieved through the elaboration of various models of Local Development Curriculum, adapted to the local context and capitalizing on new learning methods assimilated from the European context. As a result, graduates will acquire specific and well-rounded transversal competencies, increasing their chances of professional and social integration in the labor market.*

**Keywords:** *Erasmus+, professional development, skills, entrepreneurship, professional integration*

In Romania, there is a shortage of qualified labor due to existing issues in the design of the vocational and technical education system, as well as the migration of skilled workers to other developed European countries. In these circumstances, an education system is necessary to contribute to the increase of economic competitiveness, ensuring that vocational and technical education is connected to the demands of an ever-changing labor market. According to the authors of this article, Vocational and Technical Education is not a stable and independent system but an integral part of the national education system, where the quality depends on the quality of human resources that can have a beneficial effect on education. Therefore, access to

the ERASMUS+ program provides different perspectives and approaches to efficiency in the VET field, benefiting both students and teaching staff.

The Erasmus VET accreditation obtained by "Ion Holban" Technical College in Iași allowed the organization to carry out cross-border professional practical training activities and develop sustainable international cooperations to internationalize the school. The students from the organization have acquired key transferable competencies required in economic domains, tourism and hospitality, aesthetics and personal hygiene, and textile leathercraft through formation and specialization training internships conducted in prestigious companies from European countries.

The projects implemented during the accreditation period 2021-2023 at "Ion Holban" Technical College - Year 1: Project No. 2021-1-RO01-KA121-VET-000012711 and Year 2: Project No. 2022-1-RO01-KA121-VET-000059452 - have

elevated the level of training quality for our students by imparting competencies that meet the specific demands of the European labor market. A total of 51 students have completed practical training internships for a duration of 2 weeks per year in Granada, Spain; Limassol, Cyprus; Barcelona, Spain; and Dakovo, Croatia.



Image 1: Preparation of traditional Spanish dishes

In the field of tourism and hospitality (Image 1), the students' training activities focused on organizing the workplace, inspecting the equipment, machinery, and appliances, as well as the vessels and utensils necessary for culinary production. They also verified the raw materials and auxiliary materials used in the food processing, performed primary processing operations, and carried out thermal processing operations while adhering to the regulations underlying the culinary technological processes. The students learned how to prepare basic and traditional dishes (such as paella, tortilla, gazpacho, etc.), arrange them on plates and platters, and decorate the dishes with vegetable-based elements for presentation. They were trained to use specific utensils and machinery for processing raw materials under conditions of hygiene, safety, and security, and they also engaged in cleaning activities in the work area.

In the field of Aesthetics and Personal Hygiene (Image 2), participants in the practical training stage performed client preparation operations: protecting the client's clothing and seating them at the professional chair workstation. They carried out hair washing operations while observing ergonomic positions and performed modern hair regeneration treatments using creams, masks, and keratin serums. Additionally, they executed haircuts with modern techniques such as slice, pivot point, under-cut, free hand, and deep point.



Image 2: Women's haircut execution

In the economic domain (Image 3), specific tasks focused on observing work activities in the economic field in practical European contexts.

The participants in the economic project carried out the following training activities: they assisted in preparing, verifying, correcting, preserving, and archiving specific primary documents (tax invoices, goods accompanying notes, receipts, fiscal receipts, cash registers, goods receipt notes, management reports, inventory records). They sorted various types of merchandise, unpacked and checked delivered products for quantity and quality, decorated stands, and prepared and labeled products for sale.

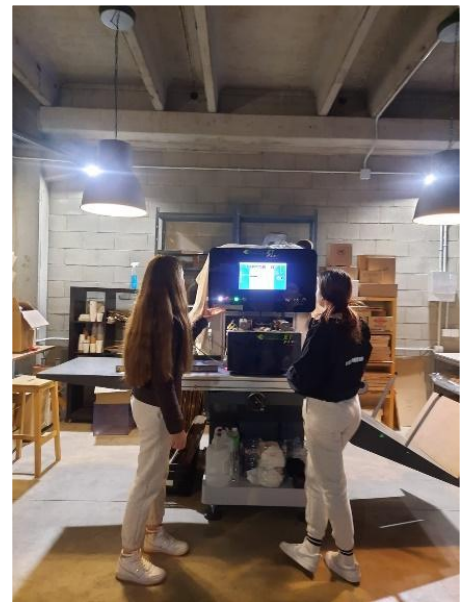


Image 3: Utilization of software in merchandise management.

The need for adaptation and transformation of the school has materialized through the improvement of the content of the Local Development Curriculum to meet the demands of the labor market, using content and strategies adopted from European partners. The choice for such a Local Development Curriculum resulted from the necessity of the role of vocational and

technical education and the responsibility towards the requirements of the local labor market.

The goal of implementing the local development curriculum can be summarized as follows:

- The deepening of communication skills, teamwork, and the ability to take on responsibilities aims to facilitate the transition of students from school to an active life.
- The acquisition of new competencies is essential for the integration into the labor market.
- The acquisition of knowledge and skills for initiating and developing a personal business in a specific field of expertise.

An example of curriculum flexibility through the Local Development Curriculum is "Entrepreneurial Skills in Tourism," offered as part of the educational program for professional qualifications in the field of "Tourism and Hospitality," which is a component of the specialized culture and weekly practical training for 11th-grade students in the vocational high school track. This module is allocated a total of 66 hours per year, as per the curriculum plan. The module is centered on learning outcomes and aims to equip students with knowledge, skills, and attitudes necessary for employment in one of the occupations specified in the relevant Sectoral Professional Profiles (SPPs) for level 4 professional qualifications in the field of "Tourism and Hospitality," or for further training in a higher-level qualification.

The learning content can be summarized as follows:

1. Organization of a company
  - 1.1. Definitions of economic units: enterprise, company, commercial entity.
  - 1.2. Forms of organization for economic units
2. Introduction to Entrepreneurship
  - 2.1. Definition of entrepreneurship
  - 2.2. Entrepreneurial profile
3. Starting Your Own Business
  - 3.1. Choosing the right business
  - 3.2. Generating business ideas
  - 3.3. Evaluating a business idea
  - 3.4. Developing a business idea
  - 3.5. Options for launching a business
4. Business Plan
  - 4.1. Developing a Business Plan

4.2.What is a Business Plan?

4.3.Business Plan as a Working Tool

4.4. The Need for a Business Plan

4.5.Content of a Business Plan: The essential components of a business plan, including the vision, strategies, human resources, market analysis, and objectives.

4.6.Sources of Financing

5. Marketing Plan:

5.1.Market: Analyzing the characteristics of the market, market trends, current and potential customers, and understanding consumer needs.

5.2.Competitors

5.3.Marketing Mix: Developing a comprehensive marketing mix, which includes product, price, promotion, and placement.

5.4.Product

5.5.Distribution and Placement: Planning the distribution channels for both retail and wholesale sales.

5.6.Product Promotion Strategy: Formulating a strategy to promote the product, considering the product's life cycle and implementing appropriate marketing techniques throughout its lifecycle.

6. Human Resources Needs:

6.1. Organizational Structure

6.2.Staffing Requirements

6.3.Employee Compensation

Examples of innovative teaching-learning methods, consolidation-systematization, problem-solving, and creativity stimulation that can be used in educational activities are:

<b>Methods of Teaching-Learning</b>	<b>Methods of Consolidation and Systematization of Knowledge and Assessment</b>	<b>Problem-Solving Methods through Creativity Stimulation</b>
Reciprocal Teaching/Learning Method	Cognitive Map or Concept Map	Brainstorming
STAD (Student Teams Achievement Division)	Conceptual Matrix	Stellar Explosion

Jigsaw Method	Cognitive Chains	Six Thinking Hats Method
Waterfall Method	Cause and Effect Diagram	Carousel Technique
TGT - Team Games Tournament Method	Spider Map (Webs) Technique	Case Study
Share-Pair Circles Method	Lotus Blossom Technique	Phillips 6/6 ABCDE Method
Pyramid/Snowball Method	R.A.I. Method	6-3-5 Technique Delphi Method

The added value brought by the project was the study of personality development and academic activities of the students participating in the Erasmus+ project. The study highlighted the following aspects:

- The formation and development of practical and applied skills among the project participants complement and continue their theoretical education;
- The international exposure diversified the cultural, social, educational, and historical representations of the participating students, which was observed during class hours. The participating students showed more active and engaging participation in classes, often providing practical examples and information to enhance the understanding of the learning content. The transfer of information and interdisciplinary knowledge demonstrated by the students during the project is evidence of their understanding and active involvement during the training period;
- The increased interest of students in theoretical and practical learning is a result of heightened academic motivation, leading to a decrease in school absenteeism;
- Discussions with parents indicated a change in leisure time preferences, with mobility participants showing more interest in international information, improving English communication skills, and focusing on technological and digital aspects;
- A significantly more cooperative social interaction was observed, with a greater willingness to provide support. The group dynamics emphasized the promotion of positive character traits, cooperation, friendship, collaboration, and harmonious involvement in social life.

- The dissemination of information by students and teachers enriched knowledge and imagination among peers from other classes and the entire school, leading to increased competition in academic results and inspiring new aspirations for mobility.

In conclusion, it is evident that Erasmus+ projects have a positive impact and increase students' interest in vocational and technical education by offering opportunities for professional training at European standards. Collaborating with foreign partners for internships leads to better integration of graduates into both the national and European job markets.

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## 12. THE DEVELOPMENT OF USEFUL COMPETENCES IN THE FUTURE CAREER OF STUDENTS

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*Through the project KA120-VET - Erasmus accreditation in vocational education and training-2021-1-RO01-KA120-VET-000046850, we proposed the involvement of students and teachers from the real profile, mathematics and computer specialization in international mobility activities in order to acquire knowledge, develop skills and attitudes to evolve personally and professionally in areas such as creating web pages and web applications, using hardware and software technologies. For computer science teachers, we proposed the development of skills in creating and programming educational robots, combating bullying and using ICT in the educational process at European standards.*

*Keywords: skills, Erasmus+, career, workplace, computer*

The project was written for the students from the real profile, the mathematics and informatics specialization and for the teachers of informatics from the "Ienăchiță Văcărescu" National College from Târgoviște.

The objectives of the project are

1. Developing the skills to create web pages and web applications with educational themes for students from the mathematics-informatics specialization
2. Developing the skills of students from the mathematics-informatics profile, for the recognition and development of skills in the use of software and hardware technologies
3. The development of IT teachers' skills in creating and programming educational robots, combating bullying and the use of ICT in the educational process at European standards

In the first year of project accreditation, three streams were run, one stream for two teachers and two streams for students.

The stream for computer science teachers took place between February 27, 2023 and March 3, 2023, during which two teachers from the "Ienăchiță Văcărescu" National College participated in a training program at Omiros College, Glyfada in Athens, Greece "Technology in Classroom - ICT in the Digital Era - Tablets Educational Apps". Professors Cîrstea Nicoleta

Ancuța and Chiriac Beatrice Mihaela had the opportunity to learn about how new technologies can be used in the classroom with students. During the training, the female teachers practiced applications that allow the creation of web comics, interactive presentations, e-books, interactive learning games, experienced a virtual laboratory and virtually visited different places in the world.



Figure 1. Application made with Augmented Reality

A stream consisting of a group of seven students accompanied by a teacher participated in a mobility in Salamanca, Spain, between 06-17 March 2023. The students participating in the mobility were: Chira Alexandra-Elena, Cotescu Iris-Andrada, Erculescu Sara-Ioana, Gîduță Trifan Luana Maria, Luțescu Richard-Ionuț, Mărășescu Denis-Ștefan, Stănescu Radu-Ștefan. The period of the VET professional training internship was carried out at the company Tellus Spain SL, location where they communicated both in English and in Spanish, during which the students improved their linguistic skills of oral communication in English, but also in Spanish. Through practical exercises, assessments and examples, students assembled and disassembled computers, installed operating systems, repaired computers, learned about TCP/IP, DHCP, IP, DNS, browsers, about the services offered by the Internet. The students' feedback was exceptional, expressing the usefulness of the acquired skills for their future career.



Figure 2. Students assembling a computer in the stream in Salamanca, Spain

A third stream consisting of a group of seven students accompanied by a teacher participated in a mobility in Mersin, Turkey, between 23.04.2023 and 6.05.2023. The students participating in the mobility were: Alexandru Victor Ștefănel, Constantinescu Daniel, Diaconu Theodor Matei, Matei George Decebal, Popa Diana Ioana, Stan Ioana Adelina, Stanciu Greulescu Mara-Ioana. The VET vocational training period was carried out at three companies within the Technopark University of Mersin, namely: within the Kardelen Yazılım San companies. Ve Tic. ltd. You know, Hemengeliriz Teknoloji San. ve Tic. Anonymous Ltd., WİSNET Teknoloji A.Ş.

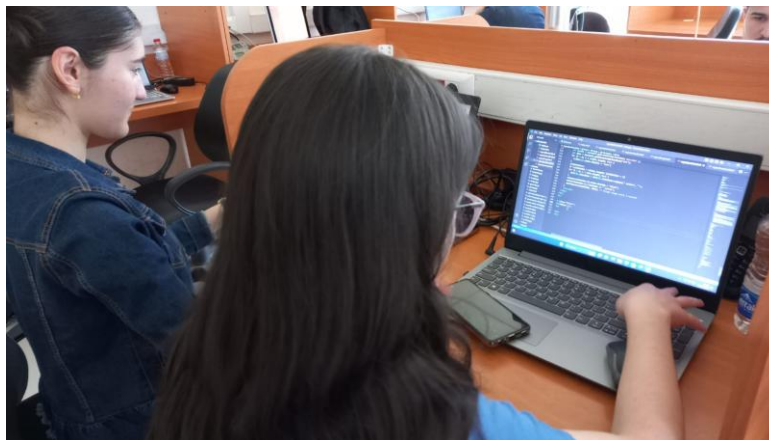


Figure 3. Students working to create websites with educational themes

All three streams we proposed were achieved, and students came away better prepared for a career in web design and hardware, software, fields that are in full development at the moment.

Upon returning from the mobilities, in the College Amphitheater we carried out a dissemination activity in which all the students presented what they achieved in the mobilities, what they learned and what experiences they had.

The teacher ladies held a course for the teaching staff of the College, called "Interactive applications for learning". In this course, the information received at the course in Greece was disseminated, where they learned about: Augmented Reality. Virtual reality, STEM robotics, Gamification of education, Digital Storytelling Tools – Web 3.0. The course was particularly interesting and valuable through the multiple ways to apply the learned applications in the classroom.



In the next school year, 2023-2024, a new selection will be made for 14 students and 2 teachers who will participate in Erasmus+ KA120-VET mobility.

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### 13. M.E.P. Europrojects Granada®, S.L.

team counts on an extensive experience of more than 14 years working with European Mobility projects and organising training mobility projects for over 8.615 mobilities including about 7.352 students and 1.263 teachers coming from 26 different countries.



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The image features a dark blue background with contact information on the left and a large circular frame on the right. The frame contains a photograph of the Alhambra in Granada, Spain, with its orange walls and towers set against a backdrop of green trees and distant mountains under a blue sky. The circular frame is decorated with a yellow and blue striped border.



## HOW IT ALL STARTED

M.E.P. counts on a long experience working in European Projects and organising mobilities for many participants with enterprises all over Europe



- a. [Good Practice at M.E.P. EUROPROJECTS GRANADA – Acrobat Document](#)
- b. [Good Practice at M.E.P. EUROPROJECTS GRANADA – PowerPoint Presentation](#)

## 14. Bridging Cultures and Skills by Welding

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### **Abstract**

*The Erasmus program has been an incredible opportunity for students and professionals from Santana to expand their horizons, gain valuable experiences and enhance their skills through european collaboration. One such innovative project that caught the attention of welding enthusiasts and engineers is the "Practice and Succeed" Erasmus+ project held in Spain. This article delves into the essence of the project, its objectives, and its significance in promoting welding expertise and intercultural understanding.*

**Keywords:** *welding, skills, Erasmus+ project, good practice*

Welding bridging cultures and skills, in the of the Erasmus + 2022-1-RO01-KA121-VET-000054411 project. 28 students from grades aX-a, from the STEFAN HELL SÂNTANA TECHNOLOGICAL HIGH SCHOOL, are doing a three-week specialist practice for mechanics and trade at companies in Granada, Spain. After the first week of practice, the students were appreciated by the representatives of the host companies for their diligence, skill and motivation to learn more. In addition to specialized skills, students develop their language skills in English and Spanish, intercultural skills, take on new responsibilities. Erasmus project was a collaborative effort between several European vocational schools, universities, and industries. The aim was to explore different welding techniques, best practices, and safety measures while fostering a mutual exchange of knowledge among participants from various countries. The host institution in Spain played a pivotal role in providing a vibrant learning environment for this unique cultural experience.

The main Objective of the mobility was skill enhancement: The primary focus of the project was to enable participants to acquire new welding skills and improve existing ones. Workshops and training sessions conducted by seasoned professionals exposed students and professionals to state-of-the-art welding technologies and methodologies.

With cross-cultural learning by bringing together students and professionals from different european countries, the project aimed to facilitate a rich cross-cultural experience. Participants not only learned about welding techniques but also about the diverse perspectives and approaches to this craft across various nations.

The project fostered collaboration between school and the industry. Partnering with local businesses allowed participants to gain insights into real-world welding challenges and their practical solutions.

As English was the primary language of communication during the project, participants improved at the same time their spanish language skills, which further enhanced their employability in an increasingly globalized job market.

The "Practice and Succeed" project offered a diverse range of activities designed to achieve its objectives:

a) Intensive Welding Workshops: Participants engaged in hands-on workshops, where they learned various welding techniques such as Shielded Metal Arc Welding (SMAW), Gas Metal Arc Welding (GMAW), and Tungsten Inert Gas (TIG) welding.



b) Guest Lectures and Seminars: Experts from the welding industry delivered insightful lectures on advanced welding technologies, safety protocols, and industry trends.

c) Cultural Exchange: To promote intercultural understanding, participants shared their traditions, cuisines, and customs during cultural exchange events. On their free days, the students had a cultural program in the cities of Malaga, Cordoba (world heritage city with the Mezquita cathedral) and, of course, in Granada, where they visited the Alhambra.



d) Industry Visits: Visits to local manufacturing units and welding fabrication workshops provided a practical understanding of welding in real-world applications.

e) Project Work: Collaborative projects in mixed-nationality teams encouraged participants to apply their newfound knowledge and work cohesively, thereby enhancing teamwork and problem-solving skills.



The impact and outcomes:

The " Practice and Succeed " Erasmus+ project left a lasting impact on all participants involved:

- a) Enhanced Skills: Participants gained confidence in their welding abilities and acquired new skills, making them more competent and employable in the welding industry.
- b) Cross-Cultural Bonds: Friendships and professional networks formed during the project created lasting ties that transcended borders and strengthened european unity.
- c) Industry Connections: Partnering with local industries improved participants' awareness of employment opportunities and potential career paths in the welding sector.
- d) Personal Growth: The exposure to a different culture and work environment broadened participants' horizons and boosted their adaptability and resilience.



The Erasmus+ project in Spain, financed by the European Union, successfully brought together aspiring welders and professionals from diverse backgrounds, fostering a harmonious blend of welding expertise and cultural experiences. By promoting skill development, intercultural understanding and industry collaboration, the project showcased the true essence and impact of Erasmus+ programs in transforming lives and building a stronger, more connected Europe.

## 15. EDUCATION - THE SOLUTION AGAINST VIOLENCE

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**MOTTO:**

*"Education is a vaccine against violence" (E.J.Olmos)*

*My proposal here is a concern that has started to become a necessity, namely the modern school is a school without violence.*

*Violence of all types and between all structures that belong to the educational act must be reduced, and any contribution, however small, that brings a decrease of even 5% represents a real success and a benefit to education and the whole world.*

*Through the curricular activities, but also extracurricular, through the everyday activity, I tried to highlight the sources, causes and effects of the phenomena of violence in the school, but also the elaboration of a strategy at the institutional level regarding the improvement of the phenomena of violence at the school level.*

**Keywords:** *violence, bullying, awareness, community, future*

Human violence is one of the great problems of contemporary society.

The complexity of the phenomenon leads us to talk not only about school violence, but also about violence in general, given that there is a determining link between them.

Examples of types of violence can be encountered daily, both in the public and private space, as well as in the institutionalized public space, for example, in school.

On the one hand, most of the time, the child makes the first contact with violence within his family, then extending the violent behaviors to other people from the extra-familial environment.

On the other hand, the violent behaviors learned in the extra-familial environment affect the family members.

Today's students are more and more exposed in school to the "bullying" effect.

Preventing and reducing the phenomenon of school violence through activities specific to school age, awareness of the importance of interpersonal relationships based on understanding and acceptance is a continuous process, with the involvement of all actors at the school and community level.

We, the teaching staff, try every day, through various forms, to make the state of harmony, understanding, tolerance, friendship, love last and manifest permanently.

I carried out many activities, addressing all forms of aggression/violence, from emotional, verbal, physical and cyberbullying.

Through games, debates, workshops, practical activities, collages with relevant messages, mandalas, exhibitions, the reading of some texts, the media coverage of representative cases, sports competitions, media presentations and ppts, I bring student-student, student-teacher, student-parent, with all the problems (teasing, physical and verbal intimidation, insults, arguments, insults, harassment, etc.).

From the desire to assert themselves or impose themselves, children and adolescents manifest themselves violently, and most of the time the environment develops a competitive spirit among students, which can be taken to extremes, causing conflicts, some serious.

Throughout this year, through the curricular and extracurricular activities planned and carried out, I brought enthusiasm, interaction, joy to the souls of my students and more.

The proposed exercises and games allowed us to practice thinking and knowledge and self-knowledge skills, being a real means of learning, relaxation and fun, socialization, practice and expression. "Words that make hearts bloom"-game exercise, "Are you really a bully?" test, "No thanks!" method, didactic musical game- "Musical chairs", "Apples" are just some of the



most requested and loved ones subjects/titles of my students.

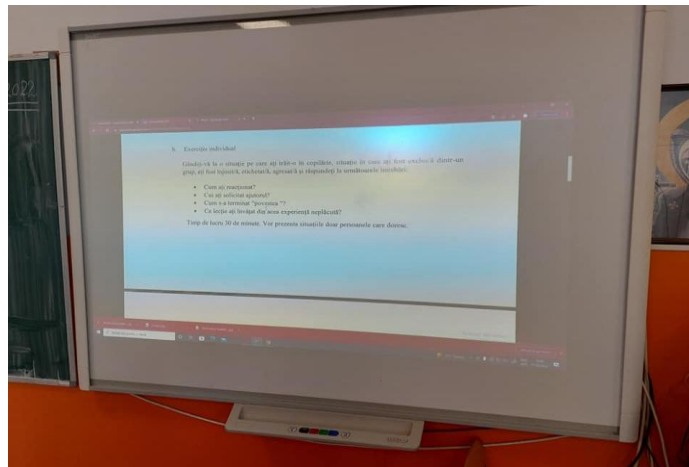
musical game- "Musical chairs"

I was surprised by the sincerity and openness of the children, by the expression of their own feelings without inhibitions, by the understanding of the situations and the empathy shown, and this gave me hope to continue.

The discussions that took shape around the subject revealed moments of bullying experienced/encountered in school life, as well as extracurricular ones.

The most surprising thing for me was the confidence to share their experiences, to recognize their own mistakes and those of others, not to judge, but to look together for help/avoidance/correction solutions for the future.

The activities aimed and largely achieved the following objectives: the identification and evaluation of the scale of the phenomenon of violence in the school and in its immediate environment, the awareness of all actors in the school regarding the sources, causes and effects of the phenomena of violence in the school, but also the development of a strategies at the institutional level regarding the amelioration of the phenomena of violence at the school level.



reflection exercise

The children loved activities of this kind, stating that they managed to get to know each other, to discover themselves, to enjoy everything that surrounds them, to better control their emotions, to be more united, to tolerate each other, to be a team.

I am attaching some thoughts and impressions of my students, after such exchanges of good practices.

"The most beautiful day, because I understood and I won't be upset if I lose sometimes" (Ianis)

"Today's activity - a ray of sunshine for me" (Daria) "Even if I'm afraid of some animals, I won't hit them again" (Darius)

"Now I know why some colleagues avoided me. I won't be upset anymore!" (Iustin)

"A rainbow day" (Raisa), "Thank you, Lady! I will not forget these teachings!" (Erika)





## **Prof. Dr. Stefan Walter Hell, membru al Academiei Pontificale de Științe de la Vatican**

Fundația Werner-von-Siemens-Ring îl onorează pe cercetătorul Max Planck, Stefan Hell, pentru realizările inovatoare în științe tehnice. Inelele, realizate special pentru cercetători, le-au fost prezentate pe 13 decembrie 2022 la Berlin.

Cel de-al 41-lea inel Werner von Siemens a fost acordat Prof. Dr. Stefan Hell, de la Institutul Max Planck pentru Științe Multidisciplinare, pentru dezvoltarea nanomicroscopiei, care permite analizarea nivelului molecular în celulele vii.