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"Innovative and Technological Content Development Applications in Education"

Eğitimde Yenilikçi ve Teknolojik İçerik Geliştirme Uygulamaları











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### **PARTNERS**









#### INTRODUCTION

#### Innovative and Technological Content Development Applications in Education



The aim of our project is to increase teachers' ability to use technology effectively, to enable them to create digital content suitable for students' individual learning needs and thus to provide better quality education opportunities for everyone. In this context, interactive and original applications will be developed for teachers, original e-content will be created and activities will be organised to disseminate these contents to a wide audience.

Our project aims to provide active and permanent learning experiences with the effective use of technology, to support equality of opportunity in education and to enrich learning outcomes by producing digital educational materials (digital

books, podcasts, etc.). Furthermore, in line with the digital transformation and education policies of the European Union, our project aims to facilitate the adaptation of teachers to digital education and overcome the challenges in this field. In this direction, it is planned to increase awareness and participation by focusing on innovative educational contents and digital skills development, in cooperation with various stakeholders.

The specific objectives of the project are:

- 1. To enable teachers to transform their educational environments into digital classrooms.
- 2. To improve teachers' competences in areas such as Web 2.0/Web 3.0, STEM, robotics and coding.
- 3. To increase teachers' skills and support their teaching skills through innovative methods in education.
- 4. To improve teachers' knowledge and skills in digital content creation.
- 5. To increase the number of staff specialised in digital learning.
- 6. To strengthen school culture and teachers' self-confidence.

As a result of our project, teachers' digital competences will increase, their knowledge on innovative methods and innovation will expand, and the necessary infrastructure for the digital transformation of educational environments will be created. This process will contribute to the development of digital skills, new learning methods and educators' competences in line with the European Union's 2021-2027 targets. With the podcasts and other content produced as a result of the project, important steps will be taken in the field of digital content and pedagogical practices.

#### **ACTIVITIES**

#### Virtual Meeting with Participant



#### Day 1:

An introductory event will be organised with the participation of teachers and institutional contacts participating in the project.

#### Day 2:

Information about the project and activities will be given.

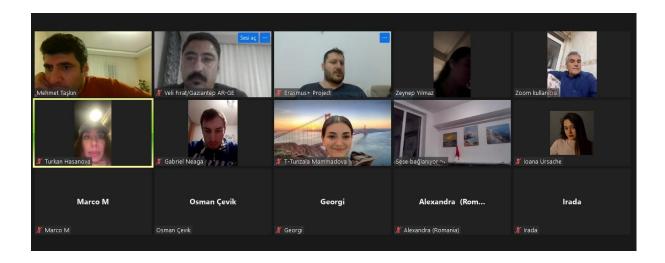
#### Target group

Selected teachers and contact persons of the partner organisations will participate in accordance with the predetermined project criteria. In total, 16 teachers and 4 contact persons from 4 organisations will participate in the project.

These participants are as follows:

4 teachers and 1 contact person from Association Scientifique ALIM (France), 4 teachers and 1 contact person from World Of Dreams (Italy), 4 teachers and 1 contact person from ASOCIATIA CENTRUL PENTRU COOPERARE IN EDUCATIE SOCIALA - ACCES (Romania), 4 teachers and 1 contact person from Ezogelin Public Education Centre (Turkey).

At the end of these activities, the participants will carry out activities in their own organisations and ensure that all staff will benefit from the project achievements. In this way, it will be possible to maximise the achievements of the project, adopt them by the institutions and integrate them into the training programmes. At the end of the activity, all institutions will organise an evaluation meeting and will evaluate the project achievements and report this evaluation and share it with other partner institutions.



#### Contribution to the Project's Objective

The project aims to encourage co-operation, to get acquainted with each other and to make them aware of the process of the project. At the same time, it aims to increase the motivation of the institutions in internationalisation by increasing the self-confidence of teachers and to support the formation of new collaborations.

Within the activity, participants will come together and learn about their roles and tasks in the project in detail. This will strengthen the communication between the team members, enabling them to focus on common goals. Furthermore, increased confidence in internationalisation will positively contribute to the professional development of teachers and increase the motivation of the institutions towards the project. This co-operation will create a sustainable impact during and after the project, ensuring the continuation of innovative work in the field of education.

As a result, this activity aims to support internationalisation, motivation and the formation of new collaborations by enabling the participants to meet each other, be aware of the process and increase their self-confidence.





#### **Expected Outcome**

This activity aims to improve the dialogue between the participants and enable the educational institutions to get to know each other better. The interaction and communication between the participants will strengthen the relations between the institutions and increase the potential for cooperation.

Greater transparency of the educational institutions in the execution of the projects will increase the morale and motivation of the participants and encourage more active participation in the project. Moreover, detailed information sharing will contribute to the success of the project by enabling participants to understand the purpose of the project and undertake their role in a more informed way. This deepened dialogue and information sharing will strengthen the relationships between educational institutions, increasing the likelihood of project success and creating a more sustainable development environment.



#### Innovation in Education - Robotics and Coding Training - Romania



Purpose: The event, which will be held in Romania between 25-29 March 2024, was hosted by ASOCIATIA "CENTRUL PENTRU COOPERARE IN EDUCATIE SOCIALA" – ACCES institution. The event, attended by teachers from Turkey, Italy, Romania and France, lasted 5 days in total and included 2 days of travel time. The event program was planned and implemented as follows.

Day 1: Opening speech of the host organization and informative presentation about the Romanian education system

Day 2: Coding Workshop.

Day 3: Robotics Workshop.

Day 4: Robotics and Coding Workshop.

Day 5: Integration of Robotics and Coding Education and General Evaluation.

Participants were given theoretical and practical information on coding and robotics throughout the event. They also received guidance on how to integrate the information learned into their educational processes.



#### Target Audience

This activity is a training program for teachers. A total of 16 teachers will participate from France, Italy, Romania and Turkey. Participants learned about robotics, coding and innovation-supported education. After the activity, teachers organized activities in their own institutions, shared their experiences and ensured that the project achievements were disseminated. The results obtained from the evaluation meeting held at the end of the activity were shared on the project website and made available to other teachers.





#### Contribution to the Purpose of the Project

This activity focuses on teachers developing innovative training programs in the field of robotics and coding and increasing their skills with innovative methods. Teachers gained information about innovative approaches and digital contents that they can use in education.

As a result of the activity, it was aimed for teachers to integrate the knowledge they gained into their educational programs by applying it in their own institutions and to encourage innovation in education. This process will help the project achieve its innovative educational goals in robotics and coding.

#### **Expected Result**

This activity aims to contribute to the goals of the project by enabling teachers to learn topics such as innovation in education, robotics, coding and sample lesson practices. The results of the activity include elements such as getting to know the education systems of different countries, gaining knowledge in these fields by receiving robotics and coding training, integrating innovation in education, and learning innovative education methods. In this way, teachers will be able to teach their lessons more efficiently and provide a more effective education to their students by increasing their learning and teaching motivation.



#### Robotic and Coding Training in Local Activitities



In our recent event, significant strides were made in robotics and coding education. The program began with an introduction to local projects and a discussion of the work accomplished. Knowledge gained in Romania was shared with the participants, enriching the overall training experience. During the first week, fundamental concepts of robotics and coding were introduced, along with basic information on electronic components. In the second week, the focus was on basic programming and algorithms, with students getting acquainted with a programming language such as Python or Scratch. The third week

involved teaching about robotic components and assembly, culminating in a hands-on project. Advanced programming techniques and robot movement control were covered in the fourth week. In the fifth week, students selected and developed their own projects, completing the planning and development stages. The sixth week saw students presenting their projects, followed by evaluations.

At the end of the training, nationally recognized certificates were awarded by Ezogelin Public Education Center during a certification ceremony. Throughout the training, additional resources and mentorship support were provided to the students. This structured training plan enabled students to gain both theoretical knowledge and practical experience in robotics and coding. The awarded certificates motivated students and documented their achievements.



#### Digital Assisted STEM Education – France



#### Purpose

This activity was carried out to introduce the STEM education model and for teachers to gain knowledge and skills in this field. The 5-day program covered topics such as the definition, purposes and benefits of STEM, project-based learning model, coding, STEM and robotics. In addition, the training of teachers, the situation of STEM in the world and in the country, and achievement-oriented STEM practices are also discussed. The activity ended with topics such as sample lesson plans and constructive learning strategies, and a general evaluation was made.

#### Target Audience

This activity aimed to teach STEM and innovation-supported education to teachers and integrate these subjects into educational processes. A total of 16 teachers participated from the partner institutions of the project, from four different countries (France, Italy, Romania and Turkey). Participants will design STEM lesson plans and implement them in their own institutions. By sharing their experiences and exemplary practices, they enabled other teachers to benefit from these gains. At the end of the activity, all institutions will evaluate the project achievements, report the experiences and share them with other partners. In addition, the pre-activity preparation process and activities were added to the project website, contributing to the benefit of all teachers and dissemination of the activity.



#### Contribution to the Purpose of the Project

This activity aimed to help teachers develop STEM-supported innovative education programs. Participants supported their learning-teaching processes by improving their skills with innovative methods in education. They also gained knowledge on integrating the learned information into education and creating activity plans by blending STEM and digital learning.

The activity offered teachers a 5-day training and implemented a Digital Supported STEM Education Course. This course ensured that successfully implemented trainings were included in the training programs of institutions, and innovative methods, digital contents, STEM lesson plans and innovation-supported lesson plans were taken into consideration when making weekly training plans. The aim of this activity is to ensure the development of teachers in the field of STEM and innovation-supported education and to encourage them to apply these achievements in their own institutions. In this way, it is aimed to adopt innovative approaches in education and provide students with a more effective learning experience.



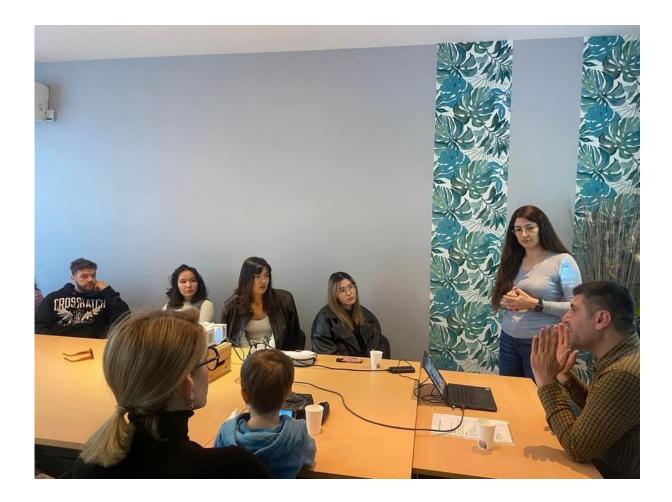
#### **Expected Result**

This activity aims to provide training to teachers on STEM, innovation, robotics, coding and sample lesson practices. The results of the activity are:

Getting to know the education systems of different countries and observing applications in the STEM field

- Learning about STEM education and innovation
- Learning and applying innovative methods for STEM education
- Gaining skills in planning and implementing digitally supported STEM activities
- Increasing teachers' learning and teaching motivation
- Ensuring more efficient collaboration and interaction in lessons
- Increasing students' interest in STEM subjects and encouraging active learning

Thanks to this activity, teachers became better equipped and implemented STEM education more effectively.



## Local Activity: STEM Education Training for Teachers



In a recent local activity, STEM education training was provided to teachers.

This training aimed to enhance teachers' skills and competencies in teaching science, technology, engineering, and mathematics (STEM) subjects.

The training program focused on providing teachers with innovative teaching methods, practical approaches, and resources to effectively engage students in STEM learning.



Throughout the training sessions, teachers were introduced to various STEM teaching strategies, handson activities, and project-based learning techniques. They learned how to integrate real-world applications and interdisciplinary approaches into their lessons, fostering critical thinking, problemsolving, and creativity among students.

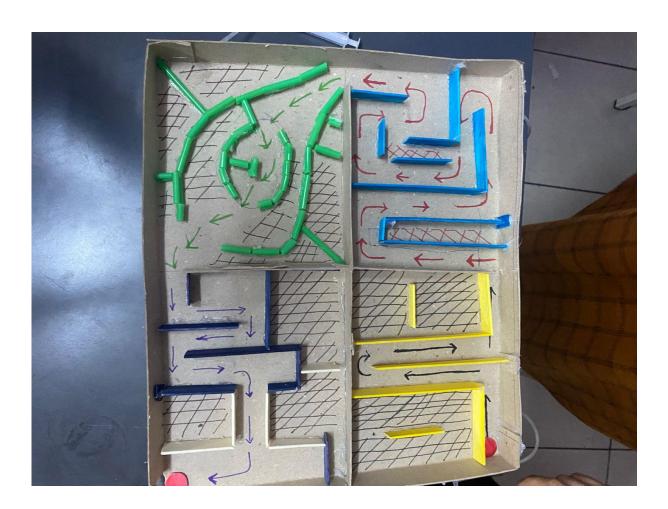






At the conclusion of the training program, nationally recognized certificates were awarded to the participating teachers by the organizing institution. These certificates validate the successful completion of the STEM education training and signify the teachers' commitment to enhancing STEM education in their classrooms.

STEM education training not only provided professional development opportunities for teachers but also aimed to ultimately improve the quality of STEM education nationwide. By empowering teachers with the necessary knowledge and skills, the training contributes to creating a more dynamic and engaging learning environment for students, preparing them for success in the 21st-century workforce.



#### Digitalisation in Education: Web 2.0 Tools - Italy



### Purpose

This activity aims to train teachers equipped with 21st century skills. At the event held in Italy, various topics on digital education tools and methods were discussed. The content of the program consists of the following topics:

Day 1: Providing information about the Italian education system, digital education seminar, creating a virtual classroom and online class board.

- Day 2: Creating concept maps and mind maps, preparing interactive media, using blogs.
- Day 3: Organizing exams and competitions, preparing word clouds, creating digital story books.
- Day 4: Graphic design, animation and comic book preparation, augmented reality applications.
- Day 5: Use of mobile technologies, teacher toolbox and general evaluation at the end of the activity.



#### Target Audience

This activity aims to teach teachers digital learning and web tools-supported education and its integration into education. Participants must have basic computer and internet usage skills. In the activity where a total of 16 teachers from 4 different institutions will participate, participants will make applications about the web tools they are researching and share their experiences. At the end of this activity, project achievements will be evaluated, reported and shared with other institutions. Before the activity, the preparation process and details of the activities were shared on the project website.



#### Contribution to the Project Purpose

This activity aimed to provide teachers with studies on digital education and innovative learning. Participants learned about digital development of education with web tools and increased their skills with innovative methods. In addition, they gained knowledge on how to integrate the learned information into education and gained the ability to create digital content with web tools. These achievements have been implemented in their institutions and included in educational studies.

The activity was planned as a 5-day teacher training, and if the training was successful, it was included in the training programs of the institutions, and innovative methods and digitalization were taken into account in the weekly training plans. These studies aim to digitalize educational environments, increase the competencies of teachers in the field of web 2.0, support teaching and learning skills with innovative methods, acquire the skills of creating digital content, increase the number of personnel who know digital learning, create a school culture and increase the self-confidence of teachers.

#### **Expected Result**

This activity aimed to improve the cooperation between society, school, teachers and students and to increase the quality of education by enriching learning environments using information technology tools. By participating in this activity, teachers achieved digital transformation of education and learned web tools.



The results of the activity are as follows:

- 1. Recognizing the importance of digital education and the use of web tools in the education of different countries
- 2. Having knowledge about web tools
- 3. Classification of web tools according to their usage methods
- 4. Integrating web tools into education
- 5. Learning innovative methods in education
- 6. Learning the steps of creating a lesson plan supported by digitally supported web tools
- 7. Ensuring digital transformation in education
- 8. Raising awareness on the relevant issue

By learning these subjects, teachers increased their motivation to learn and teach and were able to teach their lessons more efficiently. In addition, they have made learning more enjoyable by using web tools to organize educational environments in a way that is more interactive and students are more active. In this way, students were in a more active and better learning environment.

### Local Activities: Web 2.0 Tools for Teachers Training



The Web 2.0 Tools Training event was organized to support educators in enhancing their teaching processes and enriching students' learning experiences. The objective of this event is to provide teachers with the knowledge and skills to effectively utilize various Web 2.0 tools. Participants are introduced to a range of interactive and participatory online platforms aimed at fostering more effective learning environments.



Throughout the training, educators learn how to incorporate these tools into curriculum development, encourage student interaction, assess student work, and share teaching materials. Practical sessions allow participants to explore sample applications and gain the necessary skills to create their own instructional materials.





Ultimately, the goal of this event is to equip teachers with the competencies to leverage modern instructional technologies, thereby fostering more engaging and collaborative learning environments.



### Digital Education: Creating STEM-Based E-Content



### Objective

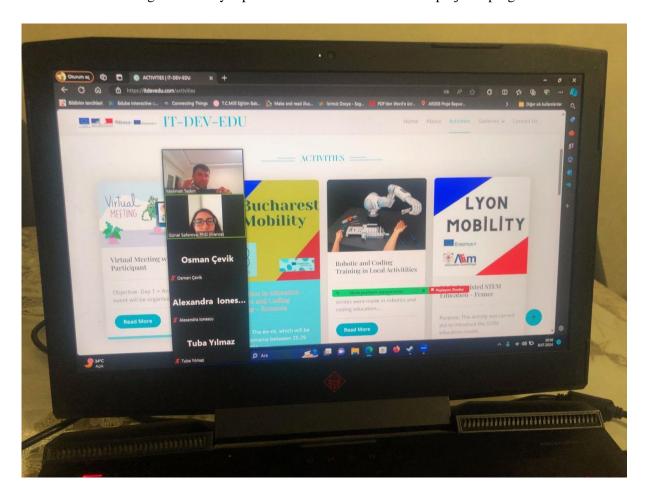
The aim of this activity was to provide teachers with knowledge in robotics, coding, STEM, and web tools to empower them to create STEM-based econtent that supports digital learning. Teachers from Turkey, Italy, Romania, and France participated online and learned the content creation process over three days under the guidance of the host institution. At the end of the activity, participants reinforced their gains through evaluations. The objective of this activity was to enable teachers to make their lessons more effective and enriched.





#### Target Audience

This activity was designed for teachers who had previously participated in similar activities to create new digital content. It involved teachers and representatives from partner institutions from Turkey, Italy, Romania, and France, totaling 16 teachers and 4 contact persons participating online. Participants created e-content based on the knowledge they gained and shared them on the project's website. At the end of the activity, the project's gains were evaluated, and the created content was shared with other teachers, thereby increasing the project's impact and facilitating integration into educational programs. An evaluation meeting and activity report were conducted to share the project's progress and outcomes.



#### Contribution to the Project's Objective

This activity focused on the digitalization of the project and the creation of innovative e-content. Participating teachers designed STEM activities enriched with robotics and coding, supported by web tools, and shared these as e-content. Additionally, they gained knowledge on integrating learned information into education and innovative teaching methods. By applying these acquired skills in their institutions, they contributed to educational efforts.

The gains were implemented as three-day teacher training sessions in institutions, and successfully completed training sessions were incorporated into the institutions' educational programs. The objectives of this activity included digitizing educational environments, enhancing teachers' competencies in the field of web 2.0, developing innovative educational programs in STEM, robotics, and coding, supporting innovative teaching methods, learning digital content creation skills, increasing the number of staff knowledgeable in digital learning, establishing a school culture, and boosting teachers' confidence. This activity aimed to support innovation in education and digitally supported content.

#### **Expected Results**

This activity seems to have supported digital transformation in education and the use of e-content. Participants became familiar with digital education in different countries and developed innovation-focused, interdisciplinary e-content. They also learned the processes of creating e-content and successfully used this content in education. By increasing the use of innovative and interdisciplinary e-content, they achieved digital transformation in education.

The outcomes of this activity included recognizing digital education in different countries, developing innovative and interdisciplinary e-content, understanding e-content creation processes, learning methods to successfully use e-content in education, increasing the use of innovative, interdisciplinary e-content, learning innovative educational methods, and raising awareness on the subject. Thanks to this activity, teachers enhanced their motivation for learning and teaching, enabling them to conduct their lessons more efficiently. Additionally, by disseminating e-content, they supported digital transformation in education.



#### Dissemination Activity



The dissemination activity aims to spread the achievements and best practices of previous projects in the fields of STEM, robotics, coding, web tools, and e-content creation to a wider audience.

Within this scope, success stories, lessons learned, resources, and innovative approaches of past projects will be shared using various communication and dissemination strategies.

Workshops, seminars, workshops, and training programs will be organized to promote collaboration and knowledge sharing among

educators, school administrators, local authorities, industry representatives, and other relevant stakeholders. Additionally, project outcomes will be disseminated to a broader audience through online platforms, social media, webinars, and printed materials to raise societal awareness on STEM education, digital transformation, and innovative teaching methods. By implementing these strategies, the aim is to enhance the impact of previous projects and achieve lasting and sustainable changes in education and teaching practices.





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