

LEARNING BY COMPETING

Promotion of Training in Robotics and of mobility, by the participation in International Competitions in Robotics

KR202-062973



Co-funded by the
Erasmus+ Programme
of the European Union



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IO3:A5 – Round Table: led by Conform

All partners will invite the External Group of Experts from each country and discuss the pilot testing and its main findings. Since an international expert round table was foreseen and no budget had been allocated for participants' travel, the partnership decided to hold it online (also due to different situations regarding the Covid Pandemic in different partner countries),



- * Present the pilot testing actions and also main findings.
- * Receive input form the external group of experts who will participate

Conform, after having agreed a date with partners using a **doodle**, (**23rd June, 2022 at 11.00 CET**) to hold the round table online, prepared an invitation that it sent to partners who then used it to contact possible experts.

All partners were asked to ensure the participation of **at least 1 expert** (experts or professionals in the areas of pedagogy, technicians in robotics, technology teachers, recruiters).

Participants were given a document containing **guidelines on how to participate**.

The round table was hosted on **ZOOM**. This allowed **registration and recording**.

A presentation was prepared by DEFOIN and validated by Conform

The moderator from Conform S.c.a.r.l. (Brunella Maio) used the presentation to **present the project and the competitions** to all participants and at the end of the presentation, **the experts were asked questions** and the moderator then sought to invite others to comment and to facilitate the work of the group.

Moderator profile:

Brunella Maio: With a degree in languages from Oxford Brookes University she began her career in specialist recruitment in London. After relocation to Italy, she now has over 25 years of experience in European project management working on Equal Phase 1 and 2, Grundtvig, LDV, LLP TOI, ERASMUS+ projects to name but a few. A native English speaker but speaks perfect Italian and has good knowledge of French and Spanish. She has considerable experience in the management of international conferences, seminars and thematic workshops. She also has a wealth of experience in presenting interactive, educational pills in diverse topics, in English, developed in Chroma Key environments, recording of voice overs for audio-visual materials, translating research reports, books, apps, video games, websites, manuals, brochures, and tutorials.

Participants and external experts



Italy

Virginia Rosania: Conform Scarl

She is a Project Team Manager responsible for the development and coordination of multi-actor transnational networks for the conception, design and management of initiatives for the competitive growth of people, territories, and companies with professional specialization in the elaboration of models and tools to develop the skills of target groups including the assessment of learning outcomes as a Technician in the planning and implementation of assessment activities, in the management of learning groups in blended mode for methodological, digital and pedagogical upskilling of teachers, educators and trainers in light of didactic and methodological expertise that is moving towards forms of coaching and team coaching.

Clelia Castellano: Istituto Suor Orsola Benincasa

Professor Clelia Castellano, Head of the Department of Multisensory Methodologies at the Istituto Suor Orsola Benincasa. They provide a personalized method that applies multisensory tools to improve language learning. She has undertaken research work in Paris and Naples with numerous publications. She has also gained significant experience in the management of international projects and the validation of training tools. She has actively participated in all the design, implementation, development and testing activities of the Erasmus + KA2 FABULA and Aprender Jugando projects.

Participants and external experts



Italy

Francesca Borzachelli: Istituto Suor Orsola Benincasa

She is a teacher at the Moral Institute of the Suor Orsola Benincasa Institute in Naples. She is a graduate with full marks and collaborates in the research and teaching activities of Professor Clelia Castellano as an expert on the subject for the chairs of Sociology of education and the family and Early Childhood Social Studies. She has worked in the experimental European project Erasmus + "Aprender Jugando" at the Suor Orsola Benincasa Institute. She has organized animated reading workshops for the inclusion and integration of children with social hardships at the Banco di Napoli Foundation for Child Care. She has considerable skills in the field of experimental and digital teaching.

Participants and external experts



Italy

Irene Campagnolo: IIS EUGANEO

She graduated from Padua University with a degree in mathematics. She has been teaching IT at the Euganeo technical institute in Este (PD, Italy) for about 20 years. In the last 5 years she has dedicated most of her time to introducing robotics in the school where she teaches, using electronic boards such as microbit, raspberry and raspberry pico. She holds training courses for teachers of all levels, first through Ambito22, and from the beginning of this year with Scuola Futura. She is passionate about all kinds of technology and drones.

Carla Giroto: IIS EUGANEO

With a degree in languages from the Ca' Foscari University in Venice she had some job experiences before starting teaching in primary, junior high schools and high schools. She has been teaching since 1995 and specifically at IIS Euganeo in Este (Padova) since 1999.

She has been organising and taken part in Comenius and Erasmus + projects for more than 15 years. Italian is her mother tongue. She can speak English, German, French and can easily communicate to Spanish speaking people.

Participants and external experts



France

Frédéric Gotzinger

He is MiFID II program director deputy for Societe Generale private banking at Societe Generale Private Banking. He is also Professor at Master 2 degree at Paris Ovest University for courses about “architecture of information system and project management”. He has a background of engineer from CentraleSupélec

Spain



Belén González

She has a degree in Psychology from the UAM and a Master's Degree in Social Psychology from the UCM. Throughout her professional career she has worked with different groups, mainly in the area of mental health and with young people. In the last year she has coordinated various projects focused on education, several of them dedicated to promoting digitalisation in different areas. Her background and perspective with a psychological approach was positive for the methodology used in the project.

Participants and external experts



Portugal

Daniela Martins: OVAR FORMA

Daniela has a BA in History (2011 – University of Porto), MA in Ancient History (2014 – University of Lisbon) and MA in Egyptology (2019 – University of Liverpool). She counts with professional experience in security and Erasmus+ projects.

Luís Vieira: ESCOLA PROFISSIONAL DE ESPINHO

Luís has a secondary level diploma in the area of computer science and he has been working as a Technician/trainer for 10 years in equipment for the graphic/computing area. He also has 9 years of professional experience as a commercial manager for printing/computing equipment. He currently works as IT technician.

Participants and external experts



Portugal

Ana Rita Ferreira: CEPROF

Rita is a trained History teacher, with a specialization in Conflict Mediation in School Settings. She has been working with students from disadvantaged backgrounds in the field of VET for the last 4 years. Rita is also a European project manager, with experience in KA2 and KA3 projects, namely as a coordinator.

Rui Soares: CEPROF

Rui is a trained Electronics and Telecommunications technician, with 8 years of experience in the labour market. He started his career in the manufacture of electronic products and, a few years later, joined the area of quality and management of Non-Conformities. He is currently a certified trainer and works as an Erasmus+ project manager.

Participants and external experts



Portugal

Raquel Amaral: EXTERNATO OLIVEIRA MARTINS

Raquel finished her BA in Informatics and Computer Engineering (University of Porto, 2004), and has worked as a programmer ever since. Since September 2004 she became a trainer in ISMAI, Happy Code Porto (programming school for children) ESPE, EOM, EPROFCOR, while continuing working on engineering. |

Portugal



João Gonçalves: APSU

João is a trained History teacher, with a post-graduation in External Affairs and Diplomacy both political and Economic. He has been working with students from disadvantaged backgrounds in the field of VET for the last 3 years. João is also a European project manager, with experience in KA2 and KA3 projects.

Participants and external experts



Portugal

João Silva: ESCOLA PROFISSIONAL DE CORTEGAÇA

João has a BA in Communication Technologies and Multimedia (ISMAI, Porto), and is currently enrolled in Image Design MA (University of Porto). João works in Escola Profissional de Cortegaça, as a trainer in the Multimedia Technician course and as coordinator of the communication department. João has also been a trainer at the Multimedia Institute of Porto, Design and Shoe Center of São João da Madeira and at the Vocational Training and Consultancy Center in Rio Tinto.

United Kingdom



Dr Paul Quantock: EU15 LIMITED

has extensive experience (over 40 years) of managing EU funded pan-European projects both as a partner and lead coordinator. He has over 25 years' experience of developing, delivering and managing complex training activities and creating effective international training partnerships around the world. His specialism is the creation of interactive multi-media eLearning course materials, and budding specialism in the use of robotics in SMEs.

17 participants

7 Portugal
 5 Italy
 2 France
 2 Spain
 1 England

Participants	Countries
Line Farah	France
Frederic Gotzinger	France
Brunella Franca Maio	Italy
Virginia Rosania	Italy
João Gonçalves	Portugal
Rui Soares	Portugal
João Silva	Portugal
Ana Rita Ferreira	Portugal
María Arroyo Ces	Spain
Daniela Martins	Portugal
Carla Giroto	Italy
Paul Quantock	England
Francesca Borzacchelli	Italy
Belén González	Spain
Clelia Castellano	Italy
Luís Vieira	Portugal
Raquel Amaral	Portugal



Your opinion about the methodology of the Learning by Competing project

What are your opinions, thoughts, comments?

Comments from participants included:

- This is a very positive methodology that has had great impact with students.
- Other teachers not directly involved are interested in participating with this kind of work, with other target groups and with other topics, not only robotics.
- The competition is the distinctive element.
- In particular in **Italy**, the involvement of the Liceo statale Alfano I had phenomenal feedback as participation increased their self-esteem.
- In **France** an increase in motivation for teachers too was noted. They created a robotics club in September 2021, to prepare for the competitions so the project created a new way of working. The teachers want to involve other students next year too at international level.
- All the students who participated in the mobilities were very happy to be a part of the project and very motivated to win the competition.



Do you think this methodology could be easily applied to other contexts and not only in international projects?

Comments from participants included:

- Here we have national competitions for IT or mechanic and mechatronics but usually the best students are chosen.
- This project gave students who knew very little about the subject an opportunity.
- The teachers were dedicated to the project and put in a lot of effort outside of school hours.
- Students found it a good way of learning which is very hands on.
- To participate in national competitions you have to pay and train before the event.
- With this project, regardless of your background, you can try to follow the methodology.
- The variety of students and backgrounds have shown that it is possible to apply the methodology to other fields and students.
- This methodology has lots of potential.



Do you think this methodology could be easily applied to other contexts and not only in international projects?

Comments from participants included:

- The pandemic has shown that you can also have a successful online competition on robotics. The teachers were very committed.
- Money will be a barrier to future competitions, possibly offering them online could help.
- The value of this methodology lies in the improvement of soft skills, i.e the ability to work in a team.
- The main output is learning together and on project objectives.
- Low cost solutions need to be found.



Do you think that robotics education should be a part of the vocational education and training (VET) environment? Should we give more impetus to international mobilities?

Comments from participants included:

- International mobilities have given added value to both students and educators.
- For some students, it was first time away.
- Soft skills improved, language skills improved.
- It was a life experience for many participants.
- This kind of exposure to robotics should be given from an early age as it helps to create curiosity.



How do you think girls/women can be encouraged to participate in science education contexts focused on technology such as computer science, programming and robotics?

Comments from participants included:

- All young people should have open minds as regards robotics.
- It is not a matter of girls and boys but giving sense to learning and future work of people.
- It is important to show how these fields affect our daily lives. In the case of health care, we showed our students how computer programming can save lives. This helped them to focus and encouraged them to learn more about computer science etc..
- This kind of opportunity can be part of a bigger project.
- Technology is developing so quickly in all aspects of our lives, in active ageing...



The project combines non-formal education with vocational education, do you think it is realistic to include aspects of non-formal education in the educational curriculum?

What are your suggestions?

Comments from participants included:

- Many young people do not consider Vocational Training and go to University, but, there is a huge dropout rate in the first year.
- There should be more vocational training also for businesses in the form of just in time learning. This needs to be non formal, short and to the point.
- Robotics and 3d printing are in demand in today's world.
- People are moving jobs more often than in the past so they need transferable skills, which are often non formal.
- The education system should be hybrid.

From an **initial evaluation** of the **Learning by Competing** piloting action:

- **One of the strengths is that it is user friendly and easy to understand.**
- **96% of respondents would recommend the course to others.**
- **41% voted for a hybrid kind of format for preferred type of delivery.**

It is recommended that the partnership seeks further funding to try to mainstream or continue activities in some way as the the possibilities are endless.

At the end of the round table participants were reminded that the project has a Website, facebook page and LinkedIn profile and to keep watching to see updates.

Website



Facebook



LinkedIn



The 4 modules developed will remain online free of charge for 5 years after project end.
To access the modules, please see: <https://training.espe.pt/training/>

We hope that the new methodology of teaching “Learning by Competing” can be transferred to other VET teaching areas as it is **an important way to promote motivation and engagement of VET trainees in the learning process.**

By reaching diverse VET schools (and not only i.e. the liceo Istituto Alfano in Italy), the new methodology/ concept **could possibly be transferred to different areas of VET courses.**

Furthermore, the training modules and above all the mobility experiences (as life experiences- for some of the young people involved in the mobilities, and also due to the Covid pandemic, this was the first time they had been away from home/in a different country) will be transferable in the sense that **the skills developed by the beneficiaries will later be applied to the professional area they work in.** They are now better prepared to face the demands of the job market.

Consequently, **a positive impact has been had on the trainees, VET providers, and will also be for SMEs** that will hopefully employ the young people when they finish their studies.

The Project has a Website which will be maintained for 2 years after project end, a facebook page and LinkedIn profile.



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THANK YOU FOR YOUR PARTICIPATION

