INSTALL YOUTH

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

# DEVELOPING SCIENTIFIC AND DIGITAL CITIZENSHIP SKILLS FOR DISADVANTAGED YOUTH

## BEST PRACTICES MANUAL

Research on non-formal Digital & Scientific Literacy Best Teaching Practices

C.R.E.A. EUROPEAN YOUTH GROUP

yEUth

NEOANALYSIS

# BEST PRACTICES MANUAL

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# INTRODUCTION

Nowadays it is widely shared that information and communication technologies (ICTs) have penetrated into all aspects of modern life. In this context, digital literacy has evolved into something much more than skills in handling a PC. The European Framework for Digital Competences published by the European Commission has defined digital competence as "the ability to use such digital technologies in a critical, collaborative and creative way" (DigComp, 2015). "Digital competence involves the confident, critical and responsible use of, and engagement with, digital technologies for learning, at work, and for participation in society. It includes information and data literacy, communication and collaboration, digital content creation (including programming), safety (including digital well-being and competences related to cybersecurity), and problem solving" (EC, 2018). Furthermore, European societies are faced with emerging threats relating to the spread of disinformation and pseudo-science. In this context, fostering scientific literacy can provide people with tools to navigate and critically address the vast amounts of information exchanged in public debate, foster democratic political processes and ensure sustainable growth.. Scientific literacy goes beyond the mere knowledge of scientific content. It should be understood as the ability to engage critically with and make informed decisions about science-related issues. This broader approach to scientific literacy should be coherently integrated in curricula. Critical thinking and active engagement should be emphasised as important learning outcomes along with fundamental literacy, scientific knowledge and competences and a contextual understanding of science. Research highlights the need to integrate various elements of scientific literacy across educational levels and subject areas(such as science, history, geography, citizenship, health, and media education), Siarova, Sternadel and Szőnyi (2019).

The main objectives of INSTALL project are: to provide a group of disadvantaged young people with learning opportunities that will equip them with a set of skills ( digital citizenship competences; science literacy skills) that are necessary in the 21st century for their uncompromised participation in professional & social life, and for their empowerment as critically thinking and active citizens, to contribute to the improvement of digital citizenship and science literacy education by developing a set of non-formal education tools and methods that will complement formal curricula, and to offer teachers

a new approach and new tools to support them in developing a positive attitude towards digital citizenship and scientific literacy, with the ambition to propose the foundation of a digital citizenship program for scholastic education that could represent the effective adoption and implementation in European countries of the DigComp Framework. In addition, Scientific literacy goes beyond the mere knowledge of scientific content. It should be understood as the ability to engage critically with and make informed decisions about science-related issues. This broader approach to scientific literacy should be coherently integrated in curricula. Critical thinking and active engagement should be emphasised as important learning outcomes along with fundamental literacy, scientific knowledge and competences and a contextual understanding of science.

The best practices gathered in this manual have specific objectives of integrating digital literacy and scientific literacy as part of the school curricula, and promoting synergies and cross-fertilization throughout scholastic education. As a matter of fact, the contemporary school must prepare the tomorrow's citizens of the knowledge society, in order to be able to face the challenges and to harness the opportunities of the new economy. With the design of the present manual of best practices for developing digital skills and science literacy education the partners want to design the intellectual output of a pedagogical framework, as the main reference for the development of an e-Toolkit in scientific literacy and Digital Citizenship, that will be experimented and made available for Youth workers working in the fields of digital empowerment and science literacy, Educators in STEM (Science, Technology, Engineering, and Mathematics) and in ICT/digital literacy, and Young people (18-29) with fewer opportunities. The best practices and tools here described constitute a simple but fundamental data, to suggest and how regularly to implement them, and what impact these resources may have in developing the digital skills and scientific competences of young learners. They represent the results of desk research done by each one of the partners in this project (CREA European Youth Group (Italy), yEUth (the Netherlands), and Neoanalysis (Greece)of digital skills and science literacy education. Each partner of INSTALL project was asked to select five past and present best practices , projects and other relevant experiences in their own country, and ten international that could be created and implemented on both national and European level, and to record such practices in a shared format. CREA European Youth Group APS was appointed to draft a cumulative manual of the selected experiences. The format for the recorded information was divided in five distinct sections: the first one named "Information about the organisation/institution/entity responsible for the Good Practice", includes Name of the entity, Type, Website (for reference purposes). The second one dedicated to Information about the Good Practice includes the name, The problem context focusing on the needs, gaps, issues, or challenges the

Good Practice aimed at addressing, Objective(s) duration, Geographical location, Targeted group(s), and Summary of the best practice (to be used for joint report). The third section "Results of the Good Practice" calls for outputs, outcomes, outreach, and impact for the best practice. The fourth is for "Challenges to the Good Practice," and the fifth and last section is "Applicability of the Good Practice" requires a brief analysis of What key lessons of the best practice can be applied or used in INSTALL Youth educational activities and whether any digital citizenship and science literacy training or educational resources, tools, or material produced during the Good Practice lifetime could be applied or used in INSTALL. All the completed forms and the best practices selected were classified in 2 main categories: Digital Citizenship and Science Literacy. Then, the best practices categorized under these two domains were then labelled corresponding to the 5 areas of competence identified by DigComp 2.1 and confirmed by the European Commission (Carretero Gomez, Vuorikari, Punie, 2017; Redecker, 2017): Information and data literacy, Communication and collaboration, Digital content creation, Safety and Problem solving if the best practice is under the Digital Citizenship category. In the same way, the way labelled ; Fundamental Literacy, Scientific Knowledge and Competences, Contextual Understanding of Science, Critical thinking, or agency identified by Siarova, Sternadel and Szőnyi (2019) in the CULT committee report.

Each partner conducted interviews with 5 representatives of those interventions/per country to gain deeper information about the impact of these programs on the digital citizenship competences and scientific literacy of the beneficiaries. (insight of the program - what was good/what did not work; broader impact; key lessons learned from the practice that can be applied or used in the education activities of INSTALL youth project).

The overview on the best practices gave the possibility to each partner to give some recommendations and practical tips, aimed to overcome difficulties and lacks in the existing national activities for digital and scientific skills in teaching/ learning , evidenced at the national level in each partner country. These elements offered us the opportunity to summarize some shared conclusions, giving practical recommendations to contribute to the design of a common pedagogical framework, that includes the elaboration and testing of new and innovative approaches in teaching/ learning activities, concretely supporting and improving youth workers and teachers' competencies to work on Digital Responsible Citizenship and science literacy education with younger students. The deep re-thinking and re-designing of the Educational systems and methodologies represent, not only in Europe but also in the global dimension, a fundamental and unavoidable

passage to face one of the crucial challenges of the present century: the transition to a digital economy and, in a wider vision,
the transition towards a Digital and Scientifically literate society, that will interest first of all the new generations. These generations will be prepared to confront the future only by receiving the right answers to their questions from parents, teachers and educators.

# CHAPTER 1
# BEST PRACTICES FOR DEVELOPING DIGITAL SKILLS

**Information and data literacy**
**Communication and collaboration**
**Digital content creation**
**Safety**
**Problem Solving**

## Safety


Cover of the Special Edition "Donald Duck dives into the digital world"

| The partner responsible for collecting the Good Practice | yEUth |
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| Information about the organisation/institution/entity responsible for the Good Practice |
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| Name of the entity | **Ministry of the Interior and Kingdom Relations** |
| Type | **Governamental Program** |
| Contact email | **Contact emails of the spokespeople:** Anne.pinxteren@minbzk.nl<br><br>marinda.giethoorn@minbzk.nl,<br><br>Pauline.voorst@minbzk.nl |
| Website (for reference purposes) | **https://www.nederlanddigitaal.nl/documenten/publicaties/2019/11/13/english-version-of-the-dutch-digitalisation-strategy-2.0** |

| **Information about the Good Practice** | |
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| Name | **Donald Duck Dives into the Digital World** |
| The problem context focusing on the needs, gaps, issues, or challenges the Good Practice aimed at addressing. | Children are increasingly confronted with technical developments, such as artificial intelligence. This offers many possibilities, but it is also important that children learn to be critical. The Good Practice focuses on the lack of discussion on new technologies, especially among young children.<br><br>As State Secretary Raymond Knops, put it:<br>*"It is extremely important that everyone is aware of his or her digital footprints in the digital world. Pupils who are now in primary school have to deal with technology from an early age. Children, I know from my own experience, grab a device and be online in seconds. That's great, but it's important to start the conversation about digital awareness. With the special* |

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| | *Donald Duck and the curriculum, children are taken into the otherwise complex world of data, privacy, laws and regulations*". |
| Objective(s) | The best practice was implemented after the Dutch participation in the drafting group of the Council of Europe's Ad Hoc Committee for the Rights of the Child. The group's task was to draft a Recommendation of the Committee of Ministers of the Council of Europe to Member States on Guidelines to promote, protect and fulfil children's rights in the digital environment.<br><br>The Good Practice's main goal is to discuss fundamental rights and new technologies such as artificial intelligence. |
| Duration | Donald Duck comic book has been created and distributed at the beginning of 2020. |
| Geographical location | The Netherlands, Saba, and Saint Eustratius |
| Targeted group(s) | The practice addresses students of grades 6,7 and 8 of elementary schools and the magazine's subscribers. |
| Summary of the best practice (to be used for joint report) | The Ministry of the Interior and Kingdom Relations teamed up with the Donald Duck comic book and the educational media agency EDG Media to develop a special edition of the comic that discusses fundamental rights and new technologies such as artificial intelligence.<br>The special edition, *Donald Duck Dives into the Digital World* is available to schools free of charge and includes a package of teaching materials. In addition, all Donald Duck subscribers received the special edition as a supplement with the regular weekly publication. |

| **Results of the Good Practice** | |
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| **Outputs:**<br>1. What were the tangible outputs of the practice? | Outputs:<br>1. The tangible output is the comic itself.<br>2. Donald Duck Dives Into the Digital World' helps students navigate safely through the |

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| 2. What are the services or activities provided during the Good Practice?<br><br>**Outcomes**<br>1. What is the degree of positive change (in terms of knowledge, skills, and attitudes) in the served targeted group(s) in relation to the Good Practice's objectives?<br><br>**Outreach**<br>1. How many people were reached or served by the Good Practice?<br><br>**Impact**<br>1. How did the Good Practice contribute to broader changes in the community, (e.g. through the work of the served or reached targeted group/s)? | digital world. The famous residents of Duckburg take the students on their adventures in various comics and show them in a cheerful way what the dangers of the online world can be. For example, Katrien experiences what it's like to have a self-driving car (who is actually in charge of such a thing?) and Donald gives too much personal data to the otherwise most useful app of the local supermarket, making him constantly followed and annoying is dropped.<br><br>Thus, this good practice allows teachers to introduce the theme of digital security in schools, among very young students.<br><br>Outcomes:<br>The album is full of fun comics, tips and puzzles about media literacy and includes a digital lesson and a manual that teachers can use to promote digital skills. Thus, the comic served to develop critical thinking and knowledge about the digital environment and digital innovations among young students.<br><br>Outreach:<br>The comic reached pupils in the final three years at 4,600 primary schools throughout the Netherlands and the magazine's 183,000 subscribers.<br><br>Impact:<br>The Good Practice is contributing to broader changes increasing the interest of the target group in the digital themes. |

| **Challenges to the Good Practice** | |
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| What are the weaknesses, challenges, or issues encountered | The challenge for the Ministry of the Interior and Kingdom Relations has been to help people consciously adapt to technological changes while |

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| during the implementation of the Good Practice? | retaining their personal autonomy, human dignity and privacy. |

| **Applicability of the Good Practice** | |
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| 1. What key lessons can be applied or used in INSTALL Youth educational activities?<br>2. Are there any digital citizenship and science literacy training or educational resources, tools, or material produced during the Good Practice lifetime that could be applied or used in INSTALL Youth? | 1. The key lesson that can be applied is to use different instruments, such as comics, to inspire students and teachers and to talk about digitalization and digital citizenship.<br><br>2. The initiative may be difficult to apply in the exact same way to INSTALL Youth, but could be applied on a smaller scale (e.g. a very short comic to elucidate some concepts, or a workshop on comic making) and could also inspire educators who are looking to apply new engaging methods of learning. |

## Communication and collaboration

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| **The partner responsible for collecting the Good Practice** | **yEUth** |

| **Information about the organisation/institution/entity responsible for the Good Practice** | |
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| Name of the entity | Instruct Educatieve Uitgeverij |

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| Type | Publishing house |
| Contact email | instruct@instruct.nl |
| Website (for reference purposes) | https://www-instruct-nl.translate.goog/methoden/digit-updater/?_x_tr_sl=auto&_x_tr_tl=en&_x_tr_hl=it&_x_tr_pto=wapp |

| **Information about the Good Practice** | |
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| Name | **DIGIT- Updater Method** |
| The problem context focusing on the needs, gaps, issues, or challenges the Good Practice aimed at addressing. | The digital revolution has been a very fast paced phenomenon and the associated challenges are very recent. For that reason, there is currently a gap between the increasingly recognized digital literacy needs of young people and the capacities & skills educators are required to have in order to cover those needs. |
| Objective(s) | The Good Practice aims to help teachers develop or improve their digital literacy skills in order to keep up with those challenges rapid technological development brings with. |
| Duration | DIGIT-Updater is available for purchase on an ongoing basis |
| Geographical location | The Netherlands (the whole country). |
| Targeted group(s) | Teachers in primary and secondary education; teachers in senior secondary vocational education / with low or zero level of digital literacy |
| Summary of the best practice (to be used for joint report) | DIGIT-Updater is a method for teachers in primary, secondary and secondary vocational education to become digitally literate themselves. It was developed by the publishing house "Instruct Educatieve Uitgeverij" that has over 30 years of experience in developing educational materials for teachers and trainers. |

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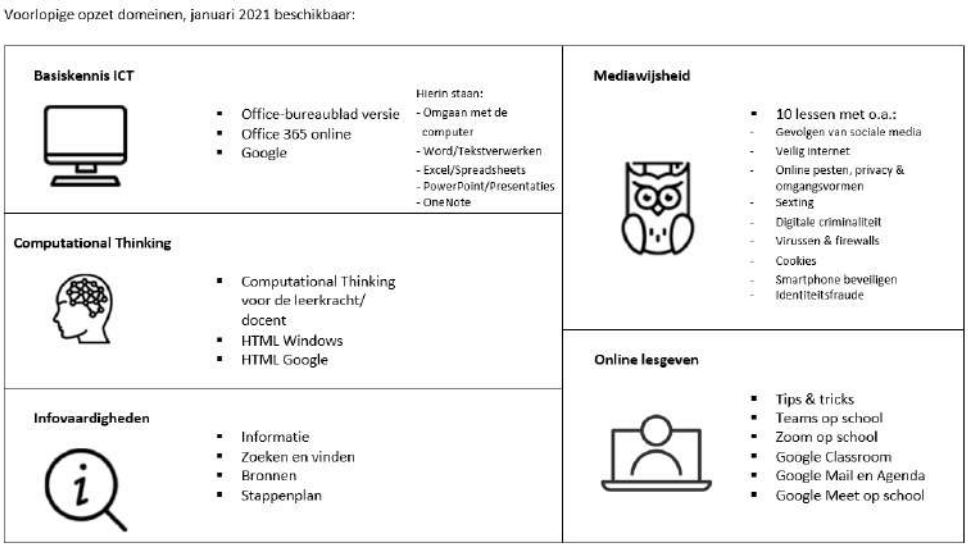
| | The Best Practice is constructed in modules that provide a broad basis for the efficient use of computers, tablets and mobile devices (Basic knowledge of ICT, Computational thinking, Information skills, Media literacy and Online teaching, MS365). Each chapter can be concluded with a test and each module with a final test. It also offers deepening modules in Windows, Word, Excel, PowerPoint, Outlook, Digisecurity and OneNote for teachers with more advanced skills. In general, the method has been developed from, and attuned to, educational practice. What teachers learn in DIGIT-updater they can use it immediately in their work, in the classroom or online. |




Structure of DIGIT-Updater course in 5 modules for primary and vocational education

| **Results of the Good Practice** | |
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| **Outputs:**<br>1. What were the tangible outputs of the practice?<br>2. What are the services or activities provided during the Good Practice? | Outputs:<br>1. The tangible output is a handbook of methods, completely accessible online. In the handbook there are teaching materials tailored to educational practice; insight into the educational needs through an adaptive 0- measurement; excellent preparation for teaching with DIGIT. |

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| **Outcomes**<br>1. What is the degree of positive change (in terms of knowledge, skills, and attitudes) in the served targeted group(s) in relation to the Good Practice's objectives?<br><br>**Outreach**<br><br>1. How many people were reached or served by the Good Practice?<br><br>**Impact**<br>1. How did the Good Practice contribute to broader changes in the community, (e.g. through the work of the served or reached targeted group/s)? | After successful completion, a DIGIT certificate is also issued.<br><br>2. During the Good Practice implementation, DIGIT updater offers:<br>• for primary/vocational education: 5 domains of digital literacy : Basic knowledge of ICT, Computational thinking, Information skills, Media literacy and Online teaching.<br>• for senior secondary vocational education: 6 domains of digital skills : Basic ICT knowledge, Information skills, Basic knowledge Office, Media literacy, MS 365 and Online teaching.<br>• Deepening modules Windows, Word, Excel, PowerPoint, Outlook, Digisecurity and OneNote for deepening.<br>• Tests Each chapter can be concluded with a test. A module is concluded with a final test.<br>• Certificate For a well-rounded domain/in-depth module, a student receives a DIGIT certificate.<br>• Supervisor environment Management and tracking system for the supervisor.<br><br>Outcomes:<br>Teachers following the method are able to work with different programs and securely use several devices after the course.<br><br>Outreach:<br>There aren't exact data<br><br>Impact:<br>The Good Practice creates a structure of continuous<br>capacity building and professional, pedagogical development of teachers, so that they are in the position to meet the changing needs of students |

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| | and learners in the face of technological developments. |

| **Challenges to the Good Practice** | |
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| What are the weaknesses, challenges, or issues encountered during the implementation of the Good Practice? | A main challenge of the practice is that the creation and publication process of educational textbooks is a time-consuming process, thus by the time the final deliverable is ready, technology has already moved forward.<br>Moreover, creating educational content for teachers is a highly complicated process, since different educators deal with different types of learners, thus the content cannot cover all different learning needs. |

| **Applicability of the Good Practice** | |
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| 1) What key lessons can be applied or used in INSTALL Youth educational activities?<br><br>2) Are there any digital citizenship and science literacy training or educational resources, tools, or material produced during the Good Practice lifetime that could be applied or | 1. The key lesson of the practice is that effective training for educators and teachers has to be prioritized if we want to have visible results in the quality of education provided to the younger generation. Through life-long learning opportunities it is important that educators develop a deep conceptual understanding on digital citizenship principles and the ability to use contemporary tools, so that they can teach their pupils/students/learners to be digitally-literate and digitally-responsible citizens.<br><br>2. There are several methods that have been created, some of which are suitable for INSTALL Youth.<br>The structure of the method's contents can serve as a basic outline for relevant courses addressed to teachers/trainers or youth themselves. It might also be shared as a "Guide-card" to our youth workers, reminding them of the fields wherein they need to be constantly up-to-date: |

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| used in INSTALL Youth? | **https://www-instruct-nl.translate.goog/wp-content/uploads/2018/06/DIGIT-updater-voorlopige-opzet.png?_x_tr_sl=auto&_x_tr_tl=en&_x_tr_hl=it&_x_tr_pto=wapp**<br>After translation from Dutch to English, also the quiz "how digitally skilled are you?" could be used as an introduction to a digital literacy course:<br>**https://www.digitalegeletterdheid.nl/test-jouw-digitale-vaardigheden/** |

## Information and data literacy

MEDIA MASTERS

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| **The partner responsible for collecting the Good Practice** | **yEUth** |

| **Information about the organisation/institution/entity responsible for the Good Practice** | |
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| Name of the entity | **Netwerk Mediawijsheid (Dutch Media Literacy Network)** |
| Type | Governamental program (Initiative of the Ministry of Education, Culture and Science) |
| Contact email | info@mediawijzer.net |
| Website (for reference purposes) | https://netwerkmediawijsheid.nl/over-ons/about-dutch-media-literacy-network/# |

| **Information about the Good Practice** | |
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| Name | **MediaMasters** |
| The problem context focusing on the needs, gaps, issues, or challenges the Good Practice aimed at addressing. | In the view of the Council of Europe, it is of utmost importance for individuals to be able to develop cognitive, technical and social skills and capacities that enable them to effectively access, critically analyse and create media content; use and make decisions about media and understand the ethical implications of media and new technologies.<br>The Good Practice belongs to a broader set of activities organized at a national level in the context of the Dutch Media Literacy Competency Framework of 2021, that is set to address current gaps in education with respect to the effective cultivation of media literacy among children and young people. |
| Objective(s) | The Good Practice aims to develop pupils' media literacy competencies so that they can consciously, critically and<br>actively find their way in the complex, ever-changing and fundamentally mediatised society. At the same time it aims to raise awareness of media literacy themes amongst educators, parents, and youth. |
| Duration | Since 2008, the game is played each year during the Dutch Media Literacy week in November. |
| Geographical location | The Netherlands (the whole country). |
| Targeted group(s) | Dutch-speaking pupils of the last two years of elementary school (10-12 yrs old), independent of their background, educational level or prior knowledge. |
| Summary of the best practice (to be used for joint report) | MediaMasters is an exciting, free serious game about the opportunities and dangers of (digital) media with offline and online elements. The main objective of the game is to raise awareness of media literacy themes amongst educators, parents, and pupils. By playing the game pupils (of the last two years of elementary school, i.e. age 10-12 years) develop their media literacy competencies through collaboratively solving |

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| | media-related problems, working on media literacy assignments, co-creating media content, and discussing media literacy themes. MediaMasters is also available for students in special education. The episodes are subtitled and are supported with Dutch sign language and audio description during the Week of Media Literacy. The game is being played by over 100,000 pupils each year during the Dutch Media Literacy week in November, in the form of a national competition, which offers exciting educational experiences to the winners. |

Elementary school delegation to the national competition of 2021

| **Results of the Good Practice** | |
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| **Outputs:**<br>1. What were the tangible outputs of the practice?<br>2. What are the services or activities provided during the Good Practice?<br><br>**Outcomes**<br>1. What is the degree of positive change (in terms of knowledge, skills, and attitudes) in the served targeted group(s) in relation to the Good Practice's objectives?<br><br>**Outreach**<br><br>1. How many people were reached or served by the Good Practice?<br><br>**Impact**<br>1. How did the Good Practice contribute to broader changes in the community, (e.g. through the work of the served or reached targeted group/s)? | Outputs:<br>1. The tangible output is a game played in Dutch schools and families. Working together as a team, the pupils complete assignments both in the classroom and at home and must demonstrate their media savviness by taking quizzes and successfully completing certain tasks.<br><br>2. Activities that are implemented complementary to the MediaMasters game:<br>• Increasing awareness & providing directions about effective digital literacy approaches through annual awareness and activation campaigns.<br>• Anchoring in practice and policy: Dutch Media Literacy Network activates the target groups' supporters when it comes to media education and mentoring.<br>• Reinforcement & activation of the network: Network partners carry out activities together and share knowledge, expertise, and resources.<br><br>Outcomes:<br>Students acquire a good level of knowledge, and they are also happy to play the game, since they feel really involved.<br><br>Outreach:<br>The objectives of MediaMasters have been highly accomplished as it is demonstrated by the high number of participants. Last year (2021) a record number of 160,000 pupils from regular and special primary education took part in the national competition.<br><br>Impact:<br>The impact of such a huge initiative is evident. Students from all over the Netherlands are now |

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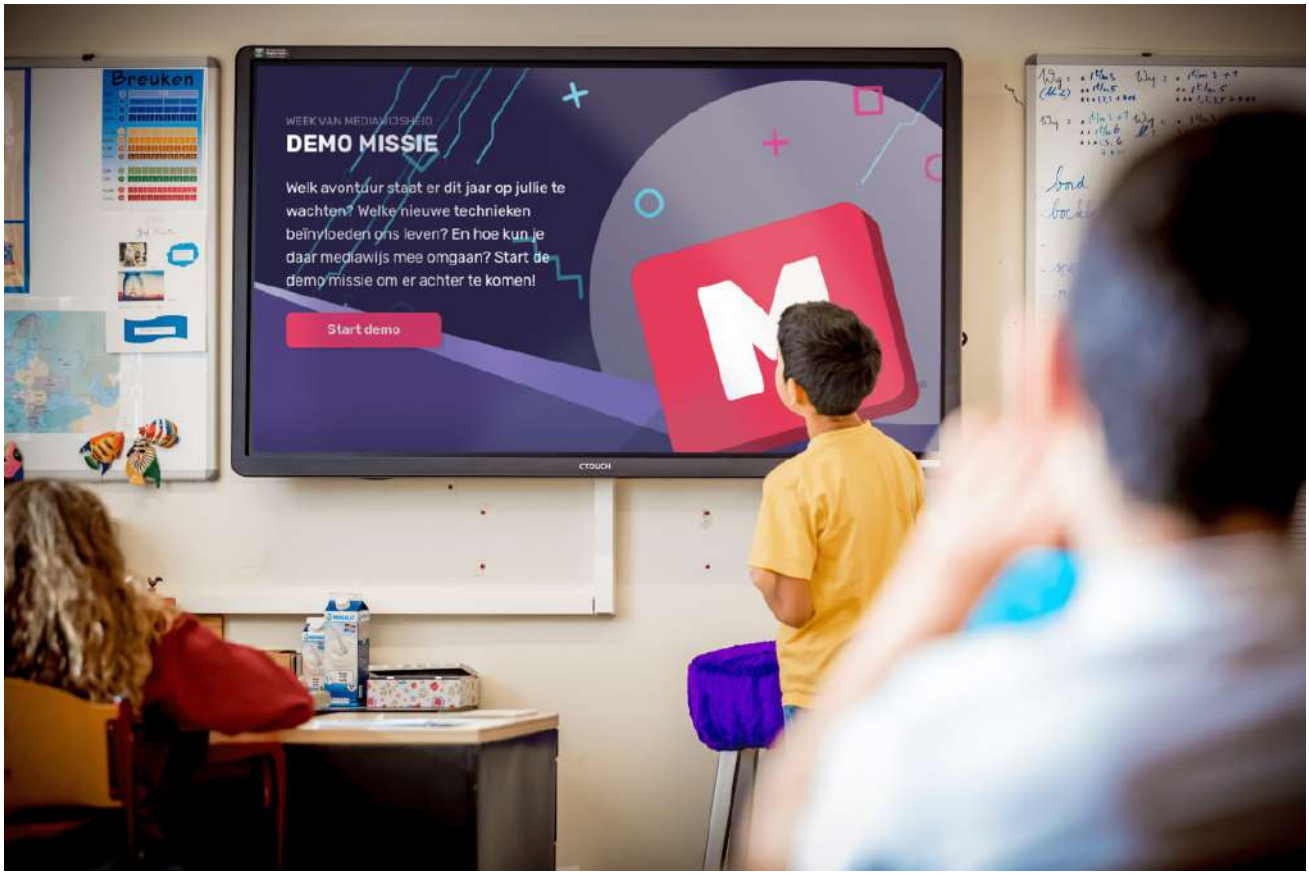
| | aware of what are digital skills and what is media literacy. |




Demo Mission: Preparation for the Media Literacy week

| **Challenges to the Good Practice** | |
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| What are the weaknesses, challenges, or issues encountered during the implementation of the Good Practice? | More young people than senior citizens doubt the trustworthiness of the news and that number keeps growing. Doubt is young people's basic attitude towards news. They have grown up with a large scale of digital resources and they do not trust any truth immediately, in principle. They consider trustworthiness as a process they own themselves, like defining 'an opinion' that can be adjusted based on new information. The main challenge, since the beginning, has been to let young people understand |

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| | that they can trust digital resources, but to do so, they must be able to understand which are the reliable ones. |

| **Applicability of the Good Practice** | |
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| 1. What key lessons can be applied or used in INSTALL Youth educational activities?<br>2. Are there any digital citizenship and science literacy training or educational resources, tools, or material produced during the Good Practice lifetime that could be applied or used in INSTALL Youth? | 1. In INSTALL Youth, one lesson that can be applied is to let youngsters understand that they can rely on digital resources, but they must develop a critical thinking about resources themselves.<br>Another important message is that effective education cannot be limited only to theoretical education, but has to include an approach for the transition of learning to real life. The competition format of a game can make young people aware of sensitive topics in a more dynamic way, and more adapted and flexible to their age.<br><br>**2.** Different elements of the game that has been created for this Good Practice and -that is the main tool used in the Netherlands – could be adapted for use in the INSTALL Youth international competition. For instance:<br>• Instead of using monetary **prizes** for the winners, these could take the form of exciting educational experiences: https://mediamasters.nl/prijzen/<br>• Implementation of a **Demo** of the Competition: during this part students are introduced to the storyline, the types of questions and how the competition works. They don't earn any points yet, but they already gain knowledge that will come in handy during the international competition.<br>• ***"Most media wise class in the Netherlands":*** In an analogous way the competition could be adapted to involve groups, instead of individuals. In this case, teamwork and communication skills are also developed, parallel to science literacy and digital citizenship skills. |

Winning class of 2021 - Trip to Sound and Vision den Hague

## Safety


| The partner responsible for collecting the Good Practice | Neoanalysis |
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| Information about the organisation/institution/entity responsible for the Good Practice |
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| Name of the entity | Technology and Research Foundation in collaboration with Google Hellas |
| Type | Research Center |
| Contact email | central@admin.forth.gr |
| Website (for reference purposes) | https://www.forth.gr/el.home |

| **Information about the Good Practice** | |
|---|---|
| Name | **Become Internet Awesome** |
| The problem context focusing on the needs, gaps, issues, or challenges the Good Practice aimed at addressing. | One of the most important challenges the younger generation faces, given that young people are frequently growing up in an unsupervised online environment, is online safety. In fact, research by the Hellenic Safe Internet Center of ITE found that 70% of kids under the legal age restriction have access to social media. In addition, 21% of children report having met someone they interacted with online, and 21% report having experienced online harassment.<br>Recognizing the vital importance of this issue, FORTH together with Google Hellas presented the course "Become Internet Awesome" |
| Objective(s) | The main objective of the practice is to enrich the knowledge and skills of elementary and high school teachers in key issues of safe online navigation and security for children**.** |
| Duration | Ongoing since 2020 |
| Geographical location | The program is available free of charge, at the request of interested teachers, in all schools in Greece. At the same time, all Be Internet Awesome resources are accessible globally. |
| Targeted group(s) | Main Target group: Teachers in elementary and secondary, children aged 7-12 |

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| | Other target groups: Parents and educators at other grade levels |
| Summary of the best practice (to be used for joint report) | Become Internet Awesome is a multidimensional program, under the auspices of the Ministry of Education and Religious Affairs , that gives teachers in schools all over Greece the tools and techniques to introduce the principles of online safety and digital citizenship in the classroom setting. The program is implemented by the Technology and Research Foundation - ITE in collaboration with Google Hellas on an ongoing basis since 2020.<br>The courses for teachers, involve gamification techniques such as Interland, an online adventure game about digital security and digital citizenship, which is used to frame the courses offered by the Informatics Institute of the FORTH.<br>Be Internet Awesome aligns with both ISTE (International Society for Technology in Education) and AASL (American Association of School Librarians) standards. |

| **Results of the Good Practice** | |
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| **Outputs:**<br>1. What were the tangible outputs of the practice?<br>2. What are the services or activities provided during the Good Practice?<br><br>**Outcomes**<br>1. What is the degree of positive change (in terms of knowledge, skills, and attitudes) in the served targeted group(s) in relation to the Good Practice's objectives? | **Outputs**<br>1. Through this project three main outputs have been developed:<br>Interland is an online adventure game that makes learning about digital citizenship and safety engaging and enjoyable. By playing, kids develop the skills they need to be responsible citizens of the online world by helping other Internet users in defending themselves against harmful hackers, phishers, hyper-sharers, and bullies.<br>The curriculum has lesson plans in five subject areas -*Share with care*, *Don't fall for fake*, *Secure your secrets*, *It's cool to be kind*, *When it doubt talk it out*-. The |

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| **Outreach**<br><br>1. How many people were reached or served by the Good Practice?<br><br>**Impact**<br>1. How did the Good Practice contribute to broader changes in the community, (e.g. through the work of the served or reached targeted group/s)? | material, created by Google in collaboration with the iKeepSafe organization, allows educators to bring the most critical lessons and fun of Interland into their classrooms. The Become Internet Awesome Family Guide offers materials and methods for families to teach their children about online safety and responsibility at home. This guide has been created to help families incorporate and practice good digital practices simply in their daily life. Rich in content, this guide will help parents and their children discuss, learn and think together about online safety.<br><br>2. Apart from the activities that led to the production of the above outputs, an additional service is available by the Good Practice: Each teacher can attend, completely free of charge, a 120-minute online seminar, which introduces them to the program's material and the techniques and tools they can use in the classroom.<br><br>**Outcomes**<br>This program has already trained educators in online safety and online citizens' rights, and provide tools to parents and kids related to digital safety. Related resources that were produced by the program are freely accessible to everyone. Numerous kids have already benefited and developed digital abilities.<br>After the completion of the first cycle of the program, in a related questionnaire, 97% of the teachers agreed that the program should be included in the school curriculum.<br><br>**Outreach**<br>More than 5.000 teachers have already participated and been certified in the Become Internet Awesome program. |

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| | During 2021 the program was carried out in 3,290 public schools, 2,950 teachers were trained by Technology and Research Foundation. These teachers taught 231,350 pupils.<br><br>**Impact**<br>The program addresses every element that the educators and families need to know to help children grasp the fundamentals of digital citizenship and safety so they can explore the online world with confidence.<br>The program has a great impact on the quality of digital citizenship education in Greece, since it focuses on the roots: i.e. the proper training of educators. |

| **Challenges to the Good Practice** | |
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| What are the weaknesses, challenges, or issues encountered during the implementation of the Good Practice? | Not known |

| **Applicability of the Good Practice** | |
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| 1. What key lessons can be applied or used in INSTALL Youth educational activities?<br>2. Are there any digital citizenship and science literacy training or educational resources, tools, or material produced during the Good Practice lifetime that could be applied or used in INSTALL Youth? | 1. The creation of an **educational online game**<br>People like playing games and beating the "evil". In this way, children play games and at the same time fight against cyberbullying and help other gamers defend themselves as Internet users.<br>Also, an other important lesson is that any intervention for education cannot be complete or optimally effective before it targets the root: i.e. teachers, trainers and other education providers, who are not digital natives, but have to explore this world in depth first, before being in the position to help young people to do so as well. |

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| | 2. **Interland game** could be used in INSTALL Youth for explaining and joyfully promoting digital citizenship.<br>Also, the **curriculum** could be used as a more theoretical material of inspiration for building training formats for digital safety. |

## Information and data literacy


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| **The partner responsible for collecting the Good Practice** | **Neoanalysis** |

| **Information about the organisation/institution/entity responsible for the Good Practice** | |
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| Name of the entity | **InterMediaKT** |
| Type | **NGO** |
| Contact email | info@intermediakt.org |
| Website (for reference purposes) | **https://intermediakt.org/home/** |

| **Information about the Good Practice** | |
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| Name | **A hug for the e-lderly** |
| The problem context focusing on the needs, gaps, issues, or challenges | The project responds to the need for equal inclusion of people 65+ yrs. in the digital world. Digital illiteracy, non-age-friendly platforms and societal stereotypes for seniors prevent people 65+ from using digital tools |

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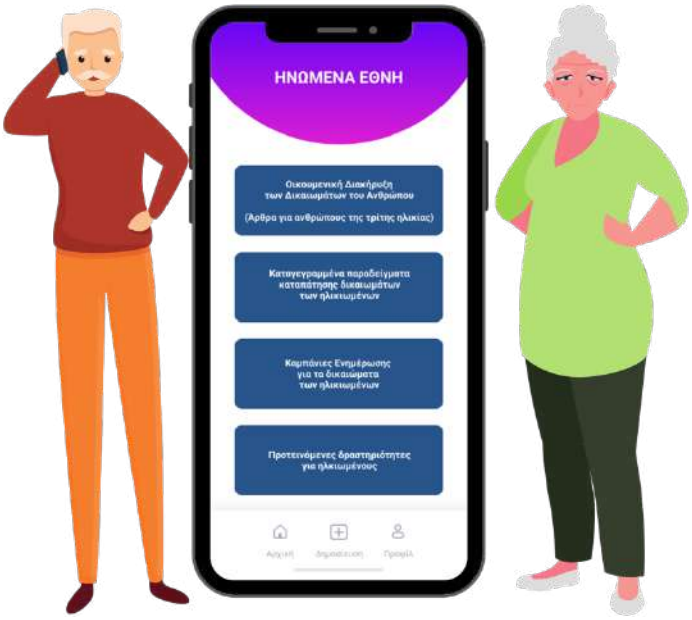
| the Good Practice aimed at addressing. | that will facilitate their daily lives and improve their quality of life. At a time when government services, banks, markets, and even medical services are being digitized, the right to equal inclusion in the digital world affects everyone regardless of age. |
| Objective(s) | The project aims to protect the right of equal access and participation of people 65+ in the digital world |
| Duration | May 2021 – March 2023 |
| Geographical location | 8 cities in Greece (Patra, Ioannina, Thessaloniki, Serres, Katerini, Chania, Heraklion, Athens) |
| Targeted group(s) | People aged 65+ with little to no digital skills |
| Summary of the best practice (to be used for joint report) | Digital illiteracy, non-age-friendly platforms and societal stereotypes for seniors prevent people 65+ from using digital tools that will facilitate their daily lives and improve their quality of life.<br>A "Hug for the e-lderly" is a 22-month long project, funded by the Active Citizens Fund program, and implemented by two Greek NGOs; InterMediaKT (Coordinator) and People Behind (Partner), that aims to respond to the need for equal inclusion of people 65+ yrs. in the digital world.<br>As first, the partners will create an awareness documentary with testimonies of people over 65 about how they were (or were not) introduced to the use of ICT and how digitalization has changed their lives.<br>The project will then share "hugs" of knowledge via a journey in 8 cities of Greece. Throughout the journey older people will be invited to partake in educational activities and open discussions based on the awareness documentary and personal experiences.<br>The main deliverable of the project is the "Hug65+" mobile app that will be created by InterMediaKT with the participation of 20 people of 65+ yrs, which will serve as a digital educational tool for seniors, made by seniors. |




| **Results of the Good Practice** | |
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| **Outputs:**<br>1. What were the tangible outputs of the practice?<br>2. What are the services or activities provided during the Good Practice?<br><br>**Outcomes**<br>1. What is the degree of positive change (in terms of knowledge, skills, and attitudes) in the served targeted group(s) in relation to the Good Practice's objectives?<br><br>**Outreach** | **Outputs**<br>1. Tangible Outputs that will be developed over the course of the project:<br>A. The **"Hug 65+" mobile application** that will be created by InterMediaKT with the participation of 20 people of 65+ yrs. The app will train the elderly on their rights and on how they can use the application to share their digital needs. In general, Hig 65+ will serve as a digital educational tool for seniors, made by seniors<br>B. An **awareness documentary** with testimonies of people over 65 about how they were (or were not) introduced to the use of ICT and how digitalization has changed their lives. This documentary will then be the basis of the awareness campaign of the project (i.e. the open discussions and trainings offered in 8 Greek cities) |

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| 1. How many people were reached or served by the Good Practice?<br><br>**Impact**<br>1. How did the Good Practice contribute to broader changes in the community, (e.g. through the work of the served or reached targeted group/s)? | 2. Activities of the project<br>The project will share "hugs" of knowledge via a journey in 8 cities of Greece. Throughout the journey older people will be invited to partake in educational activities and open discussions based on the awareness documentary and personal experiences. That is the journey will entail 2 types of activities:<br>A. **Screenings and open discussions** about digital literacy and digital inclusion with the aim is to raise awareness among citizens, and help them abolish stereotypes and gain a deeper understanding of the needs of older people.<br>B. **Trainings:** Implementation of educational seminars for employees in technology and communication companies, with the aim of sensitizing them about the right to include the elderly in the digital world, and inform them about the needs of the elderly, so that the platforms and websites they create are more 65+ friendly.<br><br>**Outcomes**<br>The positive outcome expected from this project is that digital inclusion for older adults will be facilitated, by helping them overcome key barriers: access, installation, knowledge, design, and trust, and by identifying their needs and making them better understood by relevant stakeholders (such as tech companies)<br><br>**Outreach**<br>20 people aged 65+ will take part in the development process and 400 beneficiaries (65+) will be trained through the "Hug 65+ app"<br>Further data about the outreach are not known yet, as the project is still ongoing. |

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| | **Impact**<br>The impact this project intends to make is to remove key barriers on the way of older people to fully access and benefit from the digitalized world. Moreover, civil society and the public are expected to become more sensitized with respect to the need of caring about the unhindered participation in the digital world for everyone, including often neglected groups like the elderly. |

| **Challenges to the Good Practice** | |
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| What are the weaknesses, challenges, or issues encountered during the implementation of the Good Practice? | Not available yet as the project is still ongoing |

| **Applicability of the Good Practice** | |
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| 1. What key lessons can be applied or used in INSTALL Youth educational activities?<br>2. Are there any digital citizenship and science literacy training or educational resources, tools, or material produced during the Good Practice lifetime that could be applied or used in INSTALL Youth? | **1.** We selected this practice despite the fact that the target group is completely different from that of INSTALL Youth for the following reasons:<br>• It spreads the important message that the **elderly should not be left out** of the attempts of the European civil society to support the **digital transition**, as these people too are an important part of our social fabric.<br>• Another element that we found very valuable in this project is that **the targeted group participates directly in the development process of the outputs** foreseen to be put at their disposal, with the guidance of specialized organizations.<br>• At the same time all of the **"needs-assessment" and the "needs-awareness"** activities (i.e. mobile app, |

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| | open discussions, documentary) **are based on digital tools**, and thus bring the elderly in contact with the digital world. Through this process they get a clearer idea of their needs, while their upskilling process starts already from the needs assessment phase!<br><br>2. From this project we could utilize not so much its tangible outputs, because they concern a completely different age group, but the above principles.<br>An idea that we could adopt is to organize follow-up activities that involve intergenerational dialogue; i.e. the participants could present the digital citizenship concepts they were trained in to older people. This way we could enhance retention of the learning outcomes -since the best way to understand and remember something is to teach other - while also contributing to the digital upskilling of older people. |

| The partner responsible for collecting the Good Practice | Neoanalysis |
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| Information about the organisation/institution/entity responsible for the Good Practice | |
|---|---|
| Name of the entity | **KYKLOS** |
| Type | **NGO** |
| Contact email | psaroloco.project@gmail.com |
| Website (for reference purposes) | https://el.psaroloco.org/ |

| Information about the Good Practice | |
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| Name | **PSAROLOCO** |
| The problem context focusing on the needs, gaps, issues, or challenges the Good Practice aimed at addressing. | The quality of information (re)is largely determined by the new media which are now offered on single platforms. Our choices and subsequent actions, our capacity for self-determination, personal development and our political identity are determined by the media's overwhelming presence. It is therefore a supreme challenge to cultivate the skills of evaluating, analysing |

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| | and filtering information in order to be able to exercise the right to information and freedom of expression.<br>This is where the need for media literacy, or audiovisual literacy, with skills for accessing, using and critically analysing media content comes in.<br>This is the need that the PSAROLOCO Media Literacy initiative seeks to address |
| Objective(s) | The main objective of the practice is to promote media and audio-visual literacy with access skills for creative use and critical analysis of the content through the cinema, integrating teachers as primary agents of this new audiovisual literacy. |
| Duration | Ongoing since 2010 |
| Geographical location | Greece, with International participation in the Film Festival |
| Targeted group(s) | - children and young people<br>- teachers<br>- health and mental health professionals (psychologists, psychotherapists, child psychiatrists, paediatricians, speech and language therapists)<br>- social scientists (sociologists, social workers, anthropologists)<br>- journalists<br>- communicators<br>- students of all the above disciplines<br>- parents, as well as all those who love the 7th art. |
| Summary of the best practice (to be used for joint report) | The Psaroloco Media Literacy Project was launched in Greece in 2010 and is managed by the non-profit organization KYKLOS, with the support of numerous partners from the civil society, the public and private domain (e.g. UNESCO MIL Alliance).<br>PSAROLOCO Media Literacy initiative seeks to promote the movement of educating children as digital citizens and to integrate teachers as the primary agents of audiovisual literacy. It offers free educational resources and educational programmes (long term, workshops, forums) for teachers and professionals, as well as |

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| | experiential workshops and film screenings of selected films specifically designed for children.<br>Giving priority to vulnerable groups of children and adolescents, it has collaborated with the SOS Children's Village of Greece and with the non-profit Tandem NGO for the Psaroloco experiential workshops at the Centre for the Rehabilitation of Children with Disabilities of Attica.<br>Psaroloco Media Literacy Project was the WINNER in UNESCO Global Media and Information Literacy Awards in 2021. |

| **Results of the Good Practice** | |
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| **Outputs:**<br>1. What were the tangible outputs of the practice?<br>2. What are the services or activities provided during the Good Practice?<br><br>**Outcomes**<br>1. What is the degree of positive change (in terms of knowledge, skills, and attitudes) in the served targeted group(s) in relation to the Good Practice's objectives?<br><br>**Outreach**<br><br>1. How many people were reached or served by the Good Practice? | **Outputs (1,2)**<br><u>International Film Festival</u><br>The most celebrated output of the Practice in the annual international Film Festival for children and adolescents that offers a program of cinema screenings specially formed for children and teenagers, with selected films and group workshops, in which children create entirely their own short films (fiction, documentary, stop motion, etc.). The ultimate goal of the festival is to encourage youth to get actively involved in the 7th art, to promote meaningful, thought provoking films for children and showcase amazing works of Filmmakers from around the world.<br><br>*Awards and Prizes*<br>Best Film made by children<br>Best Film with a Focus on Diversity<br>Best Film on Human Rights and the Environment<br>Best Short Film Ages 4+<br>Best Short Film Ages 7+<br>Best Short Film Ages 10+<br>Best Short Film Ages 12+<br><br><u>Psaroloco Ed</u><br>Psaroloco also has a line of vibrant educational activities. The curriculum in the Psaroloco Ed class is designed to provide meaningful engagement with the |

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| **Impact**<br>1. How did the Good Practice contribute to broader changes in the community, (e.g. through the work of the served or reached targeted group/s)? | arts, support media literacy, and improve critical thinking skills.<br>The educational resources and accompanying material are offered free of charge on the official website of the action www.psaroloco.org in Greek and English.<br>Each lesson plan includes age-appropriate thematic short films to watch along with teaching materials.<br><br>Indicatively, the educational kits for ages 10 - 12+ are mentioned.<br>• Educational kit based on the animated film "For Mother" by Dina Velikovskaya with themes: mother, family, love, mutual support, interculturalism. Suggested age: 10-12+<br>Link: https://www.psaroloco.org/about-a-mother<br>• Educational kit based on the film "Fox" by Jacqueline Lentzou with themes of adulthood, family, childhood, conflict. Suggested ages: 14+<br>Link: https://www.psaroloco.org/education-kit-fox<br>• Educational kit based on the film "Thermost 6" by Maya Av-Ron &<br>Marion Coudert & Mylene Cominotti & Sixtine Dano on climate change and the Sustainable Development Goals. Suggested age: 12+<br>Link: https://www.psaroloco.org/thermostat-6-climate-change-sdgs<br>• Educational kit "Let's get real" Suggested age: 12-16+ with the theme: the exploration of documentary filmmaking. The educational kit allows students to learn the necessary visual language required to tell a story through this form, but will also enable them to understand the selection process involved in telling a story, even if it is based on real events or people<br>Link: https://www.psaroloco.org/memory-%CE%B9-let-s-get-real<br><br>**Outcomes**<br>Each year since 2010 the PSAROLOCO international film festival takes place. The Festival receives more than 50 movie entries each year from all over Europe and beyond (Asia, Latin America, North Africa etc). |

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| | In the context of Psaroloco Ed several media and audiovisual literacy workshops for children have been implemented in collaboration with important players of the cultural sector (Cultural Centre Stavros Niarchos, Municipal Theatre of Piraeus, different Municipalities in Greek islands, SOS Villages in Greece etc)<br>The contribution of the practice has been recognized internationally, and in 2021 Psaroloco has been one of the six winners of UNESCO's Global Media and Information Literacy Awards.<br><br>**Outreach**<br>N/A<br><br>**Impact**<br>Film literacy is one of the fundamental pillars of audio-visual and media education in general, turning viewers into active and autonomous media users. Access to the educational materials of the Practice is open to all through their official website and social media, enabling young and older to search and explore them.<br>The positive impact on both educators, parents, film clubs, library staff and young filmmakers is visible from the invitations and enquiries they receive from all over the world. |

| **Challenges to the Good Practice** | |
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| What are the weaknesses, challenges, or issues encountered during the implementation of the Good Practice? | The most significant reported challenge is that Greece lacks a structured understanding of what MIL is comprised about, since there is not one central, nationally or internationally recognized framework to guide relevant initiatives. This limits the support to initiatives that have wide potential. For support to come, an organization or other entity has to first become successful and "prove a point" by its own means. |

| **Applicability of the Good Practice** | |
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| 1. What key lessons can be applied or used in INSTALL Youth educational activities?<br>2. Are there any digital citizenship and science literacy training or educational resources, tools, or material produced during the Good Practice lifetime that could be applied or used in INSTALL Youth? | 1. The implementation of participatory **MIL and film literacy activities** increases student participation, improves behaviour, and mutual understanding in the classroom. This approach is also highly effective in increasing critical thinking skills, observation-attention skills, search for meaning and ability to distinguish relationships between different domains.<br><br>Another important insight from this practice is that . film is about active learning, encouraging social awareness and critical debate about a variety of subjects, from MIL to history to important societal issues and even the SDGs! The best film education includes discussion, presentation, critical thinking, team working and filmmaking, as well as watching.<br><br>2. The application of the practice's fundamental concept (i.e. incorporating film literacy into not only MIL educational approaches, but also in education for sensitization about any kind of important social topics) in the design of the learning activities of INSTALL Youth and similar projects is highly recommended.<br>With respect to practical applications and tools, the following materials are available for free and fitting with our educational purposes:<br><br>Psaroloco Ed teaching resources by subject / age group:<br>https://www.psaroloco.org/education-psaroloco-media-literacy<br><br>Psaroloco films by themes / age group:<br>https://www.psaroloco.org/online-films-free-psaroloco<br><br>Film festival rules (could be used in case we would like to organize a conceptually similar follow-up |

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| | activity, e.g. small-scale film festival about digital citizenship and science literacy concepts): https://filmfreeway.com/Psaroloco |

## Communication and collaboration


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| **The partner responsible for collecting the Good Practice** | **yEUth** |

| **Information about the organisation/institution/entity responsible for the Good Practice** | |
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| Name of the entity | **CYPRUS ORGANIZATION FOR SUSTAINABLE EDUCATION AND ACTIVE LEARNING (S.E.A.L CYPRUS)** |
| Type | **Non-governmental organization** |
| Contact email | **projects@sealcyprus.org** |
| Website (for reference purposes) | **https://sealcyprus.org/** |

| Information about the Good Practice | |
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| Name | **TRACES- Supporting youth to manage their digital & social media presence** |
| The problem context focusing on the needs, gaps, issues, or challenges the Good Practice aimed at addressing. | The digital revolution is transforming the way young people play, access information, communicate and learn. Youth today have unprecedented learning opportunities. Digital and social media literacy training are now necessary to ensure that young Europeans can harness the potential of online opportunities to build skills, careers and relationships effectively but also safely. |
| Objective(s) | The objectives of the project were:<br>- to support the continuous professional development of youth professionals;<br>- to develop key digital and social media literacy training material for youth with fewer opportunities;<br>- to create a policy paper to advocate for the promotion of responsible digital citizenship of youth with fewer opportunities. |
| Duration | From 01-09-2019 to 21-01-2021 |
| Geographical location | The partnership consisted of 3 organizations, from Cyprus, Finland and Ireland. |
| Targeted group(s) | Youth professionals, youth workers, young people with fewer opportunities and youth organizations. |
| Summary of the best practice (to be used for joint report) | TRACES was an Erasmus+ funded project, implemented in the period 01-09-2019 to 21-01-2021, by organizations in 4 European countries (Romania, Cyprus, Finland and Ireland), which aimed at supporting the development of youth professionals and young people with fewer opportunities.<br>The project promoted responsible digital citizenship among young people with fewer opportunities, helping them to develop social media and digital literacy, by |

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| | developing a Digital and Social Media Literacy Curriculum, and a collaborative online learning database.<br>It also focused on meeting the training needs of youth workers and educators through the creation of a Handbook for in-service training programmes and a Guide for Youth Workers active in the field of Digital Media.<br>Last but not least, the project aimed at influencing relevant policy making by means of publishing policy recommendations on the promotion of digital citizenship for all young people through digital youth work in the partner countries. |

Project Website presentation in the Transnational Partner Meeting in Ireland

| **Results of the Good Practice** | |
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| **Outputs:**<br>1. What were the tangible outputs of the practice?<br>2. What are the services or activities provided during the Good Practice?<br><br>**Outcomes**<br>1. What is the degree of positive change (in terms of knowledge, skills, and attitudes) in the served targeted group(s) in relation to the Good Practice's objectives?<br><br>**Outreach**<br>• How many people were reached or served by the Good Practice?<br><br>**Impact**<br>1. How did the Good Practice contribute to broader changes in the community, (e.g. through the work of the served or reached targeted group/s)? | **Outputs:**<br>**1.** The project has had five main intellectual outputs:<br>1. Digital and Social Media Literacy Curriculum Resources;<br>2. In-service Training Programme Handbook;<br>3. Collaborative online Learning Database;<br>4. Policy Paper "Policy recommendations on the promotion of digital citizenship for all young people through digital youth work in Cyprus, Finland, Ireland and Romania";<br>5. Guidelines for Youth Workers working with Digital Media.<br><br>**2.** During the project, the partners developed and piloted resources for youth workers working with young people with fewer opportunities. The overarching methodology was Open Education. Innovative methods were used such as, in-service training, blended learning. Non formal and experiential learning underline the in-service training and the related Handbook.<br>During the short-term joint staff training event "TRACES in-service training for Youth Workers" and the training for young people, the methodology was a blend of: (1) self-driven online learning (2) non-formal education participatory methods (3) face-to-face instruction on the use of specific online tools.<br><br>The partners met with their advisory committees of youth workers to validate the outputs and to conduct semi-structured focus groups for the creation of the Policy Paper on the Digital Citizenship of Young People with fewer Opportunities.<br><br>A Collaborative online Learning Database was created and maintained using the latest |

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| | methodologies to feature all the outputs and facilitate internal and external cooperation.<br><br>A combination of dissemination methods supported the visibility of the project, the partners, and Erasmus+. The methods included classic and social media, digital promotion and face-to-face activities such as the multiplier events, and the final conference.<br><br>The Stakeholder Dialogue Model facilitated the communication and engagement of people interested in the welfare of the youth and the endorsement of the Policy Paper by policy-makers and managers in the youth field.<br><br>**Outcomes:**<br>Young people, whatever their status, who completed the curriculum resources developed as part of the project will bring a considerable skill-set with them wherever they go in their life in the connected world.<br><br>**Outreach:**<br>12 youth professionals completed the first iteration of the in-service training programme at the transnational training event. In addition,<br>40 youth workers (10 per partner country) completed the in-service training;<br>80 young people with fewer opportunities (20 per partner country) attended the digital and social media literacy workshops;<br>5 youth workers in each country will comprise the advisory committees of the partners (20 in total);<br>50 youth workers, youth trainers/ facilitators, managers of youth organisations and policy-makers attended the Final Conference in Cyprus;<br>200 young people with fewer opportunities were actively engaged in building digital and social media literacy competences and<br>100 youth organisations will receive information about the project and the resources developed. |

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| | **Impact:**<br>The project has had an important impact because the dialogue on the digital citizenship of young people with fewer opportunities is continuing after the project end. Likewise, the open access to the intellectual outputs in combination with careful dissemination and exploitation activities is prolonging their use by the partners and other organizations in Europe. |

| **Challenges to the Good Practice** | |
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| What are the weaknesses, challenges, or issues encountered during the implementation of the Good Practice? | The project followed a collaborative, results-oriented approach with ongoing monitoring and risk assessment with the traffic lights tool. If any problem was encountered, the partners communicated face-to-face during the project meetings and harnessed online media for communication and cooperation. |

| **Applicability of the Good Practice** | |
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| 1. What key lessons can be applied or used in INSTALL Youth educational activities?<br>2. Are there any digital citizenship and science literacy training or educational resources, tools, or material produced during the Good Practice lifetime that could be applied or used in INSTALL Youth? | 1. The key lesson is that providing the right tools and an adequate support, everyone can become a digital and responsible citizen. Different groups of learners' should be given tailor-made education that fits their needs.<br><br>2. The resources of the different IOs are open access, so they can be used in INSTALL Youth, in particular, the IO2 of the project "Digital and social media in service training programme handbook". It provides several activities divided in modules. A very interesting activity, called **"We are responsible netizens"**, aims to aid participants in developing an understanding of Digital Ethics and the context surrounding them, to raise their awareness of their behavior as Netizens subsequently.<br><br>These are the steps to complete this activity : |

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| | • Step 1 – Before watching the video, examine essential vocabulary and terminology regarding digital citizenship and more specifically, digital ethics. Ask participants to provide possible definitions.<br>• Step 2 – Play the video for the participants on Digital Citizenship & Digital Ethics. Ask them to take notes for the definitions mentioned above while watching it.<br>• Step 3 – After the video, repeat the correct terminology and definitions to make sure everyone understands them.<br>• Step 4 – Create groups of 4-5 people and ask them to draft a shortlist of an ethical code of conduct which netizens ought to maintain.<br>• Step 5 – When everyone finishes, ask each group to present their outputs briefly.<br><br>Another useful tool could be the "DIGITAL AND SOCIAL MEDIA LITERACY CURRICULUM RESOURCES" (Sign Up to the Learning Platform Required)<br>https://tracesproject.online/en/outputs/io1/ |

## Safety


| The partner responsible for collecting the Good Practice | yEUth |
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| Information about the organisation/institution/entity responsible for the Good Practice | |
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| Name of the entity | **National Center for Missing & Exploited Children (NCMEC)** |
| Type | **Non-profit organization** |
| Contact email | **media@ncmec.org** |
| Website (for reference purposes) | **https://www.missingkids.org/home** |

| **Information about the Good Practice** | |
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| Name | **NETSMARTZ** |
| The problem context focusing on the needs, gaps, issues, or challenges the Good Practice aimed at addressing. | The millions of reports made each year point to the urgent need to identify trends and create prevention resources to address the evolving needs of kids and teens online. NETSMARTZ focuses on the need for better knowledge about online safety and empowerment to help prevent victimization, among young people. |
| Objective(s) | The objective of the project is to help students develop critical skills and be aware of what they can find on the Internet by creating several activities to be carried out in a group. |
| Duration | The project is an ongoing one, and the kit has been created in 2015. |
| Geographical location | United States |
| Targeted group(s) | Children and adolescents between 5 and 17 years old |
| Summary of the best practice (to be used for joint report) | NetSmartz is NCMEC's (online safety education program, launched in 2015. It provides age-appropriate videos and activities to help teach children be safer online with the goal of helping children to become more aware of potential online risks and empowering them to help prevent victimization by making safer choices on- and offline.<br>It offers free, age-appropriate resources, including videos, games, e-books, webcomics, presentations, classroom lessons, and tip sheets to help children learn how to protect themselves and their friends online. Parents, educators, and law enforcement can use these materials to engage children in discussions about online issues ranging from privacy to cyberbullying. |

| **Results of the Good Practice** | |
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| **Outputs:**<br>1. What were the tangible outputs of the practice?<br>2. What are the services or activities provided during the Good Practice?<br><br>**Outcomes**<br>1. What is the degree of positive change (in terms of knowledge, skills, and attitudes) in the served targeted group(s) in relation to the Good Practice's objectives?<br><br>**Outreach**<br>1. How many people were reached or served by the Good Practice?<br><br>**Impact**<br>1. How did the Good Practice contribute to broader changes in the community, (e.g. through the work of the served or reached | **Outputs:**<br>**1.** NetSmartz offers free, multimedia internet safety presentations tailored for specific audiences — educators, parents and communities, teens, tweens, and younger children. Their innovative presentations make use of online resources, videos, and expert tips to educate, engage, and empower children and adults to be safer on and offline, and are available in a digital library: **https://www.missingkids.org/netsmartz/resources**<br><br>One important tangible output of the practice is a Handbook collecting several good practices to teach online safety and digital citizenship.<br><br>**2.** The handbook contains instructions on how to conduct activities in the classroom and how to adjust them by age.<br><br>**Outcomes:**<br>During the activities, students are encouraged to say aloud what they think about a certain topic, without fear to be judged because, at the beginning of the activity itself, it is specified that there will be no judgment among participants. The debate is useful to develop critical skills, but also to increase people's knowledge of certain topics (digital security, cyberbullying, etc.) and to favor a positive attitude forward others' opinions.<br><br>**Outreach:**<br>The outreach of the project is unknown, but it is a project that has been promoted for several years on a large-scale. Every year, it is implemented in many schools.<br><br>**Impact:**<br>The Good Practice contributed to broader changes in the community because it is from very young people (5-17 years) that the change can start. To have competent and responsible digital citizens among youngsters is the most important factor to achieve a broader change in the community in terms of digital skills. |

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| targeted group/s)? | |

| **Challenges to the Good Practice** | |
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| What are the weaknesses, challenges, or issues encountered during the implementation of the Good Practice? | The success of the implementation depends on the openness of the group to specific debates. Challenges may be faced when trainers don't have a good knowledge of the group in which they are going to implement an activity and they found out that the group is not really interested in that specific topic. |

| **Applicability of the Good Practice** | |
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| 1) What key lessons can be applied or used in INSTALL Youth educational activities?<br>2) Are there any digital citizenship and science literacy training or educational resources, tools, or material produced during the Good Practice lifetime that could be applied or used in INSTALL Youth? | 1. The key lesson that can be applied in INSTALL Youth is to promote an active dialogue in the group (among peers but also between different age groups, wherein older youth assume a mentoring role) and to have specific preparatory activities that can involve the entire group of learners in the debate.<br><br>2. There are several activities promoting online safety that could be adapted in INSTALL Youth. Here is the handbook with the entire kit: https://cdn.netsmartz.org/downloads/Student_Project_Kit.pdf<br><br>Among others, the activities from that Handbook that can be applied in INSTALL Youth are:<br>• **"Online Privacy: Shh! It's Personal"** that helps students learn about the importance of keeping personal information private.<br>• **"Digital Ethics: Art Swap",** which helps students understand the importance of crediting their online sources.<br><br>Netsmartz also offers a kit that empowers middle and high school students to educate their peers and younger students about online safety and digital citizenship: https://www.missingkids.org/content/dam/netsmartz/downloadable/Peer%20Education%20Kit.pdf |

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| | Youtube Channel with Video Series aimed at educating children on how to recognize potential Internet risks https://www.youtube.com/user/NetSmartzWorkshop |

## Communication and collaboration

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| **The partner responsible for collecting the Good Practice** | **yEUth** |

| **Information about the organisation/institution/entity responsible for the Good Practice** | |
|---|---|
| Name of the entity | **ASOCIATIA CENTRUL DE DEZVOLTARE ARAD** |
| Type | **Non-governmental organization** |
| Contact email | **office@aradcda.ro** |
| Website (for reference purposes) | **https://aradcda.ro/en/** |

| **Information about the Good Practice** | |
|---|---|
| Name | **<u>iPool</u> - Interactive Pool of tools for enhancing basic skills and key competencies of adults** |
| The problem context focusing on the needs, gaps, issues, or challenges the Good Practice aimed at addressing. | The project's idea came from analysis of the situation in the area of proficiency in basic skills of adult people. The OECD's Survey of Adult Skills (2013/14), supported by the Commission's DG Education and Culture, highlighted that 20% of the EU working age population had low literacy and low numeracy skills and 25% of adults lacked the skills to effectively use ICT. These numbers meant direct consequences for Europe 2020 strategy, both at overall level and for individual countries and showed the need for strengthening the skills dimension of Europe 2020. |
| Objective(s) | The main objective of the project was to increase the level of proficiency in basic skills among low educated adults from Romania, Poland, Germany, Spain and Italy through realizing the following operational goals:<br>• gathering, analysing and categorising existing OER tools and good practices supporting education of low skilled adults,<br>• developing an Interactive Pool (on-line database) of tools allowing for categorisation and assessment of existing tools and addition of new tools,<br>• developing a Guide to IPool providing step by step instructions of using the Pool and disseminating the outcomes in order to assure their exploitation also in other EU countries and other fields of education. |
| Duration | From 15-09-2016 to 14-09-2018 |
| Geographical location | The partnership consisted of 6 organizations, all providing training for adult people and in particular with experience in work with low-skilled adults. The organizations are from Romania, Italy, Germany, Poland (two), Spain |

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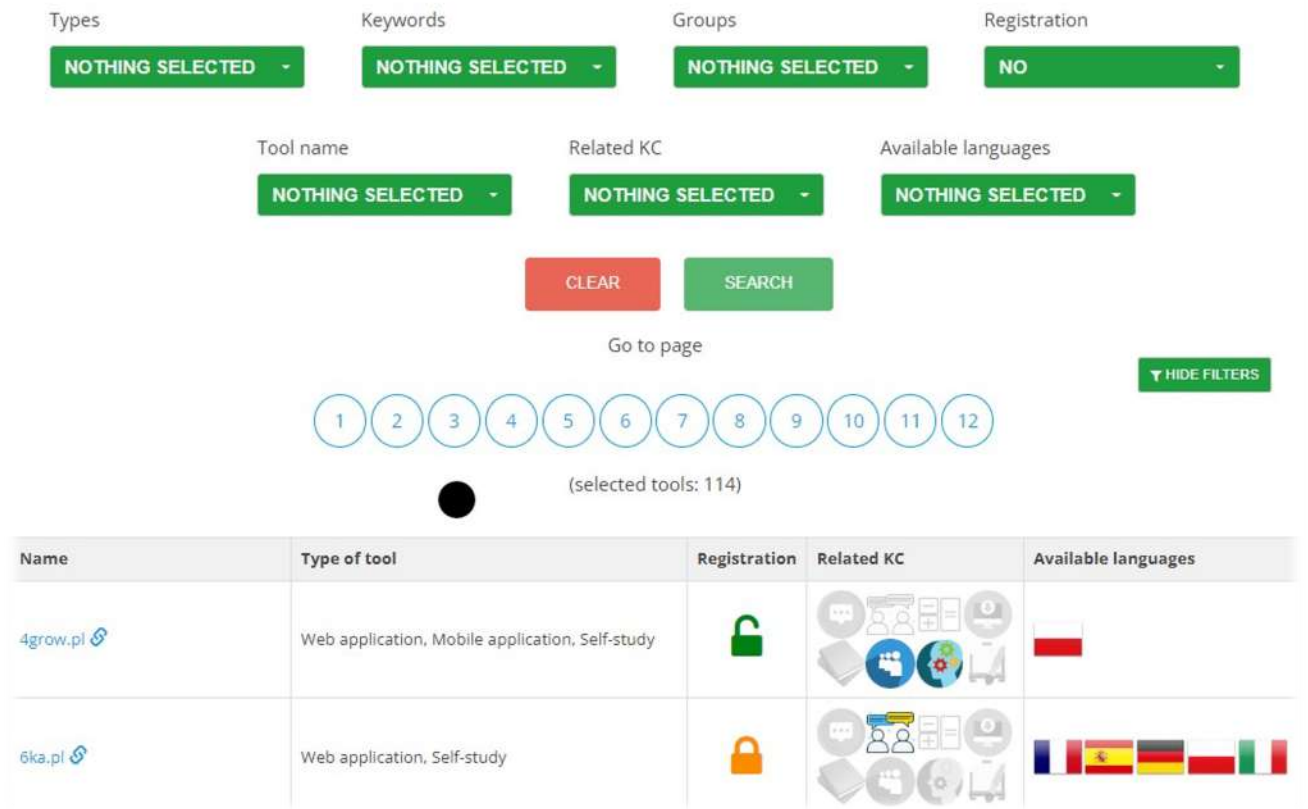
| Targeted group(s) | Direct: Lowly-skilled adults<br>Indirect: Adult education centres, third age universities, associations which support enhancing basic skills |
| Summary of the best practice (to be used for joint report) | iPool was a 24-month Erasmus+ project addressed to lowly educated adults implemented by a partnership of 6 organizations, all providing training for adult people and in particular with experience in work with low-skilled adults from Romania, Italy, Germany, Poland, and Spain.<br>The main objective of the project was to increase the level of proficiency in basic skills among lowly educated adults by meeting the following operational goals: gathering, analysing and categorising existing OER tools and good practices supporting the education of low skilled adults and developing an Interactive Pool (on-line database) of tools allowing for categorisation and assessment of existing tools and the addition of new tools. |




Interface of iPool Database

| **Results of the Good Practice** | |
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| **Outputs:**<br>1. What were the tangible outputs of the practice?<br>2. What are the services or activities provided during the Good Practice?<br><br>**Outcomes**<br>1. What is the degree of positive change (in terms of knowledge, skills, and attitudes) in the served targeted group(s) in | **Outputs:**<br>**1.** The main tangible results of the project include:<br>• **Report of existing OER supporting education of low-skilled adults**<br>• **iPool Database** allowing for categorisation and assessment of existing tools and addition of new ones<br>• A Guide on how to use the Interactive Pool<br>• many dissemination materials (website, social channels, leaflets, newsletters)<br>**2.** The main undertaken activities in the project included work on the main results, meaning that the activities included gathering, analyzing, and |

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| relation to the Good Practice's objectives?<br><br>**Outreach**<br>1. How many people were reached or served by the Good Practice?<br><br>**Impact**<br>1. How did the Good Practice contribute to broader changes in the community, (e.g. through the work of the served or reached targeted group/s)? | categorizing existing OER tools and good practices, working on the development of the Interactive Pool together with its testing and releasing the final version and developing the Guide to Interactive Pool providing step by step instructions of using the Pool. An important part of activities included quality assurance and dissemination of the outcomes in order to assure their exploitation also in other EU countries and other fields of education.<br><br>**Outcomes:**<br>The project helped improve basic skills and competencies of adult people, especially those adults that have low skills, better awareness, and orientation of target groups in existing tools and knowledge about using these tools, the better educational offer of organizations offering training to adults as well as new networks of cooperation that the partners reached thanks to the project development.<br><br>**Outreach:**<br>The I-Pool testing phase that was held in partner countries reached more than 250 learners and 50 trainers of Adult Education Institutions. Moreover, the project reached more people indirectly thanks to the tool *IPool*, that is a self-expandable database and can be used autonomously from organizations.<br><br>**Impact:**<br>1. The impact of the project exceeded the expectations. It can be seen in partners' organizations, their staff and learners, low-skilled adults and adult education providers, operators in the field of adult education. The most important is that all who participated in activities or at least heard about its results, have better awareness about lifelong learning, higher knowledge about existence of various tools and opportunities to learn which help to develop own |

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| | skills and gather new competences. The usage of the Interactive Pool itself helps in increasing ICT skills but using the tools that are gathered in the database allows for increasing the competencies in many areas, depending on the choice of a tool. |

| **Challenges to the Good Practice** | |
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| What are the weaknesses, challenges, or issues encountered during the implementation of the Good Practice? | During the implementation of the Good Practice the main problems were encountered during the first applications of the methodology. Partners were responsible for assuring the access to the IPool for those that might had problems. |

| **Applicability of the Good Practice** | |
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| 1. What key lessons can be applied or used in INSTALL Youth educational activities?<br>2. Are there any digital citizenship and science literacy training or educational resources, tools, or material produced during the Good Practice lifetime that could be applied or used in INSTALL Youth? | 1. The key lesson is that everyone is able to develop certain skills, but it is important to provide the right tools and support.<br><br>2. The database of tools created during the project provides a variety of tools and websites that can be useful for INSTALL Youth (http://www.i-pool.eu/ro/database/).<br><br>Among others, **the Digital Workshop** is a digital course, available in many different languages, that offers 26 modules developed by Google. There is the possibility to choose basic lessons about using an email address and a browser in a proper way, up till more advanced lessons on how to be secure an efficient online presence and how to promote a business online. When completing a course, there is possibility for certification. |

Pilot Testing in Romania with learners

**Information and data literacy**
**Communication and collaboration**
**Digital content creation**

eMEDIA
MEdia literacy and DIgital citizenship for All

| **The partner responsible for collecting the Good Practice** | **yEUth** |
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| **Information about the organisation/institution/entity responsible for the Good Practice** | |
|---|---|
| Name of the entity | La ligue de l'enseignement |
| Type | Non-profit NGO |

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| Contact email | **ligueparis@ligueparis.org** |
| Website (for reference purposes) | **http://www.laligue.org** |

| **Information about the Good Practice** | |
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| Name | **EMEDIA: MEDIA LITERACY AND DIGITAL CITIZENSHIP FOR ALL** |
| The problem context focusing on the needs, gaps, issues, or challenges the Good Practice aimed at addressing. | Recent surveys show that the use of digital technologies by the world's population is growing exponentially.<br>It is important, more than ever, to educate citizens in the correct and responsible use of new technologies, the Internet and social media. Investment is needed so that teachers and animators can be real transformers and awakeners to empower the new generation of citizens to use digital technologies effectively and responsibly. |
| Objective(s) | The objectives of this project were to<br>1) To introduce young people to the processes of information making, so that they can be creative and responsible actors.<br>2) To educate in computer science and raise awareness of the algorithmic logic behind all the tools we use, in order to take power over the machines.<br>3) Reveal the motivations of conspiracy and fake news to enable the emergence of a generation of critical citizens.<br>4) To promote the integration of digital skills in school curricula and to foster critical thinking, especially through the teaching of technology and science, in line with the priorities of school education. |
| Duration | 36 months (from 15/09/2018 to 14/09/2021) |
| Geographical location | France, Italy, Spain, Belgium and Latvia |

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| Targeted group(s) | Teachers ( of all disciplines) and students in secondary schools; Educational community as a whole (educators and parents) |
| Summary of the best practice (to be used for joint report) | eMedia was an Erasmus+ KA2 Strategic Partnerships for Schools Education project. The French NGO « La Ligue de l'enseignement » was the project coordinator ; other partners have been the Italian School of Robotics, the University of Latvia, the Spanish organization "SOS Racismo", the Italian association "Arci" and the Belgian "ALL DIGITAL".<br>The focus of the project was to promote educational practices that can train young people to be active and responsible citizens in the digital world. This was done through the production of educational booklets for teaching digital practices, that were used for the training of the educators in non-formal and formal education centres.<br><br>The eMedia project developed three educational booklets to support the training of teachers and educators in media literacy and digital citizenship for all:<br><br>• on robotics and coding<br>• on digital media literacy<br>• on online expression<br><br>Each of these booklets provides a minimum of ten hours of activities, and two of the (on digital media literacy and robotics) have a complementary moodle/MOOC to facilitate the training. |


Training on Online Expression in Riga

| **Results of the Good Practice** | |
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| **Outputs:**<br>1. What were the tangible outputs of the practice?<br>2. What are the services or activities provided during the Good Practice?<br><br>**Outcomes**<br>1. What is the degree of positive change (in terms of knowledge, skills, and attitudes) in the served | **Outputs:**<br>1. Three educational booklets were created as tangible outputs:<br>- The first one is about robotics. It aims to help students better understand how the world works, as almost everything in our society is programmed, from our coffee machine to our lift. We think that robotics is a fun way to talk about computer language, data processing and algorithms.<br>- The second is dedicated to media literacy. It aims to help teachers work with students on |

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| targeted group(s) in relation to the Good Practice's objectives?<br><br>**Outreach**<br>1. How many people were reached or served by the Good Practice?<br>**Impact**<br>1. How did the Good Practice contribute to broader changes in the community, (e.g. through the work of the served or reached targeted group/s)? | how to better use the internet, social media, and understand how to fight fake news and conspiracy theories.<br>- The third one is dedicated to online expression, and more specifically to web radio, blogs and web TV. We offer activities to teach young people to produce their own information.<br><br>Moreover, two MOOCs were also produced. These include a set of videos and activities aimed at fostering the appropriation of the themes covered in the first two booklets: robotics and media literacy.<br><br>Links to outputs:<br>*Educational Booklets*<br>Educational Robotics<br>Media Literacy<br>Online Expression<br><br>Handbook on Educational Robotics (EN, SP, FR, LV, IT)<br>Handbook on Media Literacy (EN)<br>Handbook on Online Expression (EN)<br><br>2. During and after the implementation of the good practice, all the resources created have been and are available in English, French, Latvian, Italian and Spanish. Tutors have also taken part in training courses in France, Spain, and Italy, to be able to accompany teachers who participated in the MOOCs.<br><br>**Outcomes:**<br>The degree of positive change in the target group in relation to the good practice's objective is that resources will allow teachers, and the educational community, to develop the necessary skills and competences to approach media literacy with their students and thus teach them to use digital media in a critical and responsible way. |

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| | **Outreach:**<br>528 people not receiving specific funding benefited or were targeted by the project's activities, 21.660 students were made aware of the project's results, 4.000 people were users of the Moocs created, 173 people participated in the project's trainings, 355 people participated in the dissemination events<br><br>**Impact:**<br>The good practice contributed to broader changes in the community especially thanks to the booklets that permit educators to teach what media literacy is and all the risks of the digital world to their students. |

| **Challenges to the Good Practice** | |
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| What are the weaknesses, challenges, or issues encountered during the implementation of the Good Practice? | The health crisis due to the Covid-19 was a great challenge which impacted the implementation of the project. |

| **Applicability of the Good Practice** | |
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| 1. What key lessons can be applied or used in INSTALL Youth educational activities?<br>2. Are there any digital citizenship and science literacy training or educational resources, tools, or material produced during the Good Practice lifetime that could be applied or used in INSTALL Youth? | **1.** The key lesson that can be applied is that it is important to introduce young people to themes such as digital technology, computer science and so on, by letting them understand to what extent these subjects are important to comprehend how the world works.<br><br>**2.** All the resources created during the project can be used in INSTALL Youth. In particular, the first booklet about robotics specifically addresses young students; also, the third one is useful to teach young |

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| | people to produce their own content with reliable information. |




Cover pages of the Handbooks produced by eMedia

Information and data literacy
Communication and collaboration
Digital content creation
Safety Problem Solving

DICIPASS
European Digital Citizenship Pass
for Youth Empowerment and Participation

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| **The partner responsible for collecting the Good Practice** | **yEUth** |

| **Information about the organisation/institution/entity responsible for the Good Practice** | |
|---|---|
| Name of the entity | **Culture Goes Europe - Soziokulturelle Initiative Erfurt e.V.** |
| Type | **Non profit organization - NGO** |
| Contact email | **info@cge-erfurt.org; evs@cge-erfurt.org** |
| Website (for reference purposes) | **https://www.cge-erfurt.org** |

| **Information about the Good Practice** | |
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| Name | **DICIPASS4YOUTH** |
| The problem context focusing on the needs, | Over the past decade, companies across industries have digitized their operations and processes. Even now, |

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| gaps, issues, or challenges the Good Practice aimed at addressing. | businesses are employing artificial intelligence to streamline workflows and supply chains. As a result, today's young generation requires specialized skills to help them stand out from the crowd.<br>Moreover, Digital Citizenship as a concept hasn't been discussed much in the field of youth work. In fact, only 48% of youth workers in Germany have heard about this term. This calls for structural change in facilitating young people's development of the digital citizen behaviour. |
| Objective(s) | The good practice's main goal is to promote the development of responsible, ethical and global digital citizens . The specific objectives of the project are to:<br>• Support youth workers to develop a positive attitude towards digital citizenship<br>• Help young people to develop specialized digital skills and a general digital citizenship attitude, by offering relevant education opportunities<br>• Establish the DICIPASS 4YOUTH programme and Code of Conduct among youth organizations and youth workers, as a binding agreement to ensure certain level of understanding of digital citizen concept |
| Duration | From 01-09-2019 to 31-08-2022 |
| Geographical location | The project was led by a German organization, with partners from Lithuania, Ireland, Spain, Greece, and Cyprus. |
| Targeted group(s) | Direct: Youth Workers<br>Indirect: Young People (14-18 years old) with a specific focus on young people with fewer opportunities (including NEETs, marginalized, with a migrant background, including newly arrived immigrants and young refugees, early school leavers etc.). . |
| Summary of the best practice (to be used for joint report) | The DICIPASS project was developed under the Erasmus+ Strategic Partnership for innovation and exchange of good practises framework to respond to current technological challenges. The consortium consisted of six dynamic and experienced partners from Germany, Greece, Lithuania, Cyprus and Belgium, and |

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| | from different fields (civil society organizations, a HEI and a social enterprise).<br>The main objectives of the project were to support youth workers to develop a positive attitude towards digital citizenship, while also helping young people to develop specialized digital skills and a general digital citizenship attitude through relevant education opportunities DICIPASS pioneered to design a COMPLETE TOOL KIT and an EDUCATIONAL PACK for developing, implementing and monitoring various INCLUSIVE strategies for promoting digital citizenship competencies. It also pioneered in developing an ASSESSMENT TOOL for the formative and on-going type of reflective and digital assessment of their habits, behaviour, attitudes and values. |

Closing International Conference "Digital Citizens, Where Are You?" in Germany

| **Results of the Good Practice** | |
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| **Outputs:**<br>1. What were the tangible outputs of the practice?<br>2. What are the services or activities provided during the Good Practice?<br><br>**Outcomes**<br>1. What is the degree of positive change (in terms of knowledge, skills, and attitudes) in the served targeted group(s) in relation to the Good Practice's objectives?<br><br>**Outreach**<br>1. How many people were reached or served by the Good Practice?<br>**Impact**<br>1. How did the Good Practice contribute to broader changes in the community, (e.g. through the work of the served or reached targeted group/s)? | **Outputs:**<br>1. The most important project's outputs are:<br>IO1-3: A comparative index on digital citizenship in youth work;<br>IO1-5: An e-databank of resources to study digital citizenship concepts<br>IO2-1: A Competence Framework of Digital Citizenship for young people<br>IO2-2: A Code of Conduct for organizations, youth workers and young people, as a commonly agreed rules to secure respect, diversity, tolerance, protection of data, human rights etc<br>IO3-1: An educational Backpack on central themes of digital citizenship (digital etiquette, digital access, digital law and copyright, digital communication etc)<br>IO4: A Dicipass-Challenge Guide<br><br>All other outputs and results can be found in the link below:<br>http://dicipass.eu/intellectual-outputs/<br><br>2. The activities were especially trainings for the acquisition of digital citizenship skills related to a set of concepts chosen by each partner country to meet the needs of the young people. The implementation took various forms (e.g. intensive summer school, after-school SOCIETIES) depending on the context of each partner country and organization. The duration was approximately 50 hours based on blended learning activities (F2F or online).<br><br>**Outcomes:**<br>The positive outcomes to which the project's results and activities led are:<br>- Increased capacity of youth workers to use innovative resources in promoting digital citizenship competence and values among young people with fewer opportunities. |

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| | - Increased awareness and enriched competences of young people to deal with sensitive ethical issues in their everyday life and make wise decisions regarding their personal data, rights, respect etc.<br>- Increased capacity of young people with fewer opportunities to express their views and participate and have access to the digital world with dignity and respect.<br><br>**Outreach:**<br>Each partner, except from Spain and Ireland, selected 10-20 young people, 2 youth workers and 2 experts who were involved in the organisation of the various activities and training for the acquisition of digital citizenship skills related to a set of concepts chosen by each partners country to meet the needs of the young people. Moreover, the online courses are free to access and many people have been reached by them.<br><br>**Impact:**<br>Through the utilization of the project's results, and the ongoing activities planned for DICIPASS sustainability (e.g. PodCasts and Conferences to spread the project's best practices) the anticipated impact revolves around the following axes:<br>• **Increased Digital Access**: One important tenant of digital citizenship is that access to technology should be available to all. Digital citizens should continue to lobby for more digital access, in more locations, so that more people can benefit from it, extending the project's activities in this direction<br>• **Mainstreaming awareness and competences in Digital Rights and Responsibility**: Those committed to the concept of Digital Citizenship must take their rights seriously and their responsibilities even more seriously. By disseminating the proper use of the project's educational outputs, the consortium is setting positive examples and |

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| | helps guiding the integration of technology into new areas.<br>• **Enhancing knowledge about Digital Law and Copyright:** Many intellectual information laws are violated in this new digital age, i.e. copyright infringement and trademark abuse. The projects results helps digital citizens be vigilant in reporting illegal behavior, and be personally committed to engage in behavior that is above reproach. |

| **Challenges to the Good Practice** | |
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| What are the weaknesses, challenges, or issues encountered during the implementation of the Good Practice? | During the implementation of the Good Practice, the main weakness encountered is that formal and non-formal institutions are not quickly adapting themselves to the needs of young people and youth workers. The recommendation is to include digital topics (digital communication, commerce, literacy, etc.) in the school agenda. Basically, there is not a clear understanding yet of these themes leading to some resistance to incorporating activities related to them. |

DICIPASS Spring School on Digital Citizenship in Brussels

| **Applicability of the Good Practice** | |
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| 1. What key lessons can be applied or used in INSTALL Youth educational activities?<br>2. Are there any digital citizenship and science literacy training or educational resources, tools, or material produced during the Good Practice lifetime that could be applied or used in INSTALL Youth? | **1.** The key lesson that can be applied is that in all the European countries there is still a lack of knowledge of the digital citizenship theme, but young people are open to learn and to get involved in it. Digital Access, awareness and competences in Digital Rights and Responsibility, as well as knowledge about Digital Law and Copyrights are important parameters – often overlooked- that have to be taken into account when designing an all-round Digital Citizenship education program.<br><br>**2.** All the educational resources/ trainings created for the project can be applied in INSTALL Youth, providing young people and youth workers with courses that in addition to the preparation on a given topic (related to digital citizenship), also award them with open badges (knowledge recognition system). |

Summer Camp "Digital Citizens - Where Are You?" Erfurt, Germany

Safety

SELMA HACKING HATE

| The partner responsible for collecting the Good Practice | Neoanalysis |
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| Information about the organisation/institution/entity responsible for the Good Practice | |
|---|---|
| Name of the entity | European Schoolnet |
| Type | NGO |
| Contact email | info@eun.org |
| Website (for reference purposes) | www.eun.org |

| Information about the Good Practice | |
|---|---|
| Name | **SELMA Hacking Hate** |
| The problem context focusing on the needs, gaps, issues, or challenges the Good Practice aimed at addressing. | Online hate speech is a growing problem. People frequently perceive the internet as a hostile space, as hateful messages are increasingly common on social media.<br>A more proactive response is unquestionably required to supplement current efforts to control, monitor, or report online hate speech. |
| Objective(s) | |
| Duration | 2 years (2017-2019) |

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| Geographical location | Belgium, Denmark, Germany, Greece, and United Kingdom |
| Targeted group(s) | Main target group: Young people (age 11-16) primarily in schools, but also in the out-of-school communities<br>Other target groups: parents and carers, teachers, and other education professionals |
| Summary of the best practice (to be used for joint report) | SELMA (Social and Emotional Learning for Mutual Awareness) is a two-year project that is co-funded by the European Commission and tries to combat the issue of online hate speech by fostering respect, tolerance, and mutual awareness.<br>Six partner from five countries (Belgium, Denmark, Germany, Greece, and United Kingdom) are part of SELMA. European Schoolnet is the coordinator of the project.<br>The project builds upon a Social and Emotional Learning approach to empower young people to become agents of change; it helps them to better understand the phenomenon of online hate; it provides them with tools and strategies to act and make a difference. |

| **Results of the Good Practice** | |
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| **Outputs:**<br>1. What were the tangible outputs of the practice?<br>2. What are the services or activities provided during the Good Practice?<br><br>**Outcomes**<br>1. What is the degree of positive change (in terms of knowledge, skills, and attitudes) in the served targeted group(s) in relation to the Good Practice's objectives?<br><br>**Outreach**<br><br>1. How many people were reached or served by the Good Practice?<br><br>**Impact**<br>1. How did the Good Practice contribute to broader changes in the community, (e.g. through the work of the served or reached targeted group/s)? | **Outputs**<br>**1.** The tangible outputs of SELMA project are:<br>• The SELMA Toolkit compiling sources, educational content and a vast array of non-formal education exercises targeting different skills and covering different themes related to hate speech, its effects and consequences, as well as personal choices that can help counteract the problem from the narrow sphere of the personal networks of young people to the broader sphere of their community<br>• A MOOC for teachers on all levels, school leaders, social and youth workers and parents on "How to empower young people to understand and disrupt online hate", which was based on the SELMA Toolkit<br>• The SELMA Digital Book "How SELMA is driving online change", which draws upon the experiences and successes of the many people who became involved in the project<br><br>**2. Activities**<br>**Activities include:**<br>• Empirical Research.<br>• Face-to-face and online training and counselling for young people.<br>• Training/briefings to educational staff/teachers and school leaders as well as social workers, parents and other carers, including a Massive Online Learning Course (MOOC).<br>• Education Task Force meetings for EU policy makers, Ministries of Education and IT companies to facilitate mutual learning and cooperation, shaping their respective policies, while taking into account the perspective of young people and civil society.<br>• The dissemination of outputs, results and lessons learned. A hackathon, an international |

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| | conference, as well as different online (mini-) campaigns, including a final education/awareness week ensured cross-European outreach.<br><br>**Outcomes**<br>The SELMA project empowered the participating young people to become agents of change, helped them to better understand the phenomenon of online hate and provided them with tools and strategies to act and make a difference.<br><br>**Outreach**<br>In the two years of the project SELMA partners toured their respective countries and Europe in general, to deliver hundreds of SELMA presentations, trainings and workshops. They trained over 7,500 people, most of them teachers and professionals working with young people.<br>**Impact**<br>The project efforts resulted in increased awareness, knowledge and understanding of online hate speech and how young people can play an active role to prevent or counter it. SELMA did not want to crack down on illegal online behaviors. Instead, it promotes a culture where young people are encouraged to take positive initiative. |

| **Challenges to the Good Practice** | |
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| What are the weaknesses, challenges, or issues encountered during the implementation of the Good Practice? | Online hate should be considered as a pattern of behaviour, interconnected with the social and cultural contexts in which it takes place. This is a difficult venture, as the global nature of social media is blurring the lines of sociocultural contexts, which do not necessarily correspond to geographical ones. |

| **Applicability of the Good Practice** | |
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| 1. What key lessons can be applied or used in INSTALL Youth educational activities?<br>2. Are there any digital citizenship and science literacy training or educational resources, tools, or material produced during the Good Practice lifetime that could be applied or used in INSTALL Youth? | 1. An important lesson we can take from this practice is that that education is an important part of the solution to hate speech. For this reason, educators should be a primary target of relevant interventions. When designing intellectual outputs and deliverables for a project we ought to make sure that teachers, school leaders, social and youth workers, counsellors, carers and other education professionals can find activities tailored to their learning and working needs as well as clear guidance on how to build comprehensive and sustained pathways of change.<br><br>A second message that also concerns the INSTALL partnership, is that when young people are faced with a very broad and difficult to tackle challenge, they can be encouraged to take action against if presented with a more manageable, "smaller" challenge. As Stefanie Fächner, Media Education Consultant at the Media Authority for Rhineland-Palatinate LMK and one of the responsible managers of SELMA put it:<br>*"Tackling online hate speech can sound like an impossible task. When we talk to young people about how to tackle hate speech on the internet, they mostly refer to reporting inappropriate content or trying to ignore it, as the language on the internet is just tougher than in a face-to-face setting. However, in the SELMA project we want to empower young people to start making a change in their surroundings and the challenge* (=the SELMA social media challenge that called young people to carry out a specific number of small everyday actions in a given timeframe) *is a great tool for this. It offers very concrete and practical actions that everyone can start doing right away – it is always easier to start a long journey with little steps."*<br><br>2. Some materials, tools and sources derived from the practice, which can be utilized in INSTALL Youth project are:<br>• The SELMA Digital Book "How SELMA is driving online change", could serve as a book of advice for project managers of similar programmes<br>• Activities from the Toolkit: |

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| | **"Xorg the Xenovian",** belongs to the Media Analysis focus of the theme "What is hate speech?" and it has become one of the most iconic activities of the Toolkit. The aim of this activity is to make judgements on whether content is hate speech or not.<br><br>**Xorg the Xenovian**<br>  <br><br>As the themes of the SELMA Toolkit develop, the focus moves from understanding what hate speech is and how it makes people feel, to questions on how to respond individually or how to effect wider change in the community. The **"Platform dilemma"** activity illustrates how you can address these questions with older students. |


| The partner responsible for collecting the Good Practice | Neoanalysis |
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| Information about the organisation/institution/entity responsible for the Good Practice | |
|---|---|
| Name of the entity | Future Classroom Lab |
| Type | Inspirational learning environment |
| Contact email | fcl@eun.org |
| Website (for reference purposes) | https://fcl.eun.org/ |

| Information about the Good Practice | |
|---|---|
| Name | Facts4All - Schools as community hubs against disinformation |
| The problem context focusing on the needs, gaps, issues, or challenges the Good Practice aimed at addressing. | It is no longer sufficient to instruct people on operational skills or how to safeguard their privacy or reputation online due to the increasing importance of fake news, echo chambers, filter bubbles and several other well-known and emerging online threats and issues. Instead, users must be equally aware of the methods (social) media platforms utilize to target and |

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| | disseminate information, as well as the potential for hostile actors, such as trolls. |
| Objective(s) | To raise awareness and critical thinking of online disinformation of pupils.<br>To support elementary and secondary schools to function as intergenerational learning hubs against misinformation through community engagement |
| Duration | 2021 – 2022 |
| Geographical location | Belgium |
| Targeted group(s) | Main target group: Primary and secondary school teachers and leaders<br>Other target groups: Young people, other educational professionals and stakeholders, such as heads of schools, school support staff, and policy makers |
| Summary of the best practice (to be used for joint report) | The Facts4All – Schools as community hubs against disinformation is a one year project co-funded by the European Commission's Media Literacy for All Programme, which aims to increase awareness and critical thinking in relation to online disinformation across generations – in particular young people and their (grand)parents.<br><br>The main project objective is to improve critical thinking of online disinformation by developing, pilot testing and launching a Massive Open Online Course (MOOC) that enables primary and secondary schools to act as intergenerational learning hubs against disinformation through community engagement. The project is coordinated by European Schoolnet in collaboration with Mediawijs (IMEC), Faktabaari (EDU project), and Ministry for Education (MFED). |

| **Results of the Good Practice** | |
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| **Outputs:**<br>1. What were the tangible | **Outputs:**<br>1. The output of this project is a 4-module MOOC on disinformation based on intergenerational collaborative |

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| outputs of the practice?<br>2. What are the services or activities provided during the Good Practice?<br><br>**Outcomes**<br>1. What is the degree of positive change (in terms of knowledge, skills, and attitudes) in the served targeted group(s) in relation to the Good Practice's objectives?<br><br>**Outreach**<br><br>1. How many people were reached or served by the Good Practice?<br><br>**Impact**<br>1. How did the Good Practice contribute to | learning scenarios, leveraging existing tools and resources such as fact checkers, repositories, games, awareness materials etc., and employing participatory methods (open space technologies and co-design jams), to foster critical thinking and active citizenship across borders. This MOOC is targeted at primary and secondary school teachers of any subject.<br><br>› Module 1: Introduction to the concept of information disorder<br>› Module 2: The Internet, Social Media and Information Challenges<br>› Module 3: Developing good practices and common approaches to deal with information challenges<br>› Module 4: Tackling disinformation through school policy and practice<br><br>2. The largest part of the project's activities was devoted to the content development of the MOOC. However, some additional activities organized during the project are:<br>• A two-day **validation workshop** that brought together 19 school leaders and teachers from Belgium, Finland and Malta to test, evaluate and adapt the developed MOOC concept.<br>Prior to the workshop a connection session took place, during which the existing ideas and activities developed for the MOOC were evaluated and revised in a collaborative effort between school leaders, teachers, and experts on the topic, aiming for real-world scenarios which would then be tested and validated in the following phase.<br>• An Awareness Raising called **#OnlyFacts** that aimed to raise awareness on information disorder and provide the knowledge and hands on guidance on how to detect false content online.<br><br>**Outcomes**<br>The activities and outputs of this project helped teachers, and in a second step, their pupils and the wider school community to:<br>• Recognize which issues in relation to disinformation are important in their community |

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| broader changes in the community, (e.g. through the work of the served or reached targeted group/s)? | • Identify disinformation online and understand what it is, and which methods and mechanisms are used to create, distribute and amplify disinformation via the internet<br>• Understand how disinformation inevitably skews and polarizes the public debate, both offline and online<br>• Explore and embrace the more active usage of social media tools, particularly opportunities for collaboration and content creation on social media platforms<br>• Test and apply specific tools, including examples for current issues important in their community and for different specific social media platforms, to understand their mechanisms etc.<br><br>**Outreach**<br>19 school leaders and teachers from Belgium, Finland and Malta gathered to pilot test, evaluate and adapt the contents of the MOOC.<br>More than 250 participants have enrolled in the MOOC since it's completion in May 2022.<br><br>**Impact**<br>The project developed and implemented effective whole-school approaches of relevance to their local community, in response to disinformation-related societal challenges especially in times of the COVID19 pandemic.<br>By reaching out to stakeholders such as local policy makers the project also contributed to the adoption of a participatory community-based and intergenerational approach to training digital citizenship skills. All in all, the legacy of the project is that it leveraged the potential of schools as hubs for intergenerational (online) learning on disinformation and active citizenship for local communities. |

| **Challenges to the Good Practice** | |
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| What are the weaknesses, challenges, or issues encountered during the implementation of the Good Practice? | While the project itself did not pose great challenges in its management, it was troublesome to find teachers/educators that were motivated and/or had the time available for the long-term engagement required in order to complete the MOOC. |

| **Applicability of the Good Practice** | |
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| 1. What key lessons can be applied or used in INSTALL Youth educational activities?<br>2. Are there any digital citizenship and science literacy training or educational resources, tools, or material produced during the Good Practice lifetime that could be applied or used in INSTALL Youth? | **1.** The important messages from this practice are that:<br>• outputs should involve their targeted group in their development process, through brainstorming, testing and evaluating.<br>• Schools have one of the greatest potentials to foster change<br>• A high degree of interactivity (such as the frequent Padlet tool use, the many quizzes, group assignments, meet your teacher events, and meet your peers possibility offered by the MOOC) are very important tools in learning, esp. when the subject matter (i.e. new media) is by its nature entirely dependent on human interactions.<br>2. From this practice we could pick up the usage of the **Padlet** to support online learning. Also, it is worth it to register to the learning environment of the **MOOC**, since it provides high quality material for understanding the phenomenon of information disorder. |

| The partner responsible for collecting the Good Practice | Neoanalysis |
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| Information about the organisation/institution/entity responsible for the Good Practice | |
|---|---|
| Name of the entity | Global Vision |
| Type | NGO |
| Contact email | https://www.globalvision.ca/contact |
| Website (for reference purposes) | https://www.globalvision.ca/ |

| Information about the Good Practice | |
|---|---|
| Name | **Digital Citizenship Challenge** |
| The problem context focusing on the needs, gaps, issues, or challenges the Good Practice aimed at addressing. | There are several new challenges for democracy in the digital era. Being an informed and involved citizen is becoming more and more difficult due to cyberattacks, online bullying, voter apathy, fake news, confirmation bias, and other factors.<br>This initiative is designed to tackle the above threats, by giving young people a podium to propose their solutions. |
| Objective(s) | To give space to young people to present and spread their ideas on how to strengthen Canadian democracy by addressing pressing issues in the digital age. |
| Duration | Feb.23 - March 10, 2020 |
| Geographical location | Canada |
| Targeted group(s) | Youth aged 16-25 |

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| Summary of the best practice (to be used for joint report) | Digital Citizenship Challenge was an open competition for young people, launched in Canada in 2020 (23/02-10/03).<br>To enter the competition, the young people had to create a 1-1.5 min. video presenting their idea of an innovative solution for one of the following challenges of the digital era: cyberbullying, your digital footprint, clickbait, cybersecurity, social media algorithms, confirmation bias, fake news, or digital citizenship as a whole. Then they had to post their video on Youtube and share it through social media to spread the word. The best applications were selected on the basis of the quality of submission level of engagement of the audience. |

| **Results of the Good Practice** | |
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| **Outputs:**<br>1. What were the tangible outputs of the practice?<br>2. What are the services or activities provided during the Good Practice?<br><br>**Outcomes**<br>1. What is the degree of positive change (in terms of knowledge, skills, and attitudes) in the served targeted group(s) in relation to the Good Practice's objectives?<br><br>**Outreach**<br><br>1. How many people were reached or served by the Good Practice? | **Outputs:**<br>• A series video pitches with proposed solutions to digital citizenship challenges, put forward by young people themselves.<br>• An online competition that required youth to post their video online and get the online network to like, share and re-post it to spread the word across the globe<br><br>**Outcomes**<br>Young people made connections with and learned from other like-minded youngsters and leaders from businesses, the government, and non-profit organizations that are striving to improve Canadian democracy.<br>They were able to organize an online discussion on the chosen aspect of digital citizenship with youngsters from all over the nation.<br>**Outreach**<br>No data available<br><br>**Impact**<br>The intended impact of the initiative was to nurture the next generation of Canadian innovators, by |

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| **Impact**<br>1. How did the Good Practice contribute to broader changes in the community, (e.g. through the work of the served or reached targeted group/s)? | giving young people the incentives to propose solutions to overcome the threats of the digital era. In the long-term the initiative sought to pave the way for the development of a new age of world-class digital citizenship for Canada. |

| **Challenges to the Good Practice** | |
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| What are the weaknesses, challenges, or issues encountered during the implementation of the Good Practice? | The initiative was organized during the initial peak of the coronavirus crisis. For this reason, the Closing conference and gala that was planned to gather the creators of the best videos did not take place. |

| **Applicability of the Good Practice** | |
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| 1) What key lessons can be applied or used in INSTALL Youth educational activities?<br><br>2) Are there any digital citizenship and science literacy training or educational resources, tools, or material produced during the Good Practice lifetime that could be applied or used | 1) What we can take away from this initiative is a brilliant idea about the organization of INSTALL Challenge:<br>Making publications and resharing on social media an obligatory part of the application process. Since our competition does not entail any output as an entry, but it is a knowledge competition, the following could be required: in order to participate in the online competition, applicants should first make a post about INSTALL project or the INSTALL challenge and share it with their networks through social media.<br>Another very important message from this practice is that an initiative that wants to successfully promote digital citizenship (DC) should focus on two aspects at the same time:<br>1. Cultivating a participatory approach and increase the sense of responsibility: A competition that calls youngsters to get informed about current threats deriving from digitalization, reflect on them, propose a solution and then make efforts to convince their peers and fellow citizens is very well placed to enhance the "citizenship" part of DC as all skills above are important elements of active citizenship |

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| in INSTALL Youth? | 2. Requesting a video and a "mini-social media campaign" as an entry to the competition, is a great way to enhance the "Digital" part of DC, as it teaches young people about multiple aspect of DC at the same time (access to information, use of digital tools, rules of digital communication etc)<br><br>2) Global vision has produced a series of videos on issues, about which digital citizens need to know about: https://www.youtube.com/playlist?list=PLzxYawDdi1FjdV_IbhC8A28UyDy19DqJU<br>Unfortunately, the videos created by the contestants in the DC Challenge are not available anymore |

## Information and data literacy


| **The partner responsible for collecting the Good Practice** | **Neoanalysis** |
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| **Information about the organisation/institution/entity responsible for the Good Practice** | |
|---|---|
| Name of the entity | CIVIX |
| Type | NGO |
| Contact email | hello@civix.ca |
| Website (for reference purposes) | https://civix.ca/home/ |

| **Information about the Good Practice** | |
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| Name | **CTRL-F: Find the Facts** |
| The problem context focusing on the needs, gaps, issues, or challenges the Good Practice aimed at addressing. | In recent years, the spread of incorrect and misleading material online has become an issue. While an informed and involved public is necessary for a functioning democracy, our contaminated information environment presents significant barriers to informed citizenship. People encounter a continuous stream of information online, and it might be challenging to determine its source, its trustworthiness, or purpose. People need to |

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| | understand claims and sources, but frequently lack the motivation or expertise to take the necessary steps to reach well-informed trust assessments. |
| Objective(s) | To build the next generation of informed citizens, by popularizing new ways to teach digital media literacy and source evaluation.<br>More specifically, it aims to promote what professional fact-checkers do: conduct quick and strategic web searches to learn key context about sources and claims. This is called lateral reading and it's what CTRL-F is all about. |
| Duration | Ongoing since 2021 |
| Geographical location | Canada |
| Targeted group(s) | Students 12-17 years old |
| Summary of the best practice (to be used for joint report) | Named for the keyboard shortcut for 'find,' CTRL-F is latest and most comprehensive digital media literacy offering of the Canadian charity, CIVIX. It entails a 7 hour, 4 part program, designed for students in grades 7-12 that equips them with the habits and skills needed to evaluate online information and determine what to trust.<br>During the 2020/21 school year CIVIX conducted a Canada-wide study of 2,324 students in grades 7 to 12 to evaluate the efficacy of CTRL-F. Since then the CTRL-F program is available on an ongoing basis.<br>CTRL-F teaches pupils how to apply the same "lateral reading" strategies used by professional fact-checkers to examine web information, instead of evaluating the content itself.<br>The program includes all of the support tools needed to bring contemporary digital media literacy instruction into the classroom, and the teaching materials are easily adaptable to different subjects, such as Social Studies, Language, or Arts. |

| **Results of the Good Practice** | |
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| **Outputs:**<br>1. What were the tangible outputs of the practice?<br>2. What are the services or activities provided during the Good Practice?<br><br>**Outcomes**<br>1. What is the degree of positive change (in terms of knowledge, skills, and attitudes) in the served targeted group(s) in relation to the Good Practice's objectives?<br><br>**Outreach**<br><br>1. How many people were reached or served by the Good Practice?<br><br>**Impact**<br>1. How did the Good Practice contribute to broader changes in the community, (e.g. through the work of the served or reached targeted group/s)? | **Outputs:**<br>1. Tangible outputs:<br>• Lesson plans, videos, slide decks, practice examples, activity sheets, and assessments<br>https://ctrl-f.ca/en/resources/ (available with registration)<br>• Engaging expert-led videos (YouTube playlist)<br>• Interactive walkthroughs of practice examples (try a sample)<br>• Multiple formats (Google Forms, Microsoft Forms)<br>• Bilingual resources (English and French)<br><br>2. CTRL-F services and activities:<br>Hands-on Workshops: CIVIX is offering a series of professional development sessions, to support bringing the CTRL-F verification strategies to the classroom. These workshops focus on guided practice using engaging examples from the CTRL-F curriculum.<br><br>**Outcomes**<br>During the 2020/21 school year CIVIX conducted a Canada-wide study of 2,324 students in grades 7 to 12 to evaluate the efficacy of CTRL-F. According to the results, CTRL-F dramatically improved students' ability to reject false claims, and identify credible sources.<br>It also improved their lateral reading skills, accuracy, and reasoning.<br>As far as teachers are concerned, the program has changed their approach to teaching digital literacy and increased their confidence in teaching digital literacy and in evaluating sources.<br><br>**Outreach** |

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| | 2,324 students and 80 teachers were involved in the assessment of the CTRL-F program's efficacy.<br>Although there are no data about the number of schools and teachers that use the program, or the students benefiting from it, the wide reach of the program is reflected in the large number of followers of the practice on social media and online platforms. The Youtube Channel dedicated to the program has 2.16K followers and its educational videos have 15-25K views each.<br><br>**Impact**<br>Through this program, a system-wide change to address the digital media literacy gap has been initiated. The educators updated the way they think about digital information literacy, paving the way for a transformation in the way these skills are cultivated. |

| **Challenges to the Good Practice** | |
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| What are the weaknesses, challenges, or issues encountered during the implementation of the Good Practice? | A challenge that obstructs the faster adoption of the program by teachers and educators is the often high bureaucratic load that needs to be overcome, in order to incorporate new elements in formal K-12 curricula. |

| **Applicability of the Good Practice** | |
|---|---|
| 1. What key lessons can be applied or used in INSTALL Youth educational activities?<br>2. Are there any digital citizenship and science literacy training or educational resources, tools, or material produced during the Good Practice lifetime that | 1. A valuable message spread by the practice is that before applying new or alternative education methodologies, it is highly advisable to test their efficiency in achieving the desired learning outcomes first.<br>Another message, is to consider **"lateral reading"** as a method that has to be incorporated in MIL teachings; if not |

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| could be applied or used in INSTALL Youth? | thoroughly analysed and practiced in depth, at least it ought to be presented to young people, when the topic of source evaluation is examined.<br><br>**2.** Readily available and easily adoptable by INSTALL materials from this practice are all Youtube videos of the CTRL-F channel. Some examples of videos that can be shown directly during the INSTALL learning activities, or used as a basis to develop activities, are:<br>Evaluate Expertise with Mike Caulfield<br>Who Makes the News: An Introduction to the Editorial Process<br>The Quest for Trust: Introducing the Standards of Professional Journalism<br>FakeOut Skill Checks |

## Safety

| **The partner responsible for collecting the Good Practice** | **Neoanalysis** |
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| **Information about the organisation/institution/entity responsible for the Good Practice** | |
|---|---|
| Name of the entity | Institute of Entrepreneurship Development |
| Type | NGO |
| Contact email | info@ied.eu |

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| Website (for reference purposes) | https://ied.eu/ |

| **Information about the Good Practice** | |
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| Name | **ACBC: Address Cyberbullying By Creating a Conscious Online Community** |
| The problem context focusing on the needs, gaps, issues, or challenges the Good Practice aimed at addressing. | Nowadays, going online to connect and communicate with others is a natural and essential aspect of daily life for young people. With new technologies, new risks appear, and cyberbullying shows up in a variety of ways, including mockery, insults, threats, and more. In Europe, cyberbullying is viewed as a significant threat that could have a long-lasting effect. According to the European Commission's #SaferInternet4EU campaign, 51% of Europeans feel either completely uninformed or poorly informed about cyberthreats. The ACBC project correspond to this need in order to fight the emerging phenomenon of cyberbullying. |
| Objective(s) | • To educate young people about the phenomenon of cyberbullying and the effects and repercussions this phenomenon may lead to.<br>• To properly engage youth on the subject of online behavior and actively involve them in the prevention of cyberbullying. |
| Duration | 01 Nov 2018 - 30 Apr 2021 |
| Geographical location | Romania, UK, The Netherlands, Lithuania, Greece and Portugal |
| Targeted group(s) | Youth (13-18 years old), youth organizations & schools, Community (NGOs, schools, youth centres and other educational organisations, parent boards) |
| Summary of the best practice (to be used for joint report) | |


| **Results of the Good Practice** | |
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| **Outputs:**<br>1. What were the tangible outputs of the practice?<br>2. What are the services or activities provided during the Good Practice?<br><br>**Outcomes**<br>1. What is the degree of positive change (in terms of knowledge, skills, and attitudes) in the served targeted group(s) in relation to the Good Practice's objectives?<br><br>**Outreach**<br><br>1. How many people were reached or served by the Good Practice? | **Outputs:**<br>1. The first Intellectual Output (IO1) was the creation of the Regional Partnerships – Blueprint. Essentially, this blueprint is a practical guide on "How to establish Regional Partnerships on Online Media Awareness" that incorporates all the learned skills from carrying out the project. This is a useful manual for organizations from European regions, other than that of the participating organizations, who want to create a regional network of relevant stakeholders that are integrated and focused on enhancing online media awareness.<br>The second and most significant Intellectual Output (IO2) was the serious game ACBC which was created by the project partner 8D Games. Developing an online conscious community to stop cyberbullying and increase online awareness is a serious game for young people. This game, which is focused on young people between the ages of 13 and 18, is accessible for download for iOS and Android users. |

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| **Impact**<br>1. How did the Good Practice contribute to broader changes in the community, (e.g. through the work of the served or reached targeted group/s)? | Finally, the last Intellectual Output (IO3) is the creation of the user guide. This guide explains in detail how schools and organizations can integrate the ACBC serious game into their practices. This manual will allow external organizations who were not part of the process of the ACBC creation to comprehend the philosophy behind this game. This guide will include, as well, special parts that will provide information on the concept of serious gaming.<br><br>2. The main activities of the project relate to the development of the outputs above. To facilitate the development process, but also to promote wider use of the project's results the following activities have also been implemented:<br>• Partner meetings<br>• Establishment of regional cooperation and networking structures in different areas of the participating countries<br>• Physical and online dissemination events, such as the free Free Online Event "Cyberbullying & Serious Gaming: Best Practices & Solutions" organized by the Greek partner (iED) and the "CYBERteens Safer Internet Ideas Sprint" event with more than 200 participants to celebrate the Safer Internet Day in Lithuania.<br><br>**Outcomes**<br>The young people gained important skills in critical thinking, (social) media literacy, and understanding the value of online privacy. Youth workers and educators learned about the phenomenon of cyberbullying and its effects on the victim's life. They also acquired crucial information and resources for establishing a network and program on online media awareness. |

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| | Finally regional cooperation and networking structures (schools, youth centres and other educational organisations, NGOs, education support services and parent boards who have an interest in media education, media awareness, online safety) have been established in the following regions: Friesland (in the Netherlands), Harghita County (in Romania), Lisbon District region with Sintra and Montijo Aveiro District (in Portugal), Vilnius including various other cities and rural localities (in Lithuania), Thessaly (central Greece) and Birmingham area in UK.<br><br>**Outreach**<br>80 people are members of the online community of ACBC project on a private Facebook page. More than 70 teachers have already been trained on how to integrate the outputs in their educational process.<br><br>**Impact**<br>Through the project, a more inclusive community was created. Young people who have been victims of cyberbullying joined the community and interacted with each other. Also, the term cyberbullying was included in the teaching process, and methods to help children be safe online were developed and used by many teachers, youth workers, and parents.<br>All in all participants, participating organisations, target groups and other relevant stakeholders will got an in depth understanding and recognition of one of today's biggest media literacy issues and its far reaching consequences. This in turn will lead to the prevention of cyberbullying, online harassment and immoral online behaviour, creating on the long-term a broad and vibrant Conscious Online Community. |

| **Challenges to the Good Practice** | |
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| What are the weaknesses, challenges, or issues encountered during the implementation of the Good Practice? | It was difficult in the beginning to link cyberbullying to a specific age because the age bracket varies per country. However, in Europe the 13-18 age category stands out as the most exposed to cyberbullying. |

| **Applicability of the Good Practice** | |
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| 1. What key lessons can be applied or used in INSTALL Youth educational activities?<br>2. Are there any digital citizenship and science literacy training or educational resources, tools, or material produced during the Good Practice lifetime that could be applied or used in INSTALL Youth? | 1. The **creation of a community** makes young people feel part of a team and increases their willingness to discuss and share experiences and thoughts with people that have something in common.<br>The **method learning by playing** is one of the most joyful ways to fight a serious phenomenon like cyberbullying.<br><br>2. The **serious game** followed by the **user guide** could be used in INSTALL Youth for the digital citizenship training formats that will be developed. |

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| **The partner responsible for collecting the Good Practice** | **C.R.E. A. European Youth Group APS** |

| **Information about the organisation/institution/entity responsible for the Good Practice** | |
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| Name of the entity | **Erasmus+ Strategic partnership** |
| Type | **Consortium :**<br>University of Technology Sydney (UTS) - University of Hull (UoH) - Stitchting - Hogeschol PXL - CARDET - Global Learning Ltd - TELLC - Grammar School Cyprus) - NUIG and Brendan McMahon |
| Contact email | Professor Kevin Burden, University of Hull<br>face.research@hull.ac.uk |
| Website (for reference purposes) | **http://www.deimpeu.com/** |

| **Information about the Good Practice** | |
|---|---|
| Name | Designing and Evaluating Innovative Mobile Pedagogies |
| The problem context focusing on the needs, gaps, issues, or challenges the Good Practice aimed at addressing. | If ICT, and mobile devices in particular, are to have the impact on learning that is envisaged, there is an urgent need for educators across the educational spectrum to work more collaboratively to design and evaluate learning experiences for young people that exploit the transformational benefits of these technologies. Current practice with mobile technologies tends to replicate |

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| | existing pedagogical practice and many valuable opportunities, especially to engage learners from diverse and marginalized backgrounds, are wasted. However, where mobile technologies are used in a transformative way there is compelling evidence of greater engagement from learners, more social inclusion, motivation and community involvement effectively transcending many of the boundaries and limitations of traditional schools and education. Therefore, this project advocates an innovative, developmental approach to widen the spread and reach of these isolated examples.<br><br>Since no single group of stakeholders is likely to be effective in tackling the problem described above, this project will develop a cross-sectoral and transnational partnership to challenge existing attitudes and practices. This involves teacher educators in universities working with the next generation of teachers, teachers and leaders in schools, and policy makers who can legislate for sustainable change at scale. The project aims to demonstrate how the professional profile of educators across this spectrum can be strenthened to ensure that learning is responsive to the benefits and opportunities afforded by mobile technologies. It seeks to define what transformational learning with mobile technologies looks like and to help stakeholders design and evaluate transformative mobile learning episodes using a bespoke mobile app, developed iteratively over three design cycles. Additionally, the app supports users in evaluating the impact of these transformational lessons, enabling teachers and their school leaders to make more informed judgments about how they invest and deploy these technologies in future |
| Objective(s) | to provide guidance and materials to help both in-service and preservice teachers design innovative mobile pedagogies<br>to inform stakeholders as they plan and implement future policies |
| Duration | from: October 2017 to: August 2020 |

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| Geographical location | UK, Australia, Ireland, Cyprus, Belgium and the Netherlands |
| Targeted group(s) | teachers and their school leaders |
| Summary of the best practice (to be used for joint report) | Designing and Evaluating Innovative Mobile Pedagogies is a threeyear Erasmus+ project with partners in the UK, Australia, Ireland, Cyprus, Belgium and the Netherlands. The project aims to provide guidance and materials to help both in-service and preservice teachers design innovative mobile pedagogies as well as inform stakeholders as they plan and implement future policies. |

| **Results of the Good Practice** | |
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| **Outputs:**<br>1. What were the tangible outputs of the practice?<br>2. What are the services or activities provided during the Good Practice?<br><br>**Outcomes**<br>1. What is the degree of positive change (in terms of knowledge, skills, and attitudes) in the served targeted group(s) in | Outputs<br>The project includes the following activities:<br>1. The creation of **a multi-purpose mobile app** that support educators and pre-service teachers in designing and evaluating creative and innovative learning episodes for their students.<br>The project team uses a design-based research methodology to design and construct the app over three iterative cycles.<br>2. **A scoping report** informing the app development, involving extensive consultation with experts in the field of mobile learning.<br>3. **Multimedia case studies** on the use of the app in 24 partner schools.<br>4. **An online MOOC and various academic papers** to disseminate the outputs and findings from the project with a wider audience.<br><br>Outcomes<br>Professor Kevin Burden leads the group and also coordinates the Digital Education Research network which is a cross faculty, interdisciplinary research and scholarship group focused on the pedagogical impact of digital technologies. In 2014 Professor Burden was awarded EU funding to investigate and develop the use of mobile technologies in teacher education. **The Mobilising and Transforming Teacher** |

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| relation to the Good Practice's objectives?<br><br>**Outreach**<br><br>1. How many people were reached or served by the Good Practice?<br><br>**Impact**<br>1. How did the Good Practice contribute to broader changes in the community, (e.g. through the work of the served or reached targeted group/s)? | **Educators'** pedagogies project (**www.mttep.eu**) has made a major impact on pre-service teachers, teachers and teacher educators across Europe and has resulted in the production of a mobile learning toolkit to support and enhance their practices. The **DEIMP** project continues the theme of MTTEP but this time with an even greater focus on what is really innovative and transformational about the use of mobile technologies in teacher education.<br><br>Outreach<br>Each partner in this consortium is engaged in teacher training. Therefore, the outreach and impact of this practice is immeasurable since it has a increasing multiplying effect. The task-based MOOC had 350 participants (teachers, teacher educators, student teachers).<br><br>Impact<br>Academic Publications<br>The DEIMP Output #1 result (the scoping study / systematic literature review), availabe since early 2019, has also resulted in the paper 'Investigating the use of innovative mobile pedagogies for school-aged students: A systematic literature review' published in the Computers & Education journal. https://doi.org/10.1016/j.compedu.2019.04.008 (Alas no longer freely available for download)<br><br>DEIMP colleagues are guest editing a special issue of the journal TechTrends on mobile technology in teacher education. Currently in the final stages of production, this special issue features articles from the DEIMP Project as well as contributions following an open call to the global mobile learning and educational technology community.<br><br>DEIMP and MiTE colleagues at NUI Galway have a chapter appearing in a new book on Transforming Teacher Education Through Mobile Technologies, edited by Prof. Kevin Burden and Dr. Amanda Naylor, and published by Bloomsbury, London.<br><br>The chapter, 'Mobilising Teacher Education in Ireland: Infrastructuring the MiTE Ecosystem for Learning by Collaborative Design', outlines the shared impact of DEIMP |

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| | and the MiTE Conference, alongside the Irish medium teacher education programme at NUI Galway, the MGO, on mobile learning innovation in Ireland and beyond.<br><br>NUI Galway and DEIMP colleagues will guest edit and publish a special issue of the International Journal of Mobile and Blended Learning (IJMBL) on the topic: 'Innovation in Mobile Learning'. This special issue will feature articles from the EU DEIMP Project as well as international submissions from the wider mobile learning community. |

| **Challenges to the Good Practice** | |
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| What are the weaknesses, challenges, or issues encountered during the implementation of the Good Practice? | Due to covid-19 a lot of the conferences, meetings and training courses were cancelled. Some were done online, but some others were just skipped.<br>The Learning and Training Event (LTTE) planned for April in Nicosia (Cyprus), involving over 75 international attendants, needed to be cancelled due to Covid 19-related travel restrictions. As all necessary arrangements had been made including hotel and flight reservations it was at first decided to postpone the event hoping for another opportunity at a later point in time. Unfortunately the application for an extension of the project, needed to run the event in the autumn 2020 or possibly spring 2021, was not successful.<br><br>Also due to Corona the project's sixth's transnational meeting planned to take place in Galway, Ireland hosted again by the **School of Education, NUIG** on May 27th & 28th, 2020 was cancelled. Instead the consortium partners met online during two days. The meeting was chaired by **Prof. Dr. Kevin Burden** and the agenda consisted of a range of issues regarding the progress of the DEIMP-project.<br>Furthermore, DEIMP partner, **School of Education (NUIG)**, also needed to cancel the 6th MiTE Conference (International Conference on Mobile Technology in Teacher Education), planned in Galway for 29th & 30th May, 2020. |

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| | To be able to realise some planned but not yet finished project results at the time (partly also due to the cancelled activities mentioned above) project coordinator Prof. Dr. Kevin Burden applied for an extension which unfortunately was not granted. |

| **Applicability of the Good Practice** | |
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| 1. What key lessons can be applied or used in INSTALL Youth educational activities?<br>2. Are there any digital citizenship and science literacy training or educational resources, tools, or material produced during the Good Practice lifetime that could be applied or used in INSTALL Youth? | The project includes the following activities:<br>1. The creation of a multi-purpose mobile app that support educators and pre-service teachers in designing and evaluating creative and innovative learning episodes for their students. The project team uses a design-based research methodology to design and construct the app over three iterative cycles.<br>2. A scoping report informing the app development, involving extensive consultation with experts in the field of mobile learning.<br>3. Multimedia case studies on the use of the app in 24 partner schools. 4. An online MOOC and various academic papers to disseminate the outputs and findings from the project with a wider audience. |

## Cittadini-digitali.it

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| **The partner responsible for collecting the Good Practice** | **C.R.E. A. European Youth Group APS** |

| **Information about the organisation/institution/entity responsible for the Good Practice** | |
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| Name of the entity | Istituto Comprensivo Montebello – Parma (coordinating partner) |
| Type | Consortium<br>Cassa di Risparmio di Parma Foundation Parma Municipality, Office for Politics for the childhood and school Coinetica Cultural Association Telefono Azzurro Lions |
| Contact email | |
| Website (for reference purposes) | **http://www.cittadini-digitali.it/** |

| **Information about the Good Practice** | |
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| Name | Digital citizenship at school |
| The problem context focusing on the needs, gaps, issues, or challenges the Good Practice aimed at addressing. | The problems this best practices focuses on are safety; the relationship between real and virtual; the dangers deriving from the gap between the potential use of digital tools and the actual knowledge of young users (sexting, gambling, online enticements); the distorted or pathological uses of the web (e.g. cyberbullying); the dependencies that the Internet may cause. |

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| Objective(s) | The objective of the activities proposed was to pursue the awareness and improve the competences of the students and their families regarding the use of the internet and social network, by creating and experimenting a specific curriculum, that begins in the primary school and ends in the secondary, involving at the same time parents, students and teachers |
| Duration | from May 2015 to May 2017 |
| Geographical location | **Parma, Italy** |
| Targeted group(s) | students and their families |
| Summary of the best practice (to be used for joint report) | Through this project, the primary schools in the territory of the Municipality of Parma undertook the task to integrate in the scholastic curriculum the education to internet and social network use, adjusting the activities to the different levels of knowledge, abilities and competences of the different school grades. The project focuses on the following topics: safety; the relationship between real and virtual; the dangers deriving from the gap between the potential use of digital tools and the actual knowledge of young users (sexting, gambling, online enticements); the distorted or pathological uses of the web (e.g. cyberbullying); the dependencies that the Internet may cause. The objective of the activities proposed was to pursue the awareness and improve the competences of the students and their families regarding the use of the internet and social network, by creating and experimenting a specific curriculum, that begins in the primary school and ends in the secondary, involving at the same time parents, students and teachers. |

| **Results of the Good Practice** | |
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| **Outputs:**<br>1)What were the tangible outputs of the practice?<br>2)What are the services or activities provided during the Good Practice?<br><br>**Outcomes**<br>3)What is the degree of positive change (in terms of knowledge, skills, and attitudes) in the served targeted group(s) in relation to the Good Practice's objectives?<br><br>**Outreach**<br><br>4)How many people were reached or served by the Good Practice?<br><br>**Impact**<br>5)How did the Good Practice contribute to | Outputs<br><br>• Project documentation (http://cittadini-digitali.it/risorse/)<br>• Curricolo di Cittadinanza Digitale/Digital Citizenship curriculum The publication is the main output published by the Didactic Methodological Group and includes some learning units for students of primary and secondary school, to guide them in the attainment of the certified competencies at the end of the fifth year of primary school, and at the end of the third year of secondary school. (http://www.icverdiparma.gov.it/attachments/article/652/curricolo_c ittadinidigitali.pdf)<br>• Guide for parents: Genitori digitali, siamo pronti! / Digital parents: we are ready! (http://cittadini-digitali.it/wp-content/uploads/2015/12/genitoridigitali-per-invio-mail.pdf<br>• Other Documents:<br>1. Livio Cancelliere, Cyberbullismo: responsabilità di insegnanti e famiglie/ Cyberbullying: responsibilities of the teachers and the families<br>2. Anna Oliverio Ferraris, Crescere tra reale e virtuale. Gestire i media in casa e a scuola / Growing between real and virtual. How to manage the media at home and at school (Parma, 5 marzo 2016)<br>3. Silvia Panella e Stefania Caltieri, Patto educativo tra scuola e famiglie per un uso consapevole dei social / Educational agreement between school and families for an aware use of the social media (1st meeting for parents)<br>4. Silvia Panella e Stefania Caltieri, Intrappolati nella rete (Cyberbullismo- Sexting e Dipendenza da Internet) / Trapped in the Web (Cyberbullying, sexting and internet addiction). (2nd meeting for parents)<br><br>Outcomes<br>-Elaboration and experimentation of a vertical educational curriculum for primary schools related to the digital competences and to the use of the internet; - Development and strengthening of digital citizenship competences of students, families and teachers; - Creation and strengthening of a territorial network of schools, at municipal level, promoting collaboration among groups of teacher |

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| broader changes in the community, (e.g. through the work of the served or reached targeted group/s)? | and parents - Active involvement of local stakeholders (policy makers, educational institutions and local authorities) sustaining school activities and institutions and definition of policies for the digital citizenship at local level.<br><br>Outreach<br>The 15 primary schools of the Parma province involved in the projects are: Istituto Comprensivo Albertelli-Newton, Istituto Comprensivo D'Acquisto, IC Ferrari, IC Micheli, IC Toscanini-Einaudi, IC Via Montebello, IC Parmigianino, IC Puccini, IC Giuseppe Verdi, Convitto Nazionale M. Luigia, DD F.lli Bandiera, IC Sanvitale Fra Salimbene, Istituto De La Salle, Istituto P.G.E. Porta, Istituto San Benedetto<br><br>Impact<br>The activities provided for the parents were: a) Informative meetings regarding the aware use of social networks, addressed to the families of the children in the 15 adherent schools; b) creation of a parent workgroup (consisting of a parents' representative for each school involved in the project) for the production of a "code of behaviour" for the use of the social networks. The activity benefitted of the advice of a psychologist and the possibility to access a helpdesk of psychologists for problematic situations. The activities for the students consisted in laboratory work and informational meetings regarding the aware se the intern and social networks. The activities for the teachers were: a) the constitution of a group of teachers (a representative from each school) for the elaboration of a vertical curriculum for digital competences; b) training for teachers through thematic didactic methodological groups; c) training and experimentation in the classrooms to introduce the social networks and the use of the internet in the daily didactical activities. |

| **Challenges to the Good Practice** | |
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| What are the weaknesses, challenges, or issues encountered during the implementation of the Good Practice? | The main risks of this small-scale project are related to its financial sustainability, due to the insufficient resources at disposal of the private and public sectors destined to social and cultural activities. This issue derives from the contingent financial situation, connected to the economic cycle and the priority to |

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| | elaborate economic and social politics on the national level. |

| **Applicability of the Good Practice** | |
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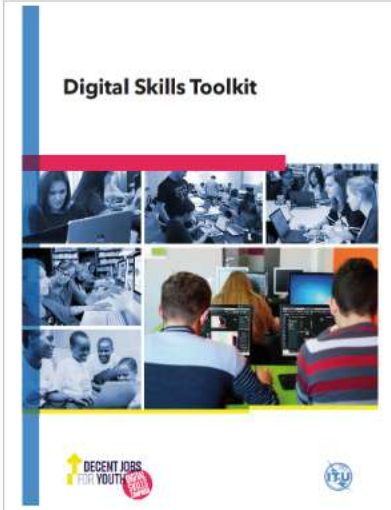
| 1. What key lessons can be applied or used in INSTALL Youth educational activities?<br>2. Are there any digital citizenship and science literacy training or educational resources, tools, or material produced during the Good Practice lifetime that could be applied or used in INSTALL Youth? | This local-scale project created two important documents (Digital Citizenship Curriculum and Digital Parents: we are ready!) that can be put at disposal of teachers, parents and school managers countrywise. At the same time, this project gave the possibility to partner Coinetica Association to autonomously develop the initiative "Internauti Consapevoli", and to the Parma health system to offer to secondary schools the service "Among Salimebene" and the blog "To surf with style", that gives tools and psychological support, and aims to open a shared discussion on the use of internet, computers and smartphones, as well as raising awareness on the possibilities, dangers and potentialities of the new technologies. |

## Problem Solving

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| **The partner responsible for collecting the Good Practice** | **C.R.E. A. European Youth Group APS** |

| **Information about the organisation/institution/entity responsible for the Good Practice** | |
|---|---|
| Name of the entity | Technology & Social Change Group (TASCHA) |
| Type | Center for multidisciplinary research at the University of Washington |
| Contact email | tascha@uw.edu |
| Website (for reference purposes) | Digital Skills Toolkit (itu.int) |

| **Information about the Good Practice** | |
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| Name | **Digital Skills Toolkit** |
| The problem context focusing on the needs, | The Digital Skills Toolkit forms part of ITU's commitment to the Global Initiative on Decent Jobs for Youth to tackle |

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| gaps, issues, or challenges the Good Practice aimed at addressing. | youth unemployment, for which it leads the digital skills thematic priority.<br>This toolkit has aimed to equip policymakers and other stakeholders with practical guidance for developing a digital skills strategy tailored to individual country needs. |
| Objective(s) | • to facilitate the development of a comprehensive digital skills strategy at country level<br>• to provide policymakers and other stakeholders with practical information, examples, and step-by-step guides to help develop a national digital skills strategy to develop policies and programmes to address specific priorities |
| Duration | from: October 2017 to: August 2020 |
| Geographical location | **Washington State, USA** |
| Targeted group(s) | policymakers and other stakeholders |
| Summary of the best practice (to be used for joint report) | This toolkit provides stakeholders with guidance on developing a digital skills strategy. It is intended for policymakers, along with partners in the private sector, non-governmental organizations, and academia. Its overarching aim is to facilitate the development of a comprehensive digital skills strategy at country level. It is also possible to use this guide to focus on selected priorities that require a fresh approach. This toolkit provides policymakers and other stakeholders with practical information, examples, and step-by-step guides to help develop a national digital skills strategy. It can also be used to develop policies and programmes to address specific priorities. |

| **Results of the Good Practice** | |
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| **Outputs:**<br>1. What were the tangible outputs of the practice?<br>2. What are the services or activities provided during the Good Practice? | A digital toolkit:<br>Digital Skills Toolkit (itu.int)<br><br>Outcomes<br>The Digital Skills Toolkit supports ITU's work as the leader of the "digital skills for youth" |

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| **Outcomes**<br>1. What is the degree of positive change (in terms of knowledge, skills, and attitudes) in the served targeted group(s) in relation to the Good Practice's objectives?<br><br>**Outreach**<br><br>1. How many people were reached or served by the Good Practice?<br><br>**Impact**<br>1. How did the Good Practice contribute to broader changes in the community, (e.g. through the work of the served or reached targeted group/s)? | thematic area for the Decent Jobs for Youth Initiative.<br>The youth employment challenge is enormous. But it is not insurmountable. We have a vision of a world where young women and men everywhere can earn a fair income while working in conditions of security, dignity and equality. Getting young people into decent jobs is not just essential for their future, but for the future of our local communities, our countries and our global society. Decent jobs for youth are also essential to realizing the 2030 Agenda for Sustainable Development.<br>Investing in youth employment requires a collaborative approach to prioritizing job creation while helping youth to overcome specific disadvantages, such as skills mismatch and discrimination.<br><br>Outreach<br>The Toolkit is available in PDF, e-Pub and Kindle versions. Additionally, an an editable Word version of all the tools is accessible in the PDF version - just click on the paperclip icon to open.<br><br>Impact<br>The toolkit provides policymakers and other stakeholders with practical information, examples, and step-by-step guidance to develop a national digital skills strategy. Topics in the toolkit include: engaging the right stakeholders, inventorying and assessing existing policies, developing strategies for varied proficiency levels, creating strategies for under-represented groups such as women and persons with disabilities, organizing campaigns and joining regional or international initiatives, and monitoring and updating the strategy. |

| Challenges to the Good Practice | |
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| What are the weaknesses, challenges, or issues encountered during the implementation of the Good Practice? | This toolkit is not tailored to individual country needs. While there is no one-size-fits-all strategy – each country has unique strengths and goals. It bears repeating here that countries can use the toolkit in its entirety in developing a comprehensive digital skills strategy or they can simply focus on a specific area and use elements from the toolkit as appropriate to particular needs – for example how to target under-represented groups |

| Applicability of the Good Practice | |
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| 1. What key lessons can be applied or used in INSTALL Youth educational activities?<br>2. Are there any digital citizenship and science literacy training or educational resources, tools, or material produced during the Good Practice lifetime that could be applied or used in INSTALL Youth? | **Creating resources and materials with easy to access and free of charge**<br><br>**https://www.itu.int/dms_pub/itu-d/opb/phcb/D-PHCB-CAP_BLD.02-2018-PDF-E.pdf** |

| The partner responsible for collecting the Good Practice | C.R.E. A. European Youth Group APS |
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| Information about the organization/institution/entity responsible for the Good Practice | |
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| Name of the entity | **DEIMP** |
| Type | **Consortium :**<br><br>University of Technology Sydney (UTS) - University of Hull (UoH) - Stitchting - Hogeschol PXL - CARDET - Global Learning Ltd - TELLC - Grammar School Cyprus) - NUIG and Brendan McMahon |
| Contact email | Professor Kevin Burden, University of Hull |
| Website (for reference purposes) | **http://www.deimpeu.com/** |

| **Information about the Good Practice** | |
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| Name | Innovative Mobile Pedagogies |
| The problem context focusing on the needs, gaps, issues, or challenges the Good Practice aimed at addressing. | If ICT, and mobile devices in particular, are to have the impact on learning that is envisaged, there in an urgent need for educators across the educational spectrum to work more collaboratively to design and evaluate learning experiences for young people that exploit the transformational benefits of these technologies. Current practice with mobile technologies tends to replicate existing pedagogical practice and many valuable opportunities, especially to engage learners from diverse and marginalized backgrounds, are wasted. However, where mobile technologies are used in a transformative way there is compelling evidence of greater engagement from learners, more social inclusion, motivation and community involvement effectively transcending many of the boundaries and limitations of traditional schools and education. Therefore, this project advocates an innovative, developmental approach to widen the spread and reach of these isolated examples.<br><br>Since no single group of stakeholders is likely to be effective in tackling the problem described above, this project will develop a cross-sectoral and transnational partnership to challenge existing attitudes and practices. This involves teacher educators in universities working with the next generation of teachers, teachers and leaders in schools, and policy makers who can legislate for sustainable change at scale. The project |

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| | aims to demonstrate how the professional profile of educators across this spectrum can be strengthened to ensure that learning is responsive to the benefits and opportunities afforded by mobile technologies. It seeks to define what transformational learning with mobile technologies looks like and to help stakeholders design and evaluate transformative mobile learning episodes using a bespoke mobile app, developed iteratively over three design cycles. Additionally, the app supports users in evaluating the impact of these transformational lessons, enabling teachers and their school leaders to make more informed judgments about how they invest and deploy these technologies in future. |
| Objective(s) | to provide guidance and materials to help both in-service and preservice teachers design innovative mobile pedagogies<br><br>to inform stakeholders as they plan and implement future policies |
| Duration | from: October 2017 to: August 2020 |
| Geographical location | UK, Australia, Ireland, Cyprus, Belgium and the Netherlands |
| Targeted group(s) | teachers and their school leaders |
| Summary of the best practice (to be used for joint report) | Designing and Evaluating Innovative Mobile Pedagogies is a three year Erasmus+ project with partners in the UK, Australia, Ireland, Cyprus, Belgium and the Netherlands. The project aims to provide guidance and |

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| | materials to help both in-service and preservice teachers design innovative mobile pedagogies as well as inform stakeholders as they plan and implement future policies. |

| **Results of the Good Practice** | |
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| **Outputs:**<br><br>1. What were the tangible outputs of the practice?<br><br>2. What are the services or activities provided during the Good Practice?<br><br>**Outcomes**<br><br>1. What is the degree of positive change (in terms of knowledge, skills, and attitudes) in the served targeted group(s) in relation to the Good Practice's objectives? | The project includes the following activities:<br><br>1. The creation of a multi-purpose mobile app that will support educators and pre-service teachers in designing and evaluating creative and innovative learning episodes for their students. The project team uses a design-based research methodology to design and construct the app over three iterative cycles.<br><br>2. A scoping report informing the app development, involving extensive consultation with experts in the field of mobile learning.<br><br>3. Multimedia case studies on the use of the app in 24 partner schools.<br><br>4. An online MOOC and various academic papers to disseminate the outputs and findings from the project with a wider audience. |

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| **Outreach**<br><br>1. How many people were reached or served by the Good Practice?<br><br>**Impact**<br><br>1. How did the Good Practice contribute to broader changes in the community, (e.g. through the work of the served or reached targeted group/s)? | Outcomes<br><br>The project demonstrated how the professional profile of educators across this spectrum can be strengthened to ensure that learning is responsive to the benefits and opportunities afforded by mobile technologies. It seeks to define what transformational learning with mobile technologies looks like and to help stakeholders design and evaluate transformative mobile learning episodes using a bespoke mobile app, developed iteratively over three design cycles. Additionally, the app supports users in evaluating the impact of these transformational lessons, enabling teachers and their school leaders to make more informed judgments about how they invest and deploy these technologies in future. Teacher educators in universities working with the next generation of teachers, teachers and leaders in schools, and policy makers who can legislate for sustainable change at scale will be the direct beneficiaries of this project.<br><br>Outreach<br><br>24 partner schools<br><br>Impact<br><br>When appropriately utilized, mobile technologies have the potential to transform educational practices and are capable of making a significant |

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| | contribution in engaging students and making learning clearer and more inclusive.<br>Therefore there is an urgent need to develop R&D oriented partnerships between university based teacher educators, school teachers and school leaders in order to design, develop, test and refine innovative pedagogies using mobile technologies.<br><br>In the context of an Erasmus+ KA2 application the University of Hull (UK), National University of Ireland (Galway), PXL Hogeschool (Belgium), Hogeschool Inholland (The Netherlands), Centre for Advancement of Research and Development in Educational Technology (Cyprus), Technology Enhanced Lifelong Learning Consult (The Netherlands) and the University of Technology in Sydney (Australia) set out series of activities to achieve this ambition centred on the collaborative construction of a mobile app to support the developing and evaluation of innovative mobile pedagogies, designed and tested between the partners and a network of 24 associated partner schools working as part of a transnational network. |

| **Challenges to the Good Practice** | |
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| What are the weaknesses, challenges, or issues encountered during the implementation of the Good Practice? | |

| **Applicability of the Good Practice** | |
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| 1. What key lessons can be applied or used in INSTALL Youth educational activities?<br>2. Are there any digital citizenship and science literacy training or educational resources, tools, or material produced during the Good Practice lifetime that could be applied or used in INSTALL Youth? | 1. The creation of an online course to support teachers and teacher educators in **designing, evaluating** and **sharing** innovative pedagogical activities or scenarios that embrace the use of mobile technologies as tools for teaching and learning. The course follows the ADDIE design model, a tried and tested approach to designing educational activities. The course closely cooperates with the **app**, and during the training course participants explore how to use the app to gain inspiration for new mobile learning activities and to share the mobile learning scenarios they have created with a wider audience of educators.<br>2. The case studies ware multimedia studies of teachers and schools using mobile learning in a transformative way, thereby using the DEIMP app and MOOC<br>3. An app designed to support teachers and teacher educators in designing and evaluating their own innovative mobile learning pedagogies. |

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| | The DEIMP app is a multi-purpose mobile app that supports educators and pre-service teachers in designing and evaluating creative and innovative learning episodes for their students. The mobile application helps to identify and design original and transformational mobile learning scenarios across various contexts (e.g., in formal spaces, in outdoor spaces, etc.), and to collect data in situ to evaluate the impact of these scenarios on learners in teacher education and in schools. It is used by teacher educators with their pre-service teachers and by teachers in schools in order to expand their repertoire of mobile learning designs. You can download the app from the Google Playstore and in the App Store (available soon). You can also use the browser version of the app.<br><br>1. a scoping study (report) on the disruptive and innovative potential of mobile technologies in schools and teacher education. |

# SCRATCH

| The partner responsible for collecting the Good Practice | C.R.E. A. European Youth Group APS |
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| Information about the organisation/institution/entity responsible for the Good Practice | |
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| Name of the entity | PDST Technology in Education |
| Type | PDST (Professional Development Service for Teachers) provides a range of up-skilling and CPD programmes for teachers. Their courses in the field of technology in education aim to develop the digital competences of teachers so that they can more comfortably integrate technology into their teaching practice |
| Contact email | info@pdst.ie |
| Website (for reference purposes) | https://www.pdsttechnologyineducation.ie/en/Training/Courses/Scrat ch-for-Learning-online-.html |

| Information about the Good Practice | |
|---|---|
| Name | Scratch for Learning |
| The problem context focusing on the needs, gaps, issues, or challenges the Good Practice aimed at addressing. | This practice is a support service offering professional learning opportunities to teachers and school leaders in a range of pedagogical, curricular and educational areas. |

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| Objective(s) | This best practice provides training and up-skilling opportunities for teachers by completing a short online programme on how to use Scratch coding software in their teaching practice. The aim of this programme is to build the digital competence of teachers so that they can then build the digital skills of their learners; as such, it serves as an example of best practice in up-skilling teachers to work in online environments through providing a bespoke e-learning programme. |
| Duration | **10 hours** |
| Geographical location | **Dublin, Ireland** |
| Targeted group(s) | **Primary and secondary school teachers** |
| Summary of the best practice (to be used for joint report) | This is a 10-hour online course which aims to build the digital competence of teachers in Irish schools, by teaching them how to use Scratch coding software to teach literacy and numeracy in the classroom. It is included here as a best practice example because it is unique in Ireland in that is specifically aims to develop the digital skills of teachers so that they can integrate technology into their teaching practice. |

| **Results of the Good Practice** | |
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| **Outputs:**<br>1. What were the tangible outputs of the practice?<br>2. What are the services or activities provided during the Good Practice?<br><br>**Outcomes**<br>1. What is the degree of positive change (in terms of knowledge, skills, and attitudes) in the served targeted group(s) in relation | Outputs<br>The programme for teachers is delivered through a 10-hour online curriculum, which provides teachers with learning content across three modules. These modules are described as follows:<br>• "Module 1 – Introduction to Scratch Coding<br>This module provides an introduction to the basic features of Scratch and an overview of Scratch resources, in particular the scratch.mit.edu website. Participants are also provided with examples of Scratch being used in the classroom. |

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| to the Good Practice's objectives?<br><br>**Outreach**<br><br>1. How many people were reached or served by the Good Practice?<br><br>**Impact**<br>1. How did the Good Practice contribute to broader changes in the community, (e.g. through the work of the served or reached targeted group/s)? | • Module 2 – Scratch in the Classroom In this module, Scratch skills are further developed and participants learn how to edit and create a Scratch project. Participants will also explore uses of Scratch to support literacy and numeracy.<br>• Module 3 – Planning for Scratch This module focuses on classroom management and planning for effective use of Scratch in teaching and learning. Participants will explore strategies to integrate Scratch into their teaching and will review the role of Scratch in assessment. As the final course assignment, participants are required to share a link to their own Scratch project<br><br>Outcomes<br>• Comfortable in using Scratch software;<br>• Using Scratch software in the classroom to support literacy and numeracy;<br>• Integrating Scratch across the curriculum;<br>• Accessing support and resources for Scratch;<br>• Creating their own Scratch project – to build the digital skills of pupils<br>Impact<br>The benefits of this programme are that it aims to foster the digital competence of teachers, so that they can use advanced digital tools and resources in the classroom, to improve their teaching practice. This is a unique programme in Ireland, as it aims to teach teachers how to use coding software which would be considered advanced digital skills when the primary school curriculum in Ireland is considered. The benefits of investing in in-service training for teachers in this field is that it leads to the further integration of technology in the primary school curriculum, as teachers who complete the training will integrate more technology into their teaching practice; and this in turn leads to the |

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| | development of enhanced digital skills of young pupils. |

| **Challenges to the Good Practice** | |
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| What are the weaknesses, challenges, or issues encountered during the implementation of the Good Practice? | **None identified** |

| **Applicability of the Good Practice** | |
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| 1. What key lessons can be applied or used in INSTALL Youth educational activities?<br>2. Are there any digital citizenship and science literacy training or educational resources, tools, or material produced during the Good Practice lifetime that could be applied or used in INSTALL Youth? | This programme advocates providing up-skilling programmes for teachers in the field of IT and also through the medium of online learning. As such, this is an innovative practice which could be adapted by the INSTALL project in providing training support to teachers. |

# Smart Coding

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| **The partner responsible for collecting the Good Practice** | **C.R.E. A. European Youth Group APS** |

| **Information about the organization/institution/entity responsible for the Good Practice** | |
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| Name of the entity | Ministry of Education, University and Research (MIUR) and Samsung electronics |
| Type | Public institutions |
| Contact email | |
| Website (for reference purposes) | Smart Coding (smart-coding.it) |

| **Information about the Good Practice** | |
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| Name | Smart Coding |
| The problem context focusing on the needs, gaps, issues, or challenges the Good Practice aimed at addressing. | With this initiative, Samsung reaffirms its support to the development of the education for young generations progressing towards the future. Through the project, Samsung Electronics guarantees a better future to the new Italian generations, with a social initiative to share the benefits of its own technological innovation with the public. Smart Coding is the name of the above-mentioned project, launched in the scholastic year 2014-2015 in collaboration with the Ministry of Education, University and Research (MIUR). |

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| Objective(s) | enhance the classes that are committed to improving the use of digital resources for learning, as increasingly required by the European Union, MIUR and civil society |
| Duration | 2014-2015 |
| Geographical location | **Milan, Italy** |
| Targeted group(s) | **Primary and Secondary schools** |
| Summary of the best practice (to be used for joint report) | The project was a continuation of the pilot project Smart Future (2013), that took place in 54 primary and secondary school classes (18 from primary school, 36 from secondary school), that were transformed into "smart classrooms" thanks to the technologies offered by Samsung Electronics. Smart Coding proposes a rigorous didactic laboratorial method to increase the creativeness of the students. |

| **Results of the Good Practice** | |
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| **Outputs:**<br>1. What were the tangible outputs of the practice?<br>2. What are the services or activities provided during the Good Practice?<br><br>**Outcomes**<br>1. What is the degree of positive change (in terms of knowledge, skills, and attitudes) in the served targeted group(s) in relation to the Good Practice's objectives?<br><br>**Outreach** | Outputs<br>The section of the website "Scopri di più / Discover more" contains all the documents and components of the didactical kit and some guide lines for teachers. The section "Guarda I vincitori / See the winners" contains all the products of the project awarded.<br><br>Outcomes<br>• Guidance and support for teachers and students through the experimental phases of the project, bearing in mind the consideration that digitalisation of education must be well "programmed" through specific rules;<br>• Promotion of creative thinking to young Italian students, through "Computational thinking", encouraging a more positive inclination to problem-solving; |

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| 1. How many people were reached or served by the Good Practice?<br><br>**Impact**<br>1. How did the Good Practice contribute to broader changes in the community, (e.g. through the work of the served or reached targeted group/s)? | • Experimentation of the planning and creative process behind video game development, in an "unplugged mode";<br>• Valorisation of the work of the classes that involved the use of digital resources in teaching/ learning, in agreement with the guidelines from the European Union and the MIUR, and with the new social trends; Contribution to the implementation of Action #17 "Introduce computational thinking to primary schools" of the National Plan for<br><br>Outreach<br>Throughout the year of implementation, the project delivered 1.013 Kits to 776 Italian schools, holding 508 meetings involving around 30.000 students. This action was encouraged by the MIUR, as contributing to the initial phase of implementation of the National Plan for Digital School, especially Action #17. |

| **Challenges to the Good Practice** | |
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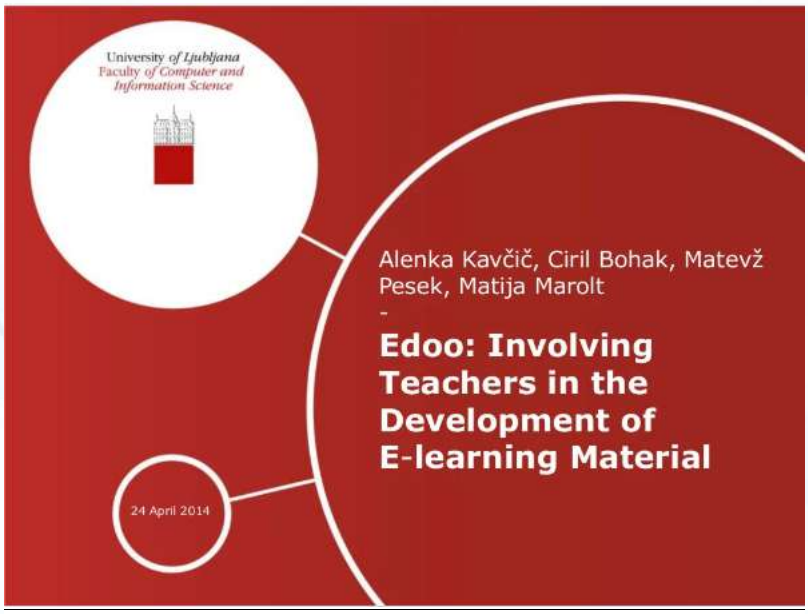
| What are the weaknesses, challenges, or issues encountered during the implementation of the Good Practice? | The main risk of this project is due to the limited period of implementation (scholastic year 2014-2015) and to the nature of the initiative: being it promoted by a private entity, new proposals and projects depend on the changing marketing policies of the company |

| **Applicability of the Good Practice** | |
|---|---|
| 1. What key lessons can be applied or used in INSTALL Youth educational activities?<br>2. Are there any digital citizenship and science literacy training or educational resources, tools, or material produced during the Good Practice lifetime that could be applied or used in INSTALL Youth? | |

## Communication and collaboration

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| **The partner responsible for collecting the Good Practice** | **C.R.E. A. European Youth Group APS** |

| **Information about the organisation/institution/entity responsible for the Good Practice** | |
|---|---|
| Name of the entity | University Of Ljubljana |
| Type | Higher education Institution |
| Contact email | alenka.kavcic@fri.uni-lj.si |
| Website (for reference purposes) | http://www.edoo.si |

| **Information about the Good Practice** | |
|---|---|
| Name | Edoo: Involving Teachers in the Development of E-learning Material |
| The problem context focusing on the needs, gaps, issues, or challenges the Good Practice aimed at addressing. | Although a vast amount of e-learning materials has been produced in the last years, teachers are still struggling daily to find appropriate materials for their lessons. The problem often lies in poor flexibility of the prepared materials, which do not always correspond to specific topics, convey the preferred teaching style, or suit the individual learning scenarios for a particular educational context. Teachers tackle this problem by adapting existing materials or developing their own materials, which requires adequate ICT skills that not all teachers possess. An alternative is to adapt their teaching scenarios to correspond to existing materials without any changes, taken as it is. Needless to say, the second option limits teachers' creativity and diminishes the educational value of their lessons.<br><br>In addition, the curriculum, which needs to be followed, may change, which may make existing materials obsolete. The didactic materials are often distributed in the final executable version which is unmodifiable. By implementing educational applications in a modular way, it is possible to reuse individual parts for changed learning scenarios. Another way of prolonging the utilization of applications is to separate the application's framework from its content, which allows teachers to modify the content (e.g. text or images) without affecting the application's structure. Maintaining a source code repository is also very important for prolonging application's lifespan, allowing a developer to modify the code and add new functionalities.<br><br>To overcome these problems, we introduced the Edoo initiative for encouraging enhanced |

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| | collaboration between producers of learning materials and its users. |
| Objective(s) | • to connect developers and users<br>• to enable their active collaboration<br>• to bridge the gap between users and producers of e-learning materials in order to increase their quality and value |
| Duration | 2013-2014 |
| Geographical location | Slovenia |
| Targeted group(s) | A community of developers was built around a group of second cycle computer science students attending the E-learning course at the Faculty of Computer and Information Science, University of Ljubljana.<br>The initiative engaged a group of enthusiastic teachers, eager to actively participate in the development process during the whole semester. The initiative targeted mainly teachers in primary and secondary schools that have<br>innovative ideas on how to improve their lectures with the use of attractive e-learning materials,<br>but are unable to achieve effective results due to inadequate ICT skill. |
| Summary of the best practice (to be used for joint report) | the Edoo initiative that aims for increased involvement of teachers in the process of e-learning materials creation. Its main goal is to connect two distinct communities – teachers as users of e-learning materials and programmers as creators of e-learning materials – through the online portal and learning site designed for sup port and collaboration. The goal of the initiative is to increase cooperation between the two communities, thus overcoming the domain gap between them. The idea of the initiative was well received among teachers, who are missing appropriate learning materials and lack the ability to adapt existing materials to their speci c teaching needs. We started the initiative in spring 2013, while the rst collaborative projects are being implemented in the winter semester of 2013/2014. The expected result of the initiative is the creation of quality |

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| | didactic applications that teachers can use in their classes. Besides, we aim at modular and adaptable educational applications with publicly available source code to enable its customization and further development. |

| **Results of the Good Practice** | |
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| **Outputs:**<br>1. What were the tangible outputs of the practice?<br>2. What are the services or activities provided during the Good Practice?<br><br>**Outcomes**<br>1. What is the degree of positive change (in terms of knowledge, skills, and attitudes) in the served targeted group(s) in relation to the Good Practice's objectives?<br><br>**Outreach**<br><br>1. How many people were reached or served by the Good Practice?<br><br>**Impact**<br>1. How did the Good Practice contribute to broader changes in the community, (e.g. through the work of the served or reached targeted group/s)? | Outputs<br>The expected result of the initiative is the creation of quality didactic applications that teachers can use in their classes. Besides, we aim at modular and adaptable educational applications with publicly available source code to enable its customization and further development.<br>Started with 25 projects and 15 projects were presented at the end.<br><br>Outcomes<br>The idea of the initiative was well received among teachers, who are missing appropriate learning materials and lack the ability to adapt existing materials to their specific teaching needs. We started the initiative in spring 2013, while the first collaborative projects are being implemented in the winter semester of 2013/2014.<br><br>Outreach<br><br>3 faculty professors<br>38 teachers: 25 primary school, 5 secondary and 6 Other 8(including special education for the hearing impaired)<br>36 students, some worked alone, some in pairs and there was a group of 3 |

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| | Impact<br>Its main result was connecting two distinct communities-teachers as users of e-learning materials and programmers as creators of e-learning materials-through the online portal and learning site designed for support and collaboration. The initiative increased cooperation between the two communities, thus overcoming the domain gap between them. |

| **Challenges to the Good Practice** | |
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| What are the weaknesses, challenges, or issues encountered during the implementation of the Good Practice? | Although at the beginning of the initiative teachers were very enthusiastic and 30 teachers came to the initial informative meeting, towards the end of the semester, teachers motivation began to vanish. Also, the lack of financing was a weakness because the university was not able to have any kind of incentive for teachers participating in the initiative. University students could earn credits, but the project could have been a bit demanding for some of them and unfortunately this course only gave them 3 credits, but the also had other coursework to finish for the 3 credits. The participation in this initiative was a not mandatory requirement to pass this course. |

| **Applicability of the Good Practice** | |
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| 1. What key lessons can be applied or used in INSTALL Youth educational activities?<br>2. Are there any digital citizenship and science literacy training or educational resources, tools, or material produced during the Good Practice | To enable effective cooperation between teachers and our students, an online web portal (Edoo, 2013)was established that was intended mostly for presenting the Edoo initiative to the public and all interested parties, focusing on current events and promotion of the idea of synergy. The portal also offers the contact information for all volunteers interested in participating in the initiative. |

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| lifetime that could be applied or used in INSTALL Youth? | They also established a Web Classroom that forms the heart of the ongoing collaborative development process, as it offers a platform for communication. We used the Moodle platform that most teachers already know and use in their everyday school activities. Familiarity with the platform is very important for stress-free use and activity management, thus allowing teachers to focus on the content itself.<br><br>For each project, a separate course was created in Moodle, enrolling members of the students' development team as Developers (Teacher's role in Moodle with rights to add and modify course content) and all interested teachers as Notion Leaders (Student's role in Moodle with rights to access content and participate in forums). A forum was set up for meetings and discussion, purifying the ideas, and designing new didactic expedients for different school subjects.<br><br>The developing educational application is uploaded as course content (use of SCORM packages is foreseen), preferably at the end of each iteration in the development process, thus enabling its instant use and testing within the Moodle environment. Teachers' feedback is then provided through forum discussions, suggesting improvements of the developed application that are considered by developers and tackled in the next iteration. |

## Information and data literacy

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| **The partner responsible for collecting the Good Practice** | **C.R.E. A. European Youth Group APS** |

| **Information about the organisation/institution/entity responsible for the Good Practice** | |
|---|---|
| Name of the entity | Cassa di Risparmio di Lucca Foundation |
| Type | **Private Institution** |
| Contact email | |
| Website (for reference purposes) | **file:///C:/Users/katherine/Downloads/Abstract%20Progetto%20UiBi.pdf** |

| **Information about the Good Practice** | |
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| Name | Uibi – Ubiquitous learning |
| The problem context focusing on the needs, gaps, issues, or challenges the | UiBi was born to sustain the scholastic communities (families, teachers and students) of the Province of Lucca. In 2014, the action extended to the Province in |

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| Good Practice aimed at addressing. | Livorno, thanks to the contribution of the Foundation of Livorno |
| Objective(s) | An important general objective behind the project is to build a bridge between formal learning contexts and informal contexts, bearing in mind the important educational value that puts the students at the center of the teaching/learning process |
| Duration | from: 2011 to: 2017 |
| Geographical location | **Italy** |
| Targeted group(s) | **The UiBi project is aimed primarily at all schools of all levels in the Province of Lucca (and is also proposed on an experimental basis to the RISCAT regional network, for evening schools).** |
| Summary of the best practice (to be used for joint report) | UiBi is a project opened to all school institutes in the Provinces of Lucca and Livorno. Its objective is to create a Social Learning Environment and to supply tools and contents to the students to pursue such aim. |

| **Results of the Good Practice** | |
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| **Outputs:**<br>1. What were the tangible outputs of the practice?<br>2. What are the services or activities provided during the Good Practice?<br><br>**Outcomes**<br>1. What is the degree of positive change (in terms of knowledge, skills, and attitudes) in the served targeted group(s) in relation to the Good Practice's objectives?<br><br>**Outreach**<br><br>1. How many people were reached or served by the Good Practice?<br><br>**Impact**<br>1. How did the Good Practice contribute to broader changes in the | Output<br>UiBi Project Abstract http://www.uibi.it/getFile.php?id=287<br>The Uibi Project: a portal to share and provide didactical contents for schools (http://www.edaforum.it/sites/default/files/Progetto%20UIBI.pdf)<br>Andrea Guastini, Social Learning Environment Didactical Portal 11th December 2015 presentation<br><br>(http://www.riscat.it/sites/default/files/2016-01/Presentazione%20RISCAT%2011%20dicembre%202015.pdf)<br><br>Outcomes<br>It preserves the positive elements of the Social Networks (such as the environment that promote sharing of information and perspectives), and applies them to learning.<br><br>Outreach<br>The project progressively opened to many realities on the regional and national territory, benefitting from a diffused and deep use of the New Technologies in the didactics. UiBi has, indeed, expanded beyond the borders of the Province of Lucca, involving an increasing number of schools in the Region of Tuscany. Moreover, in February 2016, the Cassa di Risparmio di Lucca Foundation (FCRLU) established the "UiBi Foundation for pedagogical-didactic innovation", which operates on both regional and national level, with the specific mission to consolidate an innovative vision of school and education<br><br>Impact<br>The different tools developed during the project activities contribute to the achievement of a series of important results:<br>• The possibility for the teachers to be continuously trained through the didactic portal;<br>• A Community of Practice at disposal of the teachers, that facilitates the sharing of experiences, materials and opinions; |

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| community, (e.g. through the work of the served or reached targeted group/s)? | • The parents feel reassured, because the Learning Environment is safe, controlled and has filtered access, which prevents the participation of undesirable guests;<br>• The learning process of the single student is improved, as it is enriched through the contribution of teachers and classmates;<br>• Growth of the students' motivation against truancy; • Increase in the awareness towards the management of the media in students and teachers;<br>• Overcoming the difficulties related to geographical distance, by proposing multimedia contents (courses, lessons, close examinations, test) that are easily accessible online;<br>• Support to students with learning disabilities;<br>Creation of a personal e-portfolio that certifies the competences acquired;<br>• Contribution to the improvement of the services offered by the Scholastic Community, as consequence of a better internal communication |

| **Challenges to the Good Practice** | |
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| What are the weaknesses, challenges, or issues encountered during the implementation of the Good Practice? | As a local initiative, interesting a limited quantity of schools concentrated in the Provinces of Lucca and Livorno, the main risk is its financial sustainability, that depends on the private institutions that created the project |

| **Applicability of the Good Practice** | |
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| 1. What key lessons can be applied or used in INSTALL Youth educational activities?<br>2. Are there any digital citizenship and science literacy training or educational resources, tools, or material produced during the Good Practice lifetime that | Three are the main digital methods used to implement the project: 1) A teachers' Community of Practice to collect, discuss and publish their own, to deepen specific topics and to co-build a professional training; 2) A web portal that aims to: support learning activities (on individual, group, class, school and territory level); constitute a multimedia |

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| could be applied or used in INSTALL Youth? | repository; create an e-portfolio for each pupil in the project; design lessons and tests; report the topics studies; 3) A Personal Learning Environment through a mobile App that transforms the educational contents of the Portal into gaming activities available for the students. All the activities, tools and services involved in the Uibi project is supplied for free to the participating schools<br><br>Summary of the technical aspects (Presentation of the platform by Meta / Liberologico)<br>The project includes:<br>● a website, provided on request for each school and managed with MetaCMS, which each can use<br>independently:<br>○ it is easy to use, does not require IT staff, a training course of four is enough<br>hours<br>○ is linked to the project website to show the courses provided by the single school<br>○ is supplied with two initial graphic templates but further customizable in the colors and<br>in logos<br>○ gives the possibility to publish sponsor banners<br>● a Social Portal, created with MetaCMS, in which:<br>○ activities and events are presented<br>○ the registry of students and teachers is managed<br>○ courses are published, with standard software (Moodle)<br>○ handouts, books (MetaBook) are published<br>○ publish your works (Mahara)<br>○ teaching activities are managed by class, or by individual pupils |

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| | • a mobile App to use, even in offline mode (without internet connection)<br>○ The contents of the Portal<br>○ the courses provided<br>○ textbooks / handouts / notes etc.<br>○ tests |

Safety


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| **The partner responsible for collecting the Good Practice** | **C.R.E. A. European Youth Group APS** |

| **Information about the organisation/institution/entity responsible for the Good Practice** | |
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| Name of the entity | Ministry of Education, University and Research (MIUR)<br><br>Other partners:<br>Ministry of Internal Affaires<br>Postal and Communication Police |

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| | National Ombudsperson for Childhood and Adolescence<br>University of Florence<br>University of La Sapienza - Inter University Centre, Save the Children Italia Onlus,<br>SOS - Il Telefono Azzurro Onlus,<br>E.D.I. Social Cooperative Enterprise Movimento Difesa del Cittadino<br>Skuola.net |
| Type | **Public Institution** |
| Contact email | |
| Website (for reference purposes) | Safer Internet Centre Italia - Generazioni Connesse |

| **Information about the Good Practice** | |
|---|---|
| Name | Generazioni Connesse – Safer Internet Centre |
| The problem context focusing on the needs, gaps, issues, or challenges the Good Practice aimed at addressing. | This projects aims at raising awareness of the dangers of navigating the net for children and, but also unveiling its most beautiful and positive aspects: the production of educational and informative materials intended for children, adolescents and educators |
| Objective(s) | The Safer Internet Centre implements a number of actions: Awareness and information actions aimed at schools throughout the country, Dissemination and visibility actions, actions to fight the spread of illegal material online, support and guidance assistance. Awareness and information actions are aimed mainly at actors and stakeholders from the school environment: management staff, families, teachers and students throughout the country |
| Duration | from: 2013 to: ongoing |
| Geographical location | **Italy** |
| Targeted group(s) | The project is addressed primarily to children and adolescents: 6-18 years of age. However, parents, |

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| | educators, teachers and youth professionals are involved. |
| Summary of the best practice (to be used for joint report) | The "Generazioni Connesse" project is promoted by the Italian Safer Internet Centre and co-funded by the European Commission within the program "Connecting Europe Facility" (CEF). Since July 1st 2016, the Project "Connected Generations" (SIC ITALY III) aims to become a growing national reference point on the topics related to a safer Internet for the young people. The Safer Internet Centre includes an Awareness Centre, two Hotlines and a Helpline. |

| **Results of the Good Practice** | |
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| **Outputs:**<br>1. What were the tangible outputs of the practice?<br>2. What are the services or activities provided during the Good Practice?<br><br>**Outcomes**<br>1. What is the degree of positive change (in terms of knowledge, skills, and attitudes) in the served targeted group(s) in relation to the Good Practice's objectives?<br><br>**Outreach**<br><br>1. How many people were reached or served by the Good Practice?<br><br>**Impact**<br>1. How did the Good Practice contribute to broader changes in the community, (e.g. through the work of the served or reached targeted group/s)? | Outputs<br>1) VADEMECUM - Operational guide for the management of issues connected to the use of digital technologies among the youth<br>2) E-book "Spoiler e la rete di Cosmos" (for kids)<br>3) E-book "Linked generation – Liberi di navigare" (for teenagers)<br>4) E-book "Net Educ@tion. Approfondimenti didattici e proposte laboratoriali" (guide for teachers)<br><br>Outcomes<br>The planned interventions foresee the participation of the above-mentioned groups both online, through the use of an ad-hoc digital platform, as well as through face-to-face workshops in the field. The Consortium benefits of an Advisory Board that expands to public, private and third-sector players.<br><br>Outreach<br><br>Impact<br>The Safer Internet Centre Italy is online with the portal http://www.generazioniconnesse.it, carrying out interventions of sensitization and training in Italian Primary and Secondary schools, through which thousands of children and teenagers have been able to know not only the dangers of the Net, but also its most beautiful and positive aspects; 2. Production of educational and informative materials intended for children, adolescents and educators (both teachers and parents), and promotion of existing online quality resources available at national and European level; 3. Two Hotline services for the report of online child sexual abuse and racist or xenophobic material, in collaboration with the Postal and Communication Police (a project partner), through the design of specific agreement protocols and the application of shared operational procedures. |

| Challenges to the Good Practice | |
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| What are the weaknesses, challenges, or issues encountered during the implementation of the Good Practice? | Being a particular measure and implementation activity provided in the framework of the national Law 107/2015, the main difficulties emerged during the implementation of the National Plan for Digital School derive from the resistance and low level of digital competencies among the managers and teachers in the schools. |

| Applicability of the Good Practice | |
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| 1. What key lessons can be applied or used in INSTALL Youth educational activities?<br>2. Are there any digital citizenship and science literacy training or educational resources, tools, or material produced during the Good Practice lifetime that could be applied or used in INSTALL Youth? | The main transferable practice is the possibility to put at disposal of the Italian local scholastic institutions the digital tools offered by the project. The objective is to create an e-policy programmatic document, describing how to approach digital technologies and their use and how to improve didactical activities through digital tools, explaining the concept of online safety and what are the best behavioural norms regarding ICT (Information and Communication Technologies) in the school, what are the measures for the prevention of an incorrect use and the measures to detect and manage eventual problems.<br><br>1) VADEMECUM - Operational guide for the management of issues connected to the use of digital technologies among the youth<br>2) E-book "Spoiler e la rete di Cosmos" (for kids)<br>3) E-book "Linked generation – Liberi di navigare" (for teenagers)<br>4) E-book "Net Educ@tion. Approfondimenti didattici e proposte laboratoriali" (guide for teachers) |

# CHAPTER 2
# BEST PRACTICES FOR DEVELOPING SCIENTIFIC LITERACY

**Fundamental Literacy**
**Scientific knowledge and competences**
**Contextual understanding of science**
**Critical thinking**
**Agency**

## Fundamental Literacy
## Scientific knowledge and competences

MAAK KUNDE

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| **The partner responsible for collecting the Good Practice** | **yEUth** |

| **Information about the organisation/institution/entity responsible for the Good Practice** | |
|---|---|
| Name of the entity | **Nemo Science Museum** |

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| Type | Museum |
| Contact email | info@maakkunde.nl |
| Website (for reference purposes) | https://www.maakkunde.nl |

| **Information about the Good Practice** | |
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| Name | **Maakkunde** |
| The problem context focusing on the needs, gaps, issues, or challenges the Good Practice aimed at addressing. | Student engagement can be a huge challenge for teachers. Common misconceptions about subjects in mathematics and chemistry being hard and inaccessible, coupled with boring learning materials, can make it incredibly hard to hold the attention of students for long.<br>Maakunde wants to tackle this issue |
| Objective(s) | The Good Practice's main goal is to ensure that a love for exploration and discovery for chemistry and mathematics is instilled at an early age. |
| Duration | Ongoing |
| Geographical location | The Netherlands (the whole country) |
| Targeted group(s) | Students (grades 1-4 and grades 5-8) and teachers |
| Summary of the best practice (to be used for joint report) | The Mathematics and chemistry teaching method "Maakkunde" was developed by NEMO Museum's Science Learning Center, and it guides the designing fo inquiry-based learning for groups 1 to 8. The lessons are hands-on and focused on science and technology. The teaching material of Maakkunde consists of 10 themes. Each theme has a module for groups 1-4 and a module for groups 5-8, each with its own challenge. Moreover, each theme presents different activities that are explained in a very accurate way (there are materials for students, teachers/ supervisors, etc.). If one is playing for the first time with mathematics or chemistry or another subject, they can also take an |

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| | introductory lesson. Each experiment is presented in the form of a question. |

Maakkunde workshop on the Chemistry Theme

| **Results of the Good Practice** | |
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| **Outputs:**<br>1. What were the tangible outputs of the practice?<br>2. What are the services or activities provided during the Good Practice?<br><br>**Outcomes**<br>1. What is the degree of positive change (in terms of knowledge, skills, and attitudes) in the served targeted group(s) in relation | **Outputs:**<br>1. The tangible output is a digital repository of various learning materials for teachers organized in 10 themes, each of which contains different modules for students of grades 1-4, and for students of grades 5-8.<br><br>2. During the Good Practice implementation, students and teachers have access to a wide range of resources and activities. They can pick a theme (electricity, balance, floating, satellites, forces etc.) and get started. Most of the activities imply the creation of some objects |

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| to the Good Practice's objectives?<br><br>**Outreach**<br>1. How many people were reached or served by the Good Practice?<br><br>**Impact**<br>1. How did the Good Practice contribute to broader changes in the community, (e.g. through the work of the served or reached targeted group/s)? | that will help students to have a better understanding of the chosen topic.<br><br>**Outcomes:**<br>The positive change is that students get involved in the activities and they start understanding themes that are often perceived as difficult, inaccessible or not engaging. This unique teaching method allows students to experiment with realistic design challenges: it encourages an inquisitive attitude and boosts their self-confidence. Children broaden their knowledge and develop 21st century skills such as creativity, collaboration, and problem-solving thinking.<br><br>**Outreach:**<br>There aren't exact data about the number of people reached by Maakunde method, but the project has got several partners who are implementing and promoting the approach among their students (iPabo University of Applied Sciences, TechYourFuture and the Center for Youth Communication Chemistry, BASF, DSM, EWT, Ministry of Defence, Netherlands Space Office (NSO), PPG, Sting and The Shell Centenary Scholarship Fund (TSCSF)<br><br>**Impact:**<br>The impact of this practice is that it introduces more effective approaches to facilitate learning and enhance student engagement, by providing teachers with readily usable tools to organize their science classes in an exciting, inquiry-based and interactive manner. |

| **Challenges to the Good Practice** | |
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| What are the weaknesses, challenges, or issues encountered during the implementation of the Good Practice? | N/A |

| **Applicability of the Good Practice** | |
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| 1. What key lessons can be applied or used in INSTALL Youth educational activities?<br>2. Are there any digital citizenship and science literacy training or educational resources, tools, or material produced during the Good Practice lifetime that could be applied or used in INSTALL Youth? | 1. The key lesson that can be applied is that in order to learn something well, and have fun while doing it, is to create something. In order to increase the interest of students, all of their senses have to participate, they have to be actively involved in some practical activities, experiment themselves, and also be called to interact with eachother.<br><br>2. The educational resources available on the digital repository are based on inquiry-based and design-based learning approaches and can be easily applied in INSTALL Youth learning sessions devoted to science literacy. Also, the general module design might guide our own sessions:<br>Lesson 1: understanding the problem and looking ahead to the next lessons.<br>Lesson 2: Investigate the problem and use new knowledge to design the solution.<br>Lesson 3: create, test and improve.<br>Lesson 4: show what you've made, and talk to each other. |

| The partner responsible for collecting the Good Practice | yEUth |
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| Information about the organisation/institution/entity responsible for the Good Practice | |
|---|---|
| Name of the entity | **Stichting De Olde Vechte** |
| Type | **Foundation** |
| Contact email | **info.oldevechte@gmail.com** |
| Website (for reference purposes) | **https://oldevechte.com** |

| Information about the Good Practice | |
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| Name | **MATHS IN MOTION** |
| The problem context focusing on the needs, gaps, issues, or challenges the Good Practice aimed at addressing. | Nowadays more and more students are struggling in math and have difficulties to comprehend and put in practice what they learn, the need for an inclusive, kinaesthetic and engaging way of teaching is emerging. The Good Practice focused on the lack of innovative methods to teach STEM subjects and in particular Mathematics. It addressed the need to develop a learning method that physically involves both educators |

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| | and young learners and satisfies the needs of people who are more inclined to kinesthetic learning. |
| Objective(s) | The specific objectives of the project were to:<br>• highlight body movement as a learning tool to make mathematics more attractive and accessible to all types of learners and in different settings (classroom, organisation, university etc)<br>• strengthen the professional capacity of teachers, through creating and adopting exercises based on movement in their Maths teaching<br>• make the target groups of the partners more interested and engaged in mathematics, through the LTT training activities, the multiplier events and the dissemination activities<br>• offer a toolkit in a physical and digital form, in order to enhance learning in maths through the body, for everyone |
| Duration | From 01-09-2017 to 31-07-2020 |
| Geographical location | The project brought together 7 partners from the Netherlands (Foundation), Greece (NGO), Italy (School), Romania (School), Finland (SME), Denmark (Dance school) and Bulgaria (SME). |
| Targeted group(s) | STEAM teachers/educators<br>STEM education experts<br>Dance teachers, choreographers |
| Summary of the best practice (to be used for joint report) | Maths in Motion (MiM) was a 35-month long KA2 Erasmus+ project, which developed an innovative and inclusive approach to teach mathematics: embodied activities, where the whole body is involved in the learning process instead of keeping it just on an intellectual level. The project brought together 7 partners from the Netherlands (Foundation), Greece (NGO), Italy (School), Romania (School), Finland (SME), Denmark (Dance school) and Bulgaria (SME).<br>The main project's results include a Mathematical Workbook that collects all existing activities and research on specific mathematical areas in connection |

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| | with movement, and a Toolkit that explains the basic idea behind the embodied approach to maths.<br>The project's impact has been massive: it has reached over 15.000 people in Europe, while it has also contributed to the addition of a new field inside the Science Education Centre of the University of Helsinki, which includes dance in mathematics education, embodied mathematics education and art |


Maths in Motion multiplier event at the Bridges Conference in Linz Photo: https://experienceworkshop.org/maths-in-motion-multiplier-event-at-the-bridges-conference-in-linz/

| **Results of the Good Practice** | |
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| **Outputs:**<br>1. What were the tangible outputs of the practice? | **Outputs:**<br>**1.** During the project 4 tangible outputs were developed: |

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| 2. What are the services or activities provided during the Good Practice?<br><br>**Outcomes**<br>1. What is the degree of positive change (in terms of knowledge, skills, and attitudes) in the served targeted group(s) in relation to the Good Practice's objectives?<br><br>**Outreach**<br>1. How many people were reached or served by the Good Practice?<br><br>**Impact**<br>1. How did the Good Practice contribute to broader changes in the community, (e.g. through the work of the served or reached targeted group/s)? | - a free online Mathematical Workbook that collects all existing activities and research on specific mathematical areas (Sense of Space; from 2D to 3D, Mathematical Operations and Patterns) in connection with movement<br>- a Toolkit that explains the basic idea behind the embodied<br>approach to maths and it offers 6 Maths in Motion modules --meaning, activities that include the whole body in the maths learning process.<br>• an extra scientific publication specifically focusing on the exploration of rotational symmetries and triangles through dance and body movement,<br>• a chapter in a book entitled "why science art creativities matter"<br><br>**2.** During the Good Practice, the activities promoted to reach the objectives set have been: 3 transnational meetings, 9 multiplier events, 5 Learning, Teaching and Training activities that lead to the creation of a database and a toolkit.<br><br>**Outcomes:**<br>The good practice collected good results in the served targeted groups. 100% of the teachers involved in the results' evaluation reported an increased job satisfaction and that they became more eager to develop new educational methods and materials. Moreover, the students got very involved and interested in math and scientific subjects in general.<br><br>**Outreach:**<br>Even if specific numbers are missing, in terms of outreach, the good practice was a success. It was supposed to be European, but the outreach turned to be global and the message of *Maths in motion* project reached Australia, America, Asia and Africa. |

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| | **Impact:**<br>The partners created a significant impact while offering a non-formal way to approach a formal topic, which is often considered as very "rigid": mathematics! Then, the broader change in which the good practice contributed is the creation of a lot of new educational methods and materials. Just to give an understanding of the impact, the project has been a crucial factor in the addition of a new field inside the Science Education Centre of the University of Helsinki, which includes dance in mathematics education, embodied mathematics education and art. |


Maths in Motion "Dancing Snowflakes" exercise led by Experience Workshop at the Bridges Conference in Linz Photo: https://experienceworkshop.org/maths-in-motion-multiplier-event-at-the-bridges-conference-in-linz/

| **Challenges to the Good Practice** | |
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| What are the weaknesses, challenges, or issues encountered during the implementation of the Good Practice? | The Good Practice encountered the challenge to address the disbelief of teachers and learners that new ways of teaching maths could be primarily based on kinesthetic methods. |

| **Applicability of the Good Practice** | |
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| 1. What key lessons can be applied or used in INSTALL Youth educational activities?<br>2. Are there any digital citizenship and science literacy training or educational resources, tools, or material produced during the Good Practice lifetime that could be applied or used in INSTALL Youth? | 1. The idea behind the project is grounded in embodied cognition which proves that learning depends on the body as well as the brain (Robbins and Aydede, 2009). With embodied activities, the whole body is involved in the learning process instead of keeping it just on an intellectual level. This process opens up new horizons for students, teachers, and even parents by offering simultaneous experiences with the structural, spatial, rhythmic and symbolic dimensions of mathematics through body movement.<br>Thus, a key lesson derived from this project is that the kinesthetic type of learning is applicable to STEM and maths lessons, esp. for the initial apprehension of abstract concepts.<br><br>2. Activities proposed by the project fit very well INSTALL Youth's purposes, in that our participants can be involved in several activities to learn Math and develop science literacy.<br>Some examples are:<br>**Triangles with bodies**: this activity explores the basic shape *triangle* through different elements of our bodies (legs, hands, fingers, whole body). The session involves individual exercises, as well as group exercises. During the session students learn different types of triangles, explore their qualities, and learn to move from one triangle to another in an engaging activity with their team members. In the end a performance part is included.<br><br>**Mirror symmetry:** this activity explores |

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| | one of the 4 main symmetries - the mirror symmetry through different elements of our bodies (legs, hands, direction of movement). The session involves a group exercise, where one member is the leader, and the others are the followers. In the end of the session every group presents a dance made up of certain movements of this symmetry. In the end a reflection part is included. |

Maths in Motion mirroring exercise led by Experience Workshop at IC Codogno School, Italy in 2018. Photo: https://archive.bridgesmathart.org/2019/bridges2019-621.pdf

Agency

ΜΑΘΗΤΙΚΟ ΦΕΣΤΙΒΑΛ ΨΗΦΙΑΚΗΣ ΔΗΜΙΟΥΡΓΙΑΣ

| The partner responsible for collecting the Good Practice | Neoanalysis |
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| Information about the organisation/institution/entity responsible for the Good Practice | |
|---|---|
| Name of the entity | Greek Ministry of Education |
| Type | National Ministry |
| Contact email | **info@digifest.info** |
| Website (for reference purposes) | **https://www.digifest.info/index.php/en/** |

| Information about the Good Practice | |
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| Name | **Annual Science & Creativity festival** |
| The problem context focusing on the needs, gaps, issues, or challenges the Good Practice aimed at addressing. | A STEM-skilled society is crucial for the growth of competitive industry and for the ability of Europe to cope with pressing societal challenges such as health and<br>demographic change, climate change, food security, border security, clean energy, etc<br>Most EU Member States already report shortages of STEM skilled labour. Therefore, there is a high need to promote STEM among students in a joyful and relaxing way, so as to popularize STEM as a career choice. |
| Objective(s) | The initiative seeks to provide motivation and encouragement to young people to engage with creative computer science projects.<br>The overarching goal is to facilitate the development of computer-science related skills and knowledge among primary and secondary school students. |

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| Duration | Ongoing since 2010 (annually) |
| Geographical location | All over Greece |
| Targeted group(s) | Secondary and primary education students and teachers (including VET students and teachers), parents, professionals interested in computer science or school education |
| Summary of the best practice (to be used for joint report) | The Festival is organized under the auspices of the Greek Ministry of Education with the support of a large number of public educational institutions, unions, as well as local bodies (Municipalities and Regions). During this annual event, which takes the form of a contest, groups of secondary and primary education students, accompanied by their teachers, present computer science related digital projects (including interdisciplinary projects). The digital projects that are being presented are developed prior to the festival, with the preparations taking place in the participants' schools. Every year nearly 7000 students collaborate, create and present their digital work. |

| **Results of the Good Practice** | |
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| **Outputs:**<br>1. What were the tangible outputs of the practice?<br>2. What are the services or activities provided during the Good Practice?<br><br>**Outcomes**<br>1. What is the degree of positive change (in terms of knowledge, skills, and attitudes) in the served targeted group(s) in relation to the Good Practice's objectives? | **Outputs**<br>1. After the completion of each annual festival students' works are uploaded to a Digital repository and remain available to the public online<br>2. The activities during each annual festival last 2 days and are separated in three parallel actions:<br>a. Exhibition of selected works of students by the young creators themselves.<br>b. Organized presentation of selected works to an open audience. The presentation of the works is again carried out by the students themselves. |

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| **Outreach**<br><br>1. How many people were reached or served by the Good Practice?<br><br>**Impact**<br>1. How did the Good Practice contribute to broader changes in the community, (e.g. through the work of the served or reached targeted group/s)? | c. Organization of workshops that aim to familiarize<br>participants with new technologies and the latest developments in the field. The workshops are organized by teams from higher education institutions or other technology professionals.<br><br>In addition, many educational school visits are organized, so that the main target group can visit the festival, interact with the exhibited digital projects, attend lectures and presentations and participate in various activities that are being organized parallel to the main contest.<br><br>**Outcomes**<br>Each year, hundreds of digital creations are posted on a digital repository. Dozens of them are presented at the<br>festival exhibition and conference at each location.<br>During each annual festival visitors have the opportunity to talk to the young creators, to see the digital creations closely and to use them. At the same time, the young creators benefit from observing the impressions and reactions of the public and get valuable feedback.<br><br>**Outreach**<br>Participation in the festival has been impressive. Every year nearly 7000 students collaborate, create and present their digital work. The festival also receives marked media attention, both from the local press and local TV/radio stations.<br><br>**Impact**<br>The activity has strong impact on developing students' skills. Despite its short duration, it actually involves prolonged extracurricular |

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| | engagement with Computer Science, as participants are expected to develop their projects well in advance of the contest. This way the Annual Science and Creativity Festival guarantees a strong impact on enhancing young people's sense of co-ownership in developing solutions to community problems with the help of computer science. |

| **Challenges to the Good Practice** | |
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| What are the weaknesses, challenges, or issues encountered during the implementation of the Good Practice? | The challenges faced by the organizers of the initiative derive from the increasing scope of the event, which has to be supported without increasing costs and by having to look for additional human resources.<br>The festival is visited by a large audience, which is why it proves challenging to do the necessary complicated planning and avoid overcrowding. |

| **Applicability of the Good Practice** | |
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| 1. What key lessons can be applied or used in INSTALL Youth educational activities?<br>2. Are there any digital citizenship and science literacy training or educational resources, tools, or material produced during the Good Practice lifetime that could be applied or used in INSTALL Youth? | 1. Given the huge success and participation rates to the practice, the INSTALL Youth partnership could draw conclusions about success factors for similar initiatives:<br>Factor 1: Workshops and other activities during the event are focused on popular topics. This helps attract a large number of participants and attendees<br>Factor 2: Schools and teachers are heavily involved in the preparation and organization process, thereby creating a strong sense of co-ownership of successful results and successful support of youth innovation<br>Factor 3: A participatory approach and a culture of healthy competitiveness |

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| | govern the initiative, which creates a very attractive format for young people, as they like to challenge themselves and others.<br>Factor 4: The activity cultivates strong links between the local society, schools and universities which facilitates sustainable impact.<br><br>2. INSTALL Youth can mostly benefit by this practice through the adoption of the above principles and adaptation of them to our activities' scale and purposes. However, the tangible output of the practice, i.e. digital repository, might also prove to be useful as a "library of projects", which are created by peers, that can be presented to participants and inspire them. |

## Contextual understanding of science

| **The partner responsible for collecting the Good Practice** | **Neoanalysis** |
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| **Information about the organisation/institution/entity responsible for the Good Practice** | |
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| Name of the entity | Consortium of HEIs and research centres |
| Type | HEIs, Research Centres |
| Contact email | https://researchersnight.gr/contact/ |

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| Website (for reference purposes) | https://researchersnight.gr/ |

| **Information about the Good Practice** | |
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| Name | **Researcher's Night (Greece)** |
| The problem context focusing on the needs, gaps, issues, or challenges the Good Practice aimed at addressing. | Public outreach has become an issue of growing importance for science, since there are alarming deficits in the public's understand of science. Many scientists and scientific institutions feel a need to inform the public about potentially dangerous misconceptions or to counter a continuing barrage of misinformation from numerous quarters including commercial lobbies and fundamentalists.<br>Researchers' night aims to respond to that need and give a platform for the direct interaction of scientists with citizens of all ages. |
| Objective(s) | • To create a science public communication platform that will give the opportunity to researchers to engage with citizens of all ages and raise awareness about their research<br>• To increase awareness among the general public of the importance and benefits of research and innovation and showcase its concrete impact on citizens' daily life<br>• To heighten young people's interest in science and research careers |
| Duration | Ongoing since 2014 (annually) |
| Geographical location | In different cities all over Greece |
| Targeted group(s) | Science Researchers; General public (children, young people, families) |
| Summary of the best practice (to be used for joint report) | Researchers' Night is a Europe-wide public event, funded by the MSCA and Citizens action, which displays the diversity of science and its impact on citizens' daily lives in fun, inspiring ways. |

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| | Every country in Europe can apply and organize the National Research Night, which takes place in one or more places of the country at the same time. Also all events are happening on the same night Europe-wide. In Greece, the Researcher's night is organized every year since 2014 by a consortium of HEIs (NTTU, Universoty of Patras, University of Thessaly, EL.ME.PA) and Research Centres (EKETA) in collaboration with other stakeholders in higher education and research. During a Researcher's Night expert talks from invited guests open the program, followed by a "bazaar" of science. During the Bazaar a large number of researchers from all fields of STEM and the Humanities present their research, their results and discuss them with the public. At the same time experiments, interactive activities and performances allow citizens of all ages to get an insight into natural phenomena, science concepts and the work of different scientists through experiential learning.<br>After the Researcher's Night event, citizens can keep in contact with the scientists for a whole year through the "Chat Lab" service. |

| **Results of the Good Practice** | |
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| **Outputs:**<br>1. What were the tangible outputs of the practice?<br>2. What are the services or activities provided during the Good Practice?<br><br>**Outcomes**<br>1. What is the degree of positive change (in terms of knowledge, skills, and attitudes) in the served targeted group(s) in relation to the Good Practice's objectives?<br><br>**Outreach**<br><br>1. How many people were reached or served by the Good Practice?<br><br>**Impact**<br>1. How did the Good Practice contribute to broader | **Outputs**<br><br>https://www.youtube.com/watch?v=yWtoe3Z6Q8o&t=7118s<br><br>A podcast series where renown scientists from Greece share their knowledge about their fields<br>https://researchersnight.gr/podcast/<br><br>A handbook for scientists with guidelines and tips on how to communicate their findings and research to the public in an efficient manner:<br>https://researchersnight.gr/wp-content/uploads/2022/10/Science-Communication-Handbook-.pdf<br><br>2. One of the most successful activities of the Researcher's Night, is the Chat Lab, which continues for another year and everyone can take part, regardless of whether they attended the Researcher's Night of the that year or not! Through the Chat Lab, citizens can make an appointment with a researcher from a list of Greek HEIs to discuss their questions or anything related to a specific topic related to the scientist's research field.<br><br>**Outcomes**<br>Since 2014 a public communication event has been organized in multiple Greek cities every year.<br>In each of these events children, young people and families had the chance to meet researchers and discover research, science and innovation through a wide range of science shows, hands-on experiments, games, quizzes, competitions, exhibitions and digital activities.<br>At the same time researchers put their science communication and outreach skills to practice.<br><br>**Outreach**<br>Every year more than 25 countries/400 cities participate in the European Researcher's Night Event, and the total number of citizens attending the event amounts to more than 2 |

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| changes in the community, (e.g. through the work of the served or reached targeted group/s)? | million people! The number of attendees in the parallel events in Greece is in the range of tens of thousands.<br>In general, Researcher's Night is the largest event of its kind, i.e. citizens-researchers direct meet-up.<br><br>**Impact**<br>The impact of this initiative is that it contributes to:<br>• bringing research and researchers closer to the public<br>• promoting excellent research projects at a national, European and international level<br>• increasing the interest of young people in science and research careers<br>• showcasing the impact of researchers' work on people's daily lives<br>• counteracting the phenomenon of spreading misconceptions about science topics, enhancing science literacy of European citizens |

| **Challenges to the Good Practice** | |
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| What are the weaknesses, challenges, or issues encountered during the implementation of the Good Practice? | The practice is a complex set of events happening in different cities of Greece at the same time. The challenge in this is that the different hosting institutions vary in terms of their capacity and readiness to organize such wide-reaching events. This creates a heterogeneity in the Researcher's night Program in terms of variety of science kiosks and activities offered, between the different cities of Greece. |

| **Applicability of the Good Practice** | |
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| 1. What key lessons can be applied or used in INSTALL Youth educational activities?<br>2. Are there any digital citizenship and science literacy training or educational | 1. The central message given by this practice is that successful information initiatives of the public about science concepts and against misconceptions should circumvent the media and enable the direct interaction of researchers with citizens. |

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| resources, tools, or material produced during the Good Practice lifetime that could be applied or used in INSTALL Youth? | 2. The Handbook for helping scientists communicate their research more effectively to the public could be processed (including translation to English) and given to the ICT educators, who will participate in INSTALL activities. Teachers/education professionals can be also considered as important allies and join efforts to secure accurate and effective communication of science to the public.<br><br>Also, the pool of scientists included in the Chat Lab from a wide range of fields (Energy, Society, Mathematics, Environment, Information Technology, Engineering, Health, Physics, Chemistry and their subdomains) could prove to be extremely useful for us. We could invite one or more scientists from the pool for a "Chat" with our participants of either the BM of the Local INSTALL Challenge. Similar pools might be available in the website of the corresponding events in Italy and the Netherlands. |

Scientific knowledge and competences
Contextual understanding of science
Critical thinking


| The partner responsible for collecting the Good Practice | yEUth |
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| Information about the organisation/institution/entity responsible for the Good Practice | |
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| Name of the entity | **FONDAZIONE MUSEO NAZIONALE DELLA SCIENZA E DELLA TECNOLOGIA LEONARDO DA VINCI** |
| Type | **Museum** |
| Contact email | **info@museoscienza.it** |
| Website (for reference purposes) | **https://www.museoscienza.org/it** |

| Information about the Good Practice | |
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| Name | **TINKERING EU: Building Science Capital for ALL** |
| The problem context focusing on the needs, gaps, issues, or challenges | The project emerged from: |

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| the Good Practice aimed at addressing. | - the demands of contemporary societal challenges for citizens to be equipped with 21st century skills and competences<br>- the increasing need to foster learners from vulnerable groups and disadvantaged socio-economic backgrounds<br>- the increasing importance of science as a tool for active citizenship<br>- the difficulty of schools, despite the efforts, to build a positive relationship between youth and science, especially those from disadvantaged communities |
| Objective(s) | The objectives of the project were to:<br>- develop young people's 21st century. skills and Science Capital.<br>- improve school practices through an innovative pedagogy method (Tinkering) and a new science education approach (Science Capital).<br>- encourage exchange of expertise and practice between formal and informal learning institutions<br>- create a Europe-wide community of practice |
| Duration | From 01-09-2017 to 31-08-2020 |
| Geographical location | The coordinator of the project was Italian; the other partners were from Austria, Ireland, Netherlands, Spain, Greece and United Kingdom. |
| Targeted group(s) | Teachers of primary and junior high schools; Students from 8 to 14 years old |
| Summary of the best practice (to be used for joint report) | "Tinkering EU: Building Science Capital for ALL" was a 3 year long Strategic Partnership for school-education project, implemented by a consortium of partner NGOs, Foundations, an HEI and a National Youth Centre from 7 European countries (Italy, Austria, Ireland, Netherlands, Spain, Greece and United Kingdom) that aimed to develop 21st century skills and the Science Capital of disadvantaged youth and contribute to the development of inclusive science learning in schools.<br>To achieve its objectives the project used the innovative pedagogy method of 'Tinkering'in activities and resources. This method supports the construction of knowledge through building personally meaningful |

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| | artifacts, and designs opportunities for people to "think with their hands" to construct meaning and understanding and develop skills useful for a lifetime. The main result of the project was the development of a methodological framework on how to use Tinkering to develop the Science Capital of youth and a set of Tinkering activities experienced by 3450 students, tested by 16 teacher ambassadors and evaluated by 179 more teachers. |

Tinkering: "It's thinking with your hands and learning through doing" Wilkinson & Petrich, The Art of Tinkering, 2014

| **Results of the Good Practice** | |
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| **Outputs:**<br>1. What were the tangible outputs of the practice?<br>2. What are the services or activities provided during the Good Practice?<br><br>**Outcomes**<br>1. What is the degree of positive change (in terms of knowledge, skills, and attitudes) in the served targeted group(s) in relation to the Good Practice's objectives?<br><br>**Outreach**<br>1. How many people were reached or served by the Good Practice?<br>**Impact**<br>1. How did the Good Practice contribute to broader changes in the community, (e.g. through the work of the served or reached targeted group/s)? | **Outputs:**<br>**1.** The tangible outputs of the practice are:<br>- "Tinkering and Science Capital: Ideas and Perspectives": a handbook that provides a theoretical rationale for understanding the relationship between Tinkering as a pedagogical approach, students' individual science capital and inclusive STEM teaching approaches.<br>- "Bringing Tinkering to School: Ideas for Activities": A handbook of activities used by the project group with schools from disadvantaged communities aiming to promote a more inclusive science teaching and learning.<br><br>**2.** During the project the following activities were implemented:<br>- the development of a methodology on the role of Tinkering for Science Capital<br>- the design of Tinkering activities<br>- training workshops for teachers and museum staff building knowledge and skills in Tinkering and Science Capital<br>- the organization of multiplier events for schools, some of them participating for the first time to similar initiatives<br>- an evaluation and self-reflection process for participating teachers<br>- dissemination actions at local, national and European level<br><br>**Outcomes:**<br>The results from teachers' evaluation of the Tinkering experience of the students indicated that the impact was highly beneficial for students in terms of developing broad-ranging skills and knowledge in STEM, and of support to students with lower science capital because of the way Tinkering deeply values their existing skills, interests and talents, provides |

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| | multiple pathways for success and boosts motivation and confidence. The project also impacted on teachers, in that it supported them in reflecting on their practices, and in seeing how they could utilise more learner-centered pedagogies during science teaching.<br><br>**Outreach:**<br>The project reached 195 teachers and 3450 students (total of 3645 participants)<br><br>**Impact:**<br>Research shows that Tinkering holds key benefits for learning, especially for those who say "they are not good at science", or young people with educational or integration difficulties.<br>Long-term benefits regard the work of educational institutions towards social inclusion and Science Capital. The use of innovative and concrete resources and methodologies helped enrich teaching practices and strengthened teachers' mission towards a society founded on scientific literacy, responsible citizenship, equality and democracy. |

| **Challenges to the Good Practice** | |
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| What are the weaknesses, challenges, or issues encountered during the implementation of the Good Practice? | One of the main problems during the implementation of the project has been that students had different social backgrounds. This gave them a different participatory potential. Also, the classical structure of school was an issue: modern schools need a better preparation in STEM subjects, but their programs/curricula are not adapted to current needs yet. |

Tinkering: "It's fooling around directly with phenomena, with tools and materials" Wilkinson & Petrich, The Art of Tinkering, 2014

| **Applicability of the Good Practice** | |
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| 1. What key lessons can be applied or used in INSTALL Youth educational activities?<br>2. Are there any digital citizenship and science literacy training or educational resources, tools, or material produced during the Good Practice lifetime that could be applied or used in INSTALL Youth? | 1. The key lesson that can be applied is that learner-centered pedagogies can have a highly beneficial impact on young students/people in general.<br><br>2.There are several educational activities from those embedded in the Handbooks of the project ("Tinkering and Science Capital: Ideas and Perspectives"; "Bringing Tinkering to School: Ideas for Activities") that can be used in INSTALL Youth's educational activities. |

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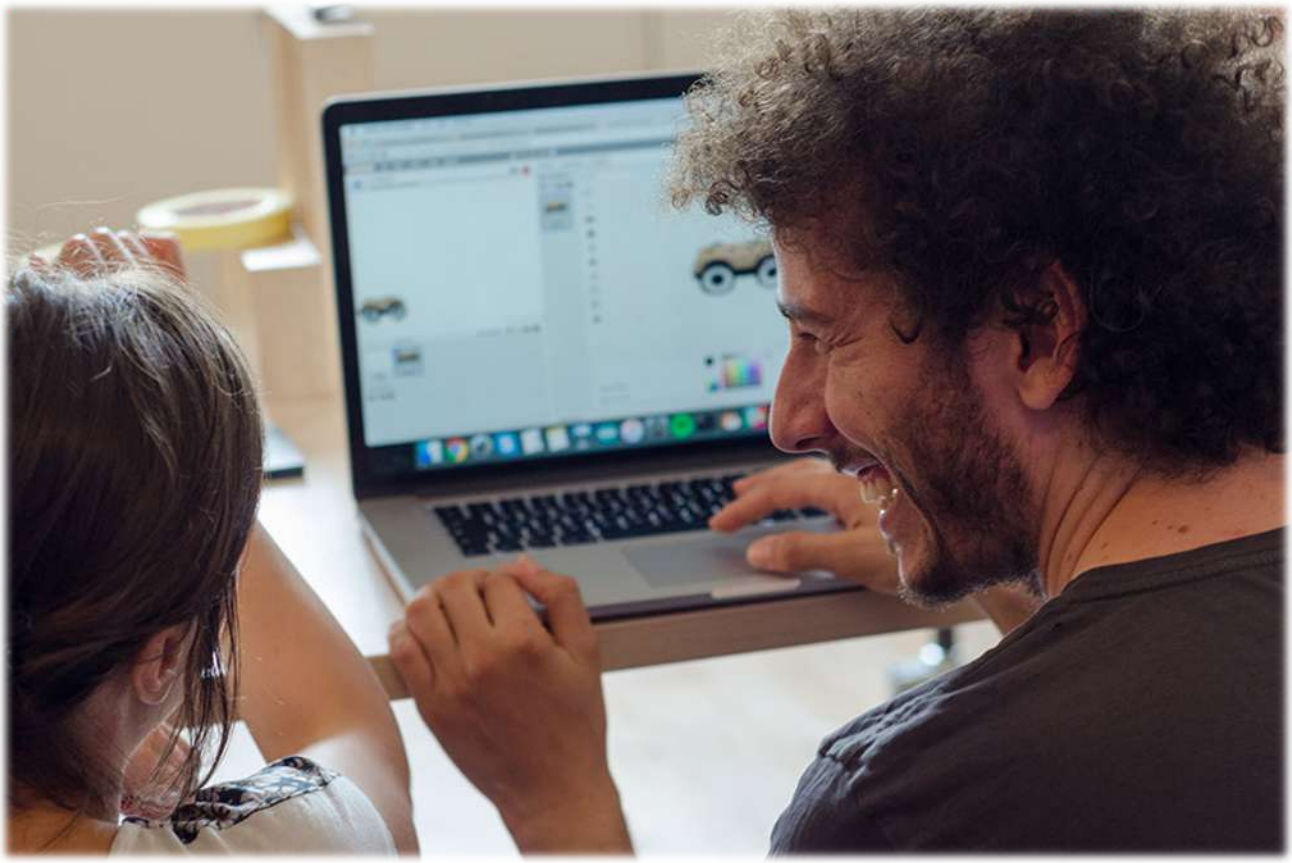
| | Some of the activities are focused on building/creating something to promote the active learning among young people.<br><br>One example is the **"light play"** activity, used to make youngsters explore light, shadow, and motion using a variety of simple materials and light sources. Everyday objects are used as shadow makers with simple to use light sources and slow-moving motors to create graceful light and shadow scenes. At the end of the activity a collaborative wall of illuminated kinetic creations is made from the individual investigations. |



Tinkering: "It's slowing down and getting curious about the mechanics and mysteries of everyday stuff around you." Wilkinson & Petrich, The Art of Tinkering, 2014

Contextual understanding of science
Critical thinking
Agency


| The partner responsible for collecting the Good Practice | yEUth |
|---|---|

| **Information about the organisation/institution/entity responsible for the Good Practice** | |
|---|---|
| Name of the entity | **ASOCIACION DE PERSONAS PARTICIPANTES AGORA** |
| Type | **Non-profit organization** |
| Contact email | **agora@edaverneda.org** |
| Website (for reference purposes) | **http://www.edaverneda.org/edaverneda8/** |

| **Information about the Good Practice** | |
|---|---|
| Name | **ScienceLit: Scientific Literacy for all!** |
| The problem context focusing on the needs, gaps, issues, or challenges the Good Practice aimed at addressing. | The European Union faces the challenge to advance towards more responsible and impacting science, looking for innovative links between science and people. Making science more attractive for young people, enrolling citizens in research or promoting formal and informal |

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| | scientific education are some of the challenges, this Good Practice was designed to address. |
| Objective(s) | The specific objectives of the project are to:<br><br>- facilitate access to scientific knowledge to adult people, especially to those in an at-risk situation, providing them with the tools that they need for their scientific literacy; tools that enable them to understand, interpret and analyze the scientific knowledge independently and autonomously<br>- develop an Interactive Guide for science Literacy so as to transfer scientific knowledge to adults<br>- connect European Science institutions with adults at risk in order to contribute into bringing science closer to society<br>- develop key competences (literacy, numeracy) through educational actions, like Scientific Gatherings. |
| Duration | From 01-09-2016 to 31-08-2018 |
| Geographical location | The ScienceLit project has been led by Agora (Spain), a community-based NGO with 30 years of experience in the implementation of SEAs. The team is also composed by two community-based organizations with a long tradition of work with vulnerable groups (Slovenia and Greece), a federation of centres of adult education with access to multiple centres, organizations, and public institutions at the European level (Spain), and a big research institution on adult education (Germany). |
| Targeted group(s) | Main target group: Adult learners with low skills and in disadvantaged situations (i.e. adults above the age of 55 and young adults, 18-34, at risk).<br>Other target groups: Adult education educators (professionals and volunteers); Adult education providers and schools; public administration/decision makers |
| Summary of the best practice (to be used for joint report) | ScienceLit is a 24-month long ERASMUS+ project that worked to promote and disseminate scientific knowledge among all cultures and sectors of society. The project was carried out by five entities: |

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| | • The Association of Participants Ágora, Spain, Coordinator<br>• The Organization of Adult Education RIC Novo Mesto, Slovenia<br>• The NGO KMOP, Greece<br>• The Federation of Cultural and Educational Association of Adults FACEPA, Spain<br>• The German Institute for Adult Education (DIE) from Germany<br>The main goal of this project was to get science closer to adults, especially those who are in at-risk situations (unemployed participants, especially those who are between the ages of 18 and 34, and adults older than 55 years).<br>To achieve this the project developed a methodology for the transfer of scientific knowledge to adults with low skills. This Methodology, including Scientific Dialogic Gatherings (SDGs) and Scientific Cafés, is based on dialogic learning, through which adults have the opportunity to be part of activities such as reading and discussing scientific documents, to share their opinions and ideas, to be part of a National Committee that coordinates the project in the partner organizations, and to learn the importance of using arguments to explain their points of view.<br>The main outputs developed by the project are:<br>1. An Interactive Guide: a Multilanguage online platform with audio-visual materials about how to organize and participate in a Scientific Dialogic Gathering<br>2. A Training Course Scheme for educators and volunteers on Scientific Dialogic Gatherings |

"Discovering De rerum Natura" - Scientific Dialogic Gathering in Spain by Agora organization

| **Results of the Good Practice** | |
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| **Outputs:**<br>1. What were the tangible outputs of the practice?<br>2. What are the services or activities provided during the Good Practice?<br><br>**Outcomes**<br>1. What is the degree of positive change (in terms of knowledge, skills, and | **Outputs:**<br>**1.** The tangible outputs of the practice are:<br>- Interactive Guide on Scientific Literacy for Adult Education (English, Spanish, German, Slovenian and Greek)<br>- Methodology on Scientific Literacy for Adult Education; how to organize SDGs (in English)<br>- Training course scheme for Educators and Volunteers on implementing Scientific Dialogic Gatherings |

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| attitudes) in the served targeted group(s) in relation to the Good Practice's objectives?<br><br>**Outreach**<br>1. How many people were reached or served by the Good Practice?<br><br>**Impact**<br>1. How did the Good Practice contribute to broader changes in the community, (e.g. through the work of the served or reached targeted group/s)? | **2.** The services and activities provided during the Good Practice were:<br>- Program for training of experts for implementation of ScienceLit methodology<br>- Scientific Cafés<br>- Scientific Dialogic Gatherings<br><br>**Outcomes:**<br>The main outcome was the acquisition of basic competences by adult learners and the promotion of the independence and autonomy of vulnerable collectives of adults. This project opened a new line of work in adult education, in the field of Science Literacy.<br><br>**Outreach:**<br>Despite the lack of data for all phases of the project, the outreach of the project was important. The 1st Scientific Café was attended by 27 participants and the 2nd by 31 participants (each Scientific Café must be attended by around 30 people to be successful). 82 local participants from the Spanish organization took part in the final conference. Considering that the number of local participants should be similar among the partners and that the project has been implemented by 5 organizations, it could be assumed that more than 400 people participated in ScienceLit.<br><br>**Impact:**<br>The key element of innovation of the project is that it applied a Successful Educational Action (SEA), an educational action that has been scientifically tested to always have effective results, in the field of science. The SEA used is the "dialogic gathering". This methodology can bring the democratization of scientific knowledge to adults, because it facilitates the access and provides the tools to the most high- |

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| | level knowledge and has a high impact in the daily life of people. |

"Killing us softly" - Scientific Dialogic Gathering in Slovenia by RIC Novo mesto organization on the mutagenicity and toxicity of pesticides

| **Challenges to the Good Practice** | |
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| What are the weaknesses, challenges, or issues encountered during the implementation of the Good Practice? | The challenges encountered were mainly of organizational nature, e.g. the organization of the Final conference and the Scientific Cafés. Another issue was related to the closure of Methodology, but the partners solved the problems during the corresponding management meetings. |

| **Applicability of the Good Practice** | |
|---|---|
| 1. What key lessons can be applied or used in INSTALL Youth educational activities?<br><br>2. Are there any digital citizenship and science literacy training or educational resources, tools, or material produced during the Good Practice lifetime that could be applied or used in INSTALL Youth? | 1. The usefulness and advantage of the achieved results of the **Scientific Dialogic Gatherings** and the **Scientific Cafés** can be attributed to on the one hand to the innovation and creativity used during those practices, and on the other hand, in the strong connection with the local community, which they promote.<br>This kind of activities can inspire an unquenchable interest of new areas in science and promote the personal development of individuals. In addition, they fill gaps in domains where participants feel a lack of knowledge.<br>The key lesson that may be applied to INSTALL Youth activities, esp. because the project is addressed to disadvantaged young adults (NEETs, low-skilled youth, etc) is that the dialogic communicative methodology that incorporates participants as part of the project team has a great potential in creating new meaningful links between science and people, esp. from underserved groups. This means that adult learners traditionally excluded from the areas of education and science should be key speakers and contributors in the development of the project's outputs.<br>2. The science literacy training material and educational resources are available among the "Dissemination Material" (at the following link: https://erasmus-plus.ec.europa.eu/projects/search/details/2016-1-ES01-KA204-025655) and on ScienceLit's website (http://www.sciencelit.eu/).<br><br>The most relevant tool, applicable in "INSTALL Youth" is the "Scientific Café".<br>A Scientific Café can be one of the new ways in which learning is more relaxed and, therefore, more effective. It is based on "Dialogic Learning", wherein participants have the opportunity to exchange and compare their views with experts on certain scientific topics. |


"Women and Science: The Hard Way to Equal Opportunities" - Scientific Cafe in Greece by KMOP organization

| The partner responsible for collecting the Good Practice | yEUth |
|---|---|

| Information about the organisation/institution/entity responsible for the Good Practice | |
|---|---|
| Name of the entity | **University of Cambridge** |
| Type | **University (public institution)** |
| Contact email | **kd283@cam.ac.uk** |
| Website (for reference purposes) | **https://www.tandfonline.com/doi/abs/10.1080/09500690802712699?journalCode=tsed20** |

| Information about the Good Practice | |
|---|---|
| Name | **Science through Drama: A multiple case exploration of the characteristics of drama activities used in secondary science lessons** |
| The problem context focusing on the needs, gaps, issues, or challenges the Good Practice aimed at addressing. | Academic research has always framed successful drama pedagogy as resulting from a Drama-in-Education approach, incorporating extended role plays and simulations of social events. By contrast, research has rarely focused on the scope and context of drama, which is devised and used by real people in real situations. Indications from non-academic literature and informal education practice suggest that there is a gap in the knowledge between research and classroom practice. |

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| | The Good Practice focuses on how non-formal education, in particular through drama activities, can be used to enable students to learn science subjects such as biology, chemistry, and physics. |
| Objective(s) | The study wanted to show that non-formal methods are still rarely used, even if they give good results. The objectives of the study were to pave the way to develop experimental skills in students by proving how non-formal education and namely drama activities are useful to teach STEM courses. |
| Duration | Five science lessons |
| Geographical location | Cambridge, Kent and Hertfordshire. |
| Targeted group(s) | The study has been conducted on pupils spanned aged 12-16 years. |
| Summary of the best practice (to be used for joint report) | The study on "Science through Drama" aimed to to pave the way to develop experimental skills in students by proving how non-formal education and namely drama activities are useful to teach STEM courses<br>It focused on teachers' drama activities in five science lessons taught across schools in Cambridge, Kent, and Hertfordshire. Their classes spanned the ages of 12–16 years in the subjects of chemistry, biology, and physics. This study explored the drama forms, teaching objectives, and characteristics by which drama was perceived to enable learning in Science. The findings revealed that drama activities were used to convey a variety of topics that have not yet been recorded in academic literature, and revealed a greater scope for the teaching abstract scientific concepts through mime and role play. These activities were perceived to develop students' understanding of different concepts via visualisation through a range of modalities, including embodied sensation and anthropomorphic metaphors. |

| **Results of the Good Practice** | |
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| **Outputs:**<br>1. What were the tangible outputs of the practice?<br>2. What are the services or activities provided during the Good Practice?<br><br>**Outcomes**<br>1. What is the degree of positive change (in terms of knowledge, skills, and attitudes) in the served targeted group(s) in relation to the Good Practice's objectives?<br><br>**Outreach**<br>1. How many people were reached or served by the Good Practice?<br><br>**Impact**<br>1. How did the Good Practice contribute to broader changes in the community, (e.g. through the work of the served or reached targeted group/s)? | **Outputs:**<br>**1.** The tangible output is a pedagogic model based on different levels of interactive talk and multimodal communication.<br><br>**2.** The study took place in English schools. Each case consisted of a Secondary Science lesson, for students aged 12-16, in which drama was employed to convey a science topic. Each lesson was to be taught by the class's specialist teacher in Biology, Chemistry, or Physics; a teacher who had used role play activities regularly in Science lessons. Each case was framed by a pre and post observation interview with the teacher, and post observation interviews for three students from each class. The pre-observation interview explored the context for the lesson, the teaching objectives, the teachers' backgrounds, and their perceptions of the students' abilities. The post-observation interviews aimed to, focus on a respondent's subjective responses to a known situation.<br><br>**Outcomes:** The findings revealed that drama activities were used to convey a variety of topics that have not yet been recorded in academic literature and revealed a greater scope for teaching abstract scientific concepts through mime and role play. These activities were perceived to develop students' visualization through a range of modalities, which included embodied sensation and anthropomorphic metaphors. Some features reflected the development of thought experiment skills.<br><br>**Outreach:** |

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| | The project reached several participants of five different classes. The exact number of reached students is missing.<br><br>**Impact:**<br>The Good Practice contributed to broader changes in the understanding of the scientific and education community with respect to the utilization of drama methods to evoke increased interest and retention in students as far as scientific subjects are concerned. |

| **Challenges to the Good Practice** | |
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| What are the weaknesses, challenges, or issues encountered during the implementation of the Good Practice? | The main weakness of the Good Practice is the lack of previous studies that can support the findings and the new pedagogic model produced after the research. |

| **Applicability of the Good Practice** | |
|---|---|
| 1. What key lessons can be applied or used in INSTALL Youth educational activities?<br>2. Are there any digital citizenship and science literacy training or educational resources, tools, or material produced during the Good Practice lifetime that could be applied or used in INSTALL Youth? | 1. The key lesson that can be used in INSTALL Youth Educational activities is that using methods based in drama is an efficient approach to teach science lessons.<br><br>2. Some of the conclusions drawn by the study, could guide the development of the learning process during the educational activities of INSTALL Youth:<br><br>*"Humour created by the teacher provides an opportunity for drawing students' attention towards a topic, and to drawing their focus towards an image. Humour from the students allows them to be active participants within discussions and can be a way to elicit recognition from other students and the teacher through laughter."* |

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| | Elements of Drama that can be used in the classroom:<br>• Anthropomorphic analogies<br>• Thought experiments<br>• Humour<br>• Role plays and performances in teams<br>• Confined dialogism (didactic lecturing by the teachers at the end of performative activities-debriefing)<br>• Physical stimulations (e.g. examples that visualize concepts) |

## Scientific knowledge and competences
## Agency

| **The partner responsible for collecting the Good Practice** | **yEUth** |
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| **Information about the organisation/institution/entity responsible for the Good Practice** | |
|---|---|
| Name of the entity | **University of Eastern Finland and Kontiolahti School** |
| Type | **University & School** |
| Contact email | **ilpo.jappinen@uef.fi; sirpa.a.karkkainen@uef.fi; Tuula.Keinonen@uef.fi; esko.vayrynen@edu.kontiolahti.fi** |
| Website (for reference | **https://www.researchgate.net/publication/327876863_Promoting_Participation_in_Society_through_Science_Education** |

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| purp oses) | |

| **Information about the Good Practice** | |
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| Name | **Promoting Participation in Society through Science Education** |
| The problem context focusing on the needs, gaps, issues, or challenges the Good Practice aimed at addressing. | The Good Practice focused on embedding an active engagement approach in science classes; an approach often overlooked in this field of learning. |
| Objective(s) | The main goal was to involve students as much as possible and, while giving them a practical understanding of physics arguments, promote active and sustainable citizenship. The objectives of the project were: the promotion of active citizenship; the promotion of sustainable citizenship; the development of physics competencies. |
| Duration | 4 lessons intervention (2017) |
| Geographical location | Finland |
| Targeted group(s) | The target group was a class of 20 students of a lower secondary school (13–14 years). Moreover, the teacher was involved as well as other actors from the municipality. |
| Summary of the best practice (to be used for joint report) | Participation in society can be promoted through science education. This Good Practice entails a lower secondary school teacher, who integrated a participation in society approach into physics studies. A participation exercise was integrated in the study of the velocity concept in physics curriculum; students exchanged knowledge and tools with others and produced knowledge for the community in the form of a citizen's initiative leading to an action by the municipality: the painting of a pedestrian crossing. |

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| | The students were keen to exercise participation and produce information through inquiries for their citizen initiative. In the intervention of this study, lower secondary school students' learning process started with a career-based scenario "Why the pedestrian crossing needs to be reinstated?" The teacher chose a local problem including a real threat to students' health and life. The students were aware of the problem. The teacher incorporated a municipal employee to the scenario and the employee had the opportunity to visit the class at the end of the project. The students presented their inquiry results to the employee and got a real chance to influence to local decision-making concerning their own life. |

| **Results of the Good Practice** | |
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| **Outputs:**<br>1. What were the tangible outputs of the practice?<br>2. What are the services or activities provided during the Good Practice?<br><br>**Outcomes**<br>1. What is the degree of positive change (in terms of knowledge, skills, and attitudes) in the served targeted group(s) in relation to the Good Practice's objectives?<br><br>**Outreach**<br>1. How many people were reached or served by the Good Practice?<br>**Impact**<br>1. How did the Good Practice contribute to broader changes in the community, | **Outputs:**<br>**1.** Thanks to the good practice, a socio-scientific issue was nicely associated with key concepts of physics, which is particularly challenging. The tangible outputs are that: students – during the project- were focusing on the physic concept of speed, while also exercising their active citizenship. After the project, they wanted to be more active, and they succeeded in the involvement of more people from their municipality in some actions of active citizenship.<br><br>**2.** During the Good Practice, different activities were carried out. In the first lesson, teacher presented the scenario "Why the pedestrian crossing needs to be reinstated?" to the students. He took and showed a picture and a map for the students, where the pedestrian crossing used to be. Then, the teacher showed a short video about road safety and pedestrian crossings made by the Finnish Road Safety Council. Thus, students were instructed to find out some facts related to speed limit and |

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| (e.g. through the work of the served or reached targeted group/s)? | pedestrian crossing signs. Lessons 2 and 3 continued with the inquiry stage where students worked in four small groups. In the first 45 min, two student small groups measured the speeds of vehicles on the street (responding physics curriculum). The two groups worked in different places to answer the research questions 1 and 2 above. One small group interviewed students in the classes as well as teachers to get information how students and teachers behave when they need to cross the street. Fourth group had the task to plan questions for the head of municipal engineer, collect the results from the other groups, and write a document for the official. The teacher discussed with the two small groups measuring the speed of motorists to find out what they would need for measuring the speed. As radar was not an option, students quickly remembered that they need distance and time to determine the speed. Teacher gave the students the equipment to measure time and distance and the students planned the measurements. The students used landmarks e.g., trees and traffic signs to determine the distance and a stopwatch to measure the time. After the measurements, the students went back to the classroom to calculate the results and reported them to the group, which collected all inquiry results. During this time, the two other small groups were carrying out the interviews and planning the questions for the municipal engineer.<br>Students found that the motorist violated the speed limit 80% of times with no pedestrian road painting and sign. The interview showed that only 4.7% of students (n = 150) use the underpass to cross the road. The results that students gathered support heavily the need for a pedestrian crossing **and so they progressed to formulate a letter to the** |

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| | **officials.** During the last lesson, the representative of the municipality visited the classroom and answered or discussed all the questions and arguments the students had prepared. After the lessons, the students formulated an initiative to the official for restoring the pedestrian crossing and sent it. In this way, students practiced doing a citizen initiative.<br><br>**Outcomes:**<br>After the intervention, most of the students expressed their willingness to participate in society and act as active citizens, they perceived that they have the means and opportunities, as well as the possibility to find support to participate and influence. Students were willing to participate particularly in their local communities. Students perceived that they learned and gained competences while participating. Students acknowledged knowledge as a base of the decision, which may promote perceived value of physics and associated careers. Students also highlighted collaboration and shared experiences, which may create engagement and participation concerning the scientific issues to which they relate.<br><br>**Outreach:**<br>The project has been a small-scale one. 20 students were actively involved, together with their teacher. However, the project's reach also extended to the municipality and some interventions were organized involving external people.<br><br>**Impact:**<br>After the intervention, most of the students expressed willingness to participate in society and act as active citizens. They perceived that they have the means and opportunities, as well |

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| | as the possibility to find support to participate and influence (The Preamble of the Revised European Charter). Moreover, the result of the initiative was that the community organised the painting of the pedestrian crossing next summer following this intervention and the local newspaper reported students' initiative and the follow-up. To conclude, science education contributed to help students to become responsible citizens. |

| **Challenges to the Good Practice** | |
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| What are the weaknesses, challenges, or issues encountered during the implementation of the Good Practice? | The weakness encountered is the small number of participants which does not allow to generalize results. This can be seen as a limitation and underlines the need of further studies to provide a fuller picture of the topic. |

| **Applicability of the Good Practice** | |
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| 1. What key lessons can be applied or used in INSTALL Youth educational activities?<br>2. Are there any digital citizenship and science literacy training or educational resources, tools, or material produced during the Good Practice lifetime that could be applied or used in INSTALL Youth? | 1. The project highlighted the importance to involve students and letting them understand what the impact of their actions on society is. This is the only approach that can lead to a more active involvement of young citizens at a local and international level.<br>The most important lesson is that participation in society can be promoted through science education.<br><br>2. The approach used by the teachers, i.e. the idea to give youngsters a general, but practical understanding of the topic that is going to be further explored, can be applied in INSTALL Youth. Little by little, young people must be and feel involved in the topic itself and practical activities should be |

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| | promoted. Moreover, it is important to discuss the impact of their action, to let participants understand how important their contribution is. |

## Scientific knowledge and competences

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| **The partner responsible for collecting the Good Practice** | **yEUth** |

| **Information about the organisation/institution/entity responsible for the Good Practice** | |
|---|---|
| Name of the entity | **Authors of the paper: Dearbhla McDonnell, Aisling O'Boyle; Published by "Queen's University Belfast"** |
| Type | **Researchers** |
| Contact email | |
| Website (for reference purposes) | **https://journals.ucc.ie/index.php/scenario/article/view/scenario-15-1-3/pdf-en** |

| **Information about the Good Practice** | |
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| Name | **Process drama in the classroom** |
| The problem context focusing on the needs, gaps, issues, or challenges the Good Practice aimed at addressing. | The research investigated to what extent process drama affects the participation of advanced *English as additional language* (EAL) learners in lessons and what are pupils' perspectives on their participation during lessons that adopt a process drama pedagogy. |

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| Objective(s) | The objective was to prove if drama pedagogy helps children in having better learning outcomes, above all in scientific subjects. |
| Duration | The research lasted for nine science lessons, that were conducted through a process drama pedagogy. |
| Geographical location | The research was conducted in the Netherland, in an unspecified International Campus where advanced English as additional language learners (EAL learners) is taught. |
| Targeted group(s) | The target group consists of six advanced EAL learner pupils (9-10-year-olds). |
| Summary of the best practice (to be used for joint report) | The focus of this study was the experiences of six case study participants within nine science lessons conducted through a process drama pedagogy. The key learning outcomes in the science lessons included reproduction in plants and describing the differences in the life cycles of mammals including humans, amphibians, insects and birds. The drama conventions included: teacher in role, hot seating, marking the moment, conscience alley, mantle of the expert, spotlight, thought tracking, still images, narration and role play. |

| **Results of the Good Practice** | |
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| **Outputs:**<br>1. What were the tangible outputs of the practice?<br>2. What are the services or activities provided during the Good Practice?<br><br>**Outcomes**<br>1. What is the degree of positive change (in terms of knowledge, skills, and attitudes) in the served targeted group(s) in | **Outputs:**<br>1.The tangible output is the method itself. According to the findings, using process drama as a teaching methodology increases participation, but not immediately.<br><br>2. The activities conducted are different. Apart from the 9 classes and prior to them, a training session was conducted, using pre-recorded video material to familiarize the class teacher with the types of participation and the analysis template to be used in the observation. Then, to gain the pupil's perspectives on their experience of a process drama pedagogy, two sets of pupil |

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| relation to the Good Practice's objectives?<br><br>**Outreach**<br>1. How many people were reached or served by the Good Practice?<br><br>**Impact**<br>1. How did the Good Practice contribute to broader changes in the community, (e.g. through the work of the served or reached targeted group/s)? | interviews were completed with each of the case study participants and one focus group in which all six case study participants were present. Also, participants were asked to use the drama convention freeze frame followed by thought tracking to show what their understanding of participation was. To finish the session, the drama game "Who's who?" was played -giving pupils the opportunity to reflect on their type of participation in each of the nine lessons by choosing and justifying the teddy that they thought most represented them in the lesson. The pupils also compared the type of participation they felt they displayed in other lessons compared with the main type they adopted in these drama lessons.<br><br>**Outcomes:**<br>Drawing on the classroom observation, analysis of lesson recordings, and research journal the recurring feature of the case study narratives is that over the course of the nine lessons conducted using a process drama pedagogy, participation increased, but not immediately. Throughout the sessions, the opportunities for quieter pupils to become more active became more noticeable as they were selected to speak more regularly in a combination of group and whole class games and speaking activities.<br><br>**Outreach:**<br>The targeted pupils were six advanced EAL learner pupils (9-10-year-olds), but the entire class group and the teacher of the class itself were involved in the research.<br><br>**Impact:**<br>The impact of the research is to underline that drama can be exploited as a teaching strategy for foreign and second language learning. Moreover, the study demonstrates how process drama can be applied to science lessons in order to |

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| | encourage EAL learner participation in classrooms. In the context of an International School, where levels of proficiency and language support may vary within one class, it highlights the use of drama as a teaching tool and as a means of opening up more active oral spaces for learners. |

| **Challenges to the Good Practice** | |
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| What are the weaknesses, challenges, or issues encountered during the implementation of the Good Practice? | During the implementation of the Good Practice the only obstacle (that became a challenge) seems to have been the involvement of students in the beginning of the training period. |

| **Applicability of the Good Practice** | |
|---|---|
| 1. What key lessons can be applied or used in INSTALL Youth educational activities?<br>2. Are there any digital citizenship and science literacy training or educational resources, tools, or material produced during the Good Practice lifetime that | 1. In INSTALL Youth education the key lesson that can be used is to differ teaching methods in order to involve students of different levels and with different competences and attitudes.<br><br>2.The activities used during the research and well described in the paper can be adapted to INSTALL Youth educational practices to increase engagement and support the expression of youth's perspectives, e.g.:<br>- **Class teacher's observation template** |

| Discuss the participation of x during these activities | Compare to general behaviour |
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| Slide 1 – Welcome slide<br>Slide 2 – Teacher in role | |
| Slide 3 – Role play | |
| Slide 4 – Mime | |
| Slide 5 – Hot seating | |
| Slide 6 – Mantle of the expert | |
| Slide 7 - Narration | |

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| could be applied or used in INSTALL Youth? | |

## Contextual understanding of science

| **The partner responsible for collecting the Good Practice** | **Neoanalysis** |
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| **Information about the organisation/institution/entity responsible for the Good Practice** | |
|---|---|
| Name of the entity | Outreach Department of the Freshman Research Initiative at the University of Texas |
| Type | HEI |
| Contact email | **-** |
| Website (for reference purposes) | **https://cns.utexas.edu/** |

| **Information about the Good Practice** | |
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| Name | **Shadow a Scientist** |
| The problem context focusing on the needs, gaps, issues, or challenges the Good Practice aimed at addressing. | Using job shadowing before studies begin is an outstanding technique for a young person to find out what a profession "is like". There may be no better way for someone to understand what it is like to be a scientist, than to follow a around while they work. This gives young people a first-hand view of the flow of the work, the duties performed, the inherent responsibilities and so on. However, such opportunities are scarce |

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| | within a typical study program, and even more so at the school level, when "deciding what one will do professionally" is the number one question. |
| Objective(s) | The activity aims to give an opportunity to students to gain first-hand experience of work in a university lab, understand through experience what a scientist does on a daily basis, and in the longer term cultivate young people's interest in science. |
| Duration | Ongoing |
| Geographical location | University of Texas, USA |
| Targeted group(s) | Middle school students |
| Summary of the best practice (to be used for joint report) | The "Shadow a Scientist Program", organized by the Outreach Department of the Freshman Research Initiative at the University of Texas, is a summer extracurricular program for Middle School students. It pairs two Middle School students with a researcher at the University of Texas for a two-hour tour of the scientist's lab, during which they also observe experiments in progress.<br>The research field is chosen by the students and, if possible, the student teams are matched to a scientist doing research in this area |

| **Results of the Good Practice** | |
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| **Outputs:**<br>1. What were the tangible outputs of the practice?<br>2. What are the services or activities provided during the Good Practice?<br><br>**Outcomes**<br>1. What is the degree of positive change (in terms of knowledge, skills, and attitudes) in the served targeted group(s) in relation to the Good Practice's objectives?<br><br>**Outreach**<br><br>1. How many people were reached or served by the Good Practice?<br><br>**Impact**<br>1. How did the Good Practice contribute to broader changes in the community, (e.g. through the work of the served or reached targeted group/s)? | **Outputs**<br>1. There are no tangible outputs from the program<br>2. A short safety training for the shadowing program participants is offered, on occasion the lab practice poses any tangible risks or of the used equipment can be easily damaged<br><br>**Outcomes**<br>Through this practice pupils and students regardless of their field can get an insight into the "real-life" as a scientist and cultivate their interest in science as a career path or in science generally.<br><br>**Outreach**<br>No data available<br><br>**Impact**<br>The activity is part of an overarching strategy of re-designing STEM education in order to make it more effective. The Freshman Research Initiative has equipped laboratories where first- and second-year university students conduct research together with experienced scientists. This approach has won multiple higher education awards and has been considered a proven good practice for making STEM education more effective for university students. The Freshman Research Initiative has even attempted to measure the impact of this new approach and has concluded that it has a positive impact on the employability and future earnings of graduates. The Shadowing Program is an application of the same approach to much younger students. |

| **Challenges to the Good Practice** | |
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| What are the weaknesses, challenges, or issues encountered during the implementation of the Good Practice? | Some challenges of organizational nature arise from the fact that there is not a program coordinator to act as a contact person for parents of students that are applying to the program. |

| **Applicability of the Good Practice** | |
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| 1. What key lessons can be applied or used in INSTALL Youth educational activities?<br>2. Are there any digital citizenship and science literacy training or educational resources, tools, or material produced during the Good Practice lifetime that could be applied or used in INSTALL Youth? | 1. What this practice shows us is that the part of "real-life applications" of what we teach young people is often missing, even if in the educational program design there are practical exercises, labs, experiments, team assignments etc. "Shadowing" is the best available means for someone to determine whether they are likely to enjoy the job or even a career in the a specific field.<br>2. There are no tools or sources readily available for use in the context of INSTALL project. |

2016 - 2018 Science 4 all

| The partner responsible for collecting the Good Practice | Neoanalysis |
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| Information about the organisation/institution/entity responsible for the Good Practice | |
|---|---|
| Name of the entity | Public High School No. 1 |
| Type | School |
| Contact email | gimkrempachy@o2.pl |
| Website (for reference purposes) | http://www.gim.krempachy.szkolnastrona.pl/ |

| Information about the Good Practice | |
|---|---|
| Name | **Science 4 All** |
| The problem context focusing on the needs, gaps, issues, or challenges the Good Practice aimed at addressing. | The four participating schools, each in a different region of Europe, are facing problems in delivering effective inclusive education – including that on STEM -that are mostly the result of local diversity and historical or cultural issues. The project focused on the opportunities for efficient learning and work inside the European Union, particularly for students from disadvantaged areas. |

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| Objective(s) | • To improve social, intercultural, and linguistic skills in the partner schools<br>• To improve the professional skills of teachers in the partner schools<br>• To enhance the knowledge and enthusiasm of students in the fields of science, math, and entrepreneurship |
| Duration | 2016-2018 |
| Geographical location | Poland, France, Estonia and Portugal |
| Targeted group(s) | Teachers and students (13-15 years old) |
| Summary of the best practice (to be used for joint report) | "Science 4 all" was a 2-year long project, implemented by Krempachy Gymnasium in partnership with schools from France, Portugal and Estonia.<br>The project focused on the exchange of good practices in teaching and learning mathematics and science, as well as their relationship with the labor market and entrepreneurship. Particular attention was paid to emphasizing the possibilities of effective learning and working in the European Union, especially for students from disadvantaged areas. These students increased their competences and motivation by participating in innovative educational activities, researching the labor market with the help of mathematics, science, technology and the appropriate application of modern technologies. |

| **Results of the Good Practice** | |
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| **Outputs:**<br>1. What were the tangible outputs of the practice?<br>2. What are the services or activities provided during the Good Practice?<br><br>**Outcomes** | **Outputs:**<br><br>1.The project's results consist of <u>scenarios for innovative lessons</u> that were designed and conducted during the project. Along with the above-mentioned processes and results, the following outputs were also created:<br>2. Construction of "Weather Stations" close to partner schools |

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| 1. What is the degree of positive change (in terms of knowledge, skills, and attitudes) in the served targeted group(s) in relation to the Good Practice's objectives?<br><br>**Outreach**<br><br>1. How many people were reached or served by the Good Practice?<br><br>**Impact**<br>1. How did the Good Practice contribute to broader changes in the community, (e.g. through the work of the served or reached targeted group/s)? | 3. Production of "24 hours in two minutes" films;<br>4. "Partnership: Key Findings and Recommendations" report<br>5. Slideshow presentation of the cooperating schools<br>6. The guidelines for a new math competition<br>7. A mini dictionary containing common words in the languages of the partner schools and some of the other countries attending schools<br>8. An e-museum of science, math, and professions<br>9. "Dream story of my life," a selection of imaginated student biographies<br>10. Project-related posters<br>11. e-magazines<br>12. A collection of puzzles and exercises<br><br>2. Project activities also included:<br>• Events and competitions in the areas of science, math, and the labor market, workshops for the partner schools' teachers' professional development, video conferences, and exhibitions in school halls organized and took place during the project.<br>• Based on good practices in partner schools and recommendations from educational institutions, teachers developed and delivered creative lessons.<br>• After doing scientific experiments, students produced videos that were uploaded online.<br>• They took part in events held by educational and scientific institutions like science centers, universities, museums, and many others.<br>• Professional counseling seminars, workshops on "Entrepreneurship and economy," company and job centers visits |

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| | were all conducted as part of the process of becoming familiar with the labor market.<br><br>**Outcomes**<br>After finishing school, the participating students gained more confidence in and awareness of their skills, and they understood better the ways they can use them.<br>The teachers in the partner schools were encouraged to adopt a modern approach of teaching by their high level of professional and linguistic skills.<br>In addition, the project's proper execution, it was accomplished by taking part in five international learning, teaching, or training activities in which each participant was given a Europass Mobility document.<br><br>**Outreach**<br>The good practice was implemented in 4 different schools, with the participation of 25 students and 4 teachers from each partner country.<br><br>**Impact**<br>Thanks to individualized interactions and cooperative work in international teams of students and teachers from four different countries, it was possible to comprehend, be aware of, tolerate, respect, and accept the cultural diversity of Europe.<br>The project had a significant impact on the participating schools, their students, educators and the local communities.<br>Through involvement in cutting-edge learning activities and an examination of the job market by using math, science, and technology, students' competencies and motivation grew.<br>The partner schools enhanced the quality of educational offer, acquired resources and technologies for the classroom, and |

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| | strengthened internal and external collaboration.<br>Local communities broadened their perspectives and gained a greater understanding of the value and significance of the European Union through engaging with diverse cultures. |

| **Challenges to the Good Practice** | |
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| What are the weaknesses, challenges, or issues encountered during the implementation of the Good Practice? | Some of the common challenges faced by school management teams: teachers' lack of motivation; resistance to innovation and collaborative work. Teachers are not open to share their good practices and many are still very reticent to open their classroom's door. |

| **Applicability of the Good Practice** | |
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| 1. What key lessons can be applied or used in INSTALL Youth educational activities?<br>2. Are there any digital citizenship and science literacy training or educational resources, tools, or material produced during the Good Practice lifetime that could be applied or used in INSTALL Youth? | 1. Important lessons learned from the implementation of the Good Practice include the following:<br>• Organizations should support collaborative work among teachers, since this can result to less workload with classes, and importantly promote quality teaching through the sharing and exchange of good teaching practices<br>• Teachers should listen to students and involve them in decision making/ planning/assessment of the learning process. In a way they should stop being the centre of the teaching and learning process and act as facilitators rather than presenters, in order to achieve meaningful results with respect to promoting critical thinking, creativity and a sense of responsibility and co-ownership in their students – all vital elements of citizenship education<br><br>2.The scenarios of innovative lessons and the lesson plans including such methods as for example cross-curricular, problem-based teaching, IBSE method (Inquiry Based Science Education), CLIL lessons, collaborative learning and |

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| | teaching, worksheets could be used as a module for the training formats https://ec.europa.eu/programmes/erasmus-plus/project-result-content/9ec70af8-4971-41fa-8d3f-7a6d21f43c6e/Scenarios_of_innovative_lessons.pdf<br><br>The development of **digital exercises and puzzles** like mathematical crosswords, Sudoku, Geometric puzzles, Tangrams, etc. could develop the digital skills of the pupils and at the same time their understanding of simple scientific concepts that will help them think critically in their everyday life. |


| The partner responsible for collecting the Good Practice | Neoanalysis |
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| Information about the organisation/institution/entity responsible for the Good Practice | |
|---|---|
| Name of the entity | Jan Friesen; John T. Van Stan and Skander Elleuche |
| Type | Scientific Paper |
| Contact email | **jan.friesen@ufz.de** |
| Website (for reference purposes) | **https://www.mdpi.com/2304-6775/6/3/38/htm** |

| Information about the Good Practice | |
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| Name | **Communicating Science through Comics: A Method** |
| The problem context focusing on the needs, gaps, issues, or challenges | The books that students usually use are less attractive to read. This becomes a constraint against growing their scientific literacy. Students are more likely to be |

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| the Good Practice aimed at addressing. | interested in reading pectoral stories (comics) rather than academic books. |
| Objective(s) | • To design a more attractive way (comics) for promoting learning and understanding of concepts that will increase the citizens' scientific literacy and make them capable of using scientific evidences in daily life.<br>• To encourage researchers from all disciplines to enter the field of science comics |
| Duration | Study published in 2018 |
| Geographical location | Publication: Germany; Outreach: International |
| Targeted group(s) | The academic community and the public |
| Summary of the best practice (to be used for joint report) | Science communication is of increasing importance to acquire funding and generate effective outreach, as well as introduce, and sometimes even justify, research to society. This paper suggests a simple and flexible framework to translate a complex scientific publication into a broadly-accessible comic format. Examples are given for embedding scientific details into an easy-to-understand storyline. A background story is developed and panels are generated that convey scientific information via plain language coupled with recurring comic elements to maximize comprehension and memorability. This methodology is an attempt to alleviate the inherent limitations of interdisciplinary and public comprehension that result from standard scientific publication and dissemination practices. |

| **Results of the Good Practice** | |
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| **Outputs:**<br>1. What were the tangible outputs of the practice?<br>2. What are the services or activities provided during the Good Practice? | **Outputs**<br>1. The output of this study is a methodology to develop science comics in an efficient manner. The method describes 4 steps to produce a comic that reduces expert knowledge to a level that allows the inexperienced audience to understand complex topics in an attractive way. |

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| **Outcomes**<br>1. What is the degree of positive change (in terms of knowledge, skills, and attitudes) in the served targeted group(s) in relation to the Good Practice's objectives?<br><br>**Outreach**<br><br>1. How many people were reached or served by the Good Practice?<br><br>**Impact**<br>1. How did the Good Practice contribute to broader changes in the community, (e.g. through the work of the served or reached targeted group/s)? | The "developmental" subdivisions proposed by this method are:<br>.develop a conceptual foundation;<br>.(ii) develop a setting that graphically ties important scientific elements to the conceptual foundation;<br>.(iii) develop characters that graphically describe the science; and<br>iv.(iv) develop a detailed storyline that weaves together the conceptual foundation, setting, and characters into a linear narrative.<br><br>2. As this practice is a science review, no other activities or services provided<br><br>**Outcomes**<br>The outcome is a clear and concise step-by-step methodology on how to convert single scientific publications into a science comic.<br><br>**Outreach**<br>The study has been cited by 25 other research works. The exact amount of scientists, teachers, education providers or other stakeholders this study has inspired or influenced is not possible to be identified.<br><br>**Impact**<br>Comics are utilized to cover important and complex issues in an appealing and interesting format that might introduce a new audience to scientific topics. The impact that this practice attempts to achieve is to encourage more researcher's to enter the field of science comics, and in a second step, transform the way in which science is communicated to the public. |

| **Challenges to the Good Practice** | |
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| What are the weaknesses, challenges, or issues encountered during the implementation of the Good Practice? | A challenge identified by the authors in the process of developing a science comic is that it is difficult to develop a likeable character that is all-knowing, or at least enough-knowing, to explain every technical term.<br>The weakness of the study is that the authors present a single case example to describe a subjective framework based on their own work and experience. |

| **Applicability of the Good Practice** | |
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| 1. What key lessons can be applied or used in INSTALL Youth educational activities?<br>2. Are there any digital citizenship and science literacy training or educational resources, tools, or material produced during the Good Practice lifetime that could be applied or used in INSTALL Youth? | 1. Outreach efforts of scientists have to evolve and adapt to the changing needs of society, in order to close the communication gap between researcher's and the public. The field of science comics is a very useful approach in that direction, and applying simple principles in the development of such comics can help researchers overcome difficulties and produce better results.<br><br>2. The 4-step methodology could be presented to the STEM/ICT educators that will participate in the BM, as they could utilize it to create short science comics for use in the classroom.<br>Apart from that the examples given by the study of already existing science comics may also be useful for direct use in the classroom. |

## Fundamental Literacy

| The partner responsible for collecting the Good Practice | Neoanalysis |
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| Information about the organisation/institution/entity responsible for the Good Practice | |
|---|---|
| Name of the entity | UNIVERSITY COLLEGE DUBLIN, NATIONAL UNIVERSITY OF IRELAND, DUBLIN |
| Type | University |
| Contact email | communications@ucd.ie |
| Website (for reference purposes) | http://www.ucd.ie |

| Information about the Good Practice | |
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| Name | FANTASIA - FAiry TAle ScIence Augmented |
| The problem context focusing on the needs, gaps, issues, or challenges | The educational landscape is shifting. Augmented reality is gaining traction as a way to engage students, and its impact on learning can be summarised by the |

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| the Good Practice aimed at addressing. | Confucius quotation: "Tell me and I will forget; Show me and I may remember; Involve me and I will understand". A user's real, visible environment is the predominant element, with extra information intended to augment the actual environment a user sees on an ad hoc basis, rather than fully replacing it. As a result, the capacity for immersion with AR is lower than that offered by virtual and mixed realities.<br>Moreover, according to the Commissions Digital Transformation Monitor report, the market for both VR and AR has high potential, but is still immature. |
| Objective(s) | FANTASIA project aims at developing an educational package for the teaching of some basic scientific concepts & skills, which will utilize the potential of Augmented Reality technologies and will be easily used by anyone regardless whether they are teachers, parents or guardians and regardless of their training. |
| Duration | 3 years (2019-2022) |
| Geographical location | Ireland, Italy, Greece |
| Targeted group(s) | Young people, pupils, teachers |
| Summary of the best practice (to be used for joint report) | FANTASIA is a Strategic Partnership for school education project, funded by the Erasmus+ programme, that combines story telling, scientific method (rational thinking) and AR technology (to represent scientific models) with the aim to develop an innovative educational package for the teaching of some basic scientific concepts & skills, which will be easily used by anyone regardless whether they are teachers, parents or guardians and regardless of their training.<br>FANTASIA is realized by an interdisciplinary consortium of two Universities (Ireland and Greece), one social enterprise (Ireland) and the national council of research of Italy.<br>The main project outcome is represented by a book and a mobile application powered by Augmented Reality contents that help to understand three science concepts (the concept of the spherical earth, as a planet moving |

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| | around itself & the sun, the concept of the sun, the phenomenon of the change of the day/night cycle & the explanation of floating & sinking of solid objects in the water) for kids in K-12 grade.<br>Moreover, through this project the students learned how to apply the scientific method in order to evaluate their beliefs concerning the above phenomena. |

| **Results of the Good Practice** | |
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| **Outputs:**<br>1. What were the tangible outputs of the practice?<br>2. What are the services or activities provided during the Good Practice?<br><br>**Outcomes**<br>1. What is the degree of positive change (in terms of knowledge, skills, and | **Outputs:**<br>1. The tangible outputs of the practice are:<br>• The FANTASIA educational kit, which includes:<br>FANTASIA Fairy Tale, Fairy Science Self-training Manual Scenarios, Theoretical Framework, Working Paper, Fairy Science Self-training Manual<br>• FANTASIA Augmented Reality (AR) Toolkit<br>• FANTASIA Digital Repository<br>• FANTASIA Impact Assessment |

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| attitudes) in the served targeted group(s) in relation to the Good Practice's objectives?<br><br>**Outreach**<br><br>1. How many people were reached or served by the Good Practice?<br><br>**Impact**<br>1. How did the Good Practice contribute to broader changes in the community, (e.g. through the work of the served or reached targeted group/s)? | 2. Apart from the development of the above materials, the project included the implementation of three workshop-based conferences – one in each partner country. During these conference the partners presented to the target audience the most innovative educative product based on Augmented Reality technology and traditional storytelling: the FANTASIA educational kit. The researchers/teachers of the Consortium also demonstrated how the kit can be used at school or at home by the teacher or the parent/guardian. Participants had the opportunity to implement activities of the proposed educational scenarios and to provide feedback to the research group on their experience.<br><br>**Outcomes**<br>The students gained knowledge of how to use the scientific method to assess their beliefs about specific natural phenomena (the concept of the spherical earth, as a planet moving around itself & the sun, the phenomenon of the change of the day/night cycle & the explanation of floating & sinking of solid objects in the water) and could discuss and overcome the difficulties that they had in learning the specific concepts.<br>Educatros & edults were introduced to simplified description of the theoretical framework underlying the proposed educational activities and a discussion of the aim of the proposed educational activities. Through this process, they became better able to help the students overcome these obstacles.<br><br>**Outreach**<br>N/A |

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| | **Impact**<br>FANTASIA integrated elements of Augmented Reality, Learning Analytics, and gamification with aspects of Learning Semantics, introduced innovation from these individual fields in synergy to the area of primary school learning. This way the project had a great impact into showcasing how new technologies and AR can be exploited to increase quality and efficacy of science education. |

| **Challenges to the Good Practice** | |
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| What are the weaknesses, challenges, or issues encountered during the implementation of the Good Practice? | An inherent challenge that the practice was called to address is the fine balance that needs to be found, so as to create engaging and creative materials, that do not misrepresent accurate scientific concepts. |

| **Applicability of the Good Practice** | |
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| 1. What key lessons can be applied or used in INSTALL Youth educational activities?<br>2. Are there any digital citizenship and science literacy training or educational resources, tools, or | **1.** With **AR**, classroom education can be extraordinary and more interactive, as AR can enable teachers to show virtual examples of concepts and add gaming elements to provide textbook material support.<br>**Fairytales** and **storytelling**, which are traditional teaching tools to increase student engagement and understanding can achieve significantly better results if combined with AR.<br><br>2. Elements that could be utilized in similar science learning initiatives:<br><br>• The concept of basing the teaching of a physical phenomenon (or a series of physical phenomena) on a fairytale specifically developed for that purpose<br>Taking the example of the FANTASIA fairytale, we could develop similar stories for the phenomena we would like to discuss about:<br>***Fairy tale:*** *A young illiterate shepherd, Yiannis, starts a trip around the earth in order to explain what seems to be a* |

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| material produced during the Good Practice lifetime that could be applied or used in INSTALL Youth? | *"mystery" to him, namely the explanation of the day/night cycle. During this trip Yiannis needs to solve scientific problems by conducting observations & experiments using simple materials & having discussions with people whom he will meet during his trip. Thus, step by step he will discover the answers to the questions concerning some laws of nature.*<br>  <br>Why do we have day and night?<br>What do we ask children about the day/night cycle:<br>• It' s day now. How will night come?<br>• Where is the sun at night?<br>• Make a drawing/play dough model of the earth and the sun during the day. Show me how night will come.<br>• What should be done to have day/night all the time?<br>• (If the earth/sun moves) What would happen if the earth/sun stops.<br>• a **set of drama and music kinetic activities** connected to the story to make the process of learning amusing |

## Scientific knowledge and competences

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| **The partner responsible for collecting the Good Practice** | **Neoanalysis** |

| **Information about the organisation/institution/entity responsible for the Good Practice** | |
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| Name of the entity | TECHNICAL UNIVERSITY - GABROVO |
| Type | University |
| Contact email | info@tugab.bg |
| Website (for reference purposes) | https://www.tugab.bg/ |

| **Information about the Good Practice** | |
|---|---|
| Name | DISCOVER - Developing Innovative Science Outreach for Vocational Education to Encourage STEM Careers and Education |
| The problem context focusing on the needs, gaps, issues, or challenges the Good Practice aimed at addressing. | The number of students in the EU interested in STEM fields and focusing on STEM careers are not keeping up with the fast-increasing demand from business and society.<br>Another significant issue is underachievement in STEM fields. The situation necessitates a shift to innovative, effective and attractive science education- both formal and non-formal, with a view to boosting the interest of young people in STEM disciplines and encouraging them to pursue science and technology careers. DISCOVER addresses the need for innovative STEM teaching and learning resources at secondary VET education (SE VET) level. |
| Objective(s) | • To boost the interest of young people in STEM disciplines and encourage them to pursue science and technology careers.<br>• To provide cross-curricular scientific teaching tools based on collaboration between SE VET schools and universities to enhance students' STEM understanding and drive to pursue STEM careers. |
| Duration | 01.10.2017 - 30.09.2019 |
| Geographical location | Bulgaria, Greece, Italy, Poland, Slovakia |
| Targeted group(s) | Educators and students at upper SE VET level |
| Summary of the best practice (to be used for joint report) | The project "Developing Innovative Science Outreach for Vocational Education to Encourage STEM Careers and Education" (DISCOVER) was a 2 year long Erasmus+ KA2 project aiming to address the need for innovative STEM teaching and learning resources at secondary VET education (SE VET) level.<br>The project was implemented by a consortium of 8 organizations (HEIs, Research Centres, and School Directorates) from 5 European countries (Bulgaria, |

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| | Greece, Italy, Poland, Slovakia), under the coordination of the Technical University of Gabrovo, Bulgaria.<br>The most important intellectual output of the project is a compendium of teaching resources for extracurricular science education at high-school level focusing on different domains (Robotics, Mechatronics, Physical Computing and the synergic combination between Art and Science).<br>Importantly, the project's outputs are based on integrated and embedded approaches to non-formal STEM education, promoting cross-curricular learning. They are expected to be useful for educators at upper secondary education level (teachers, trainers in non-formal learning programs), secondary education students, universities and research organizations seeking to enhance their impact on the development of STEM-related competences and other transferable soft skills at regional level. |

| **Results of the Good Practice** | |
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| **Outputs:**<br>1. What were the tangible outputs of the practice?<br>2. What are the services or activities provided during the Good Practice?<br><br>**Outcomes**<br>1. What is the degree of positive change (in terms of knowledge, skills, and attitudes) in the served targeted group(s) in relation to the Good Practice's objectives?<br><br>**Outreach** | **Outputs:**<br>1. The main tangible outputs of the practice include:<br>• A compendium of good practices of science outreach for SE VET schools, including practices targeted at disadvantaged and under-served groups<br>• A Resource pack for science outreach for SE VET schools, including concepts, lesson plans, and activity organization and delivery plans for science outreach activities targeted at SE VET students and teachers<br>• An extracurricular training program in Mechatronics and Robotics for SE VET learners, including practice oriented training resources on fundamentals of Design, Robotics, Mechatronics and Programming, and training resources and guidelines for hands-on cross-disciplinary activities |

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| 1. How many people were reached or served by the Good Practice?<br><br>**Impact**<br>1. How did the Good Practice contribute to broader changes in the community, (e.g. through the work of the served or reached targeted group/s)? | exploiting Robotics Invention Systems technology<br>• An extracurricular training module in Programming for Art & Design – for learners without strong STEM proficiency, including practice oriented training resources on fundamentals of Scratch, App Inventor and Digital Story Creation, and an extracurricular training module in Programming and Physical Computing – for learner with strong STEM aptitude, including practice oriented training resources on fundamentals of Python and Physical Computing. Both modules will also offer learning designs and resource packs for hands-on learning activities exploiting Scratch, App Inventor and Python.<br><br>The intellectual outputs are based on integrated and embedded approaches to non-formal STEM education, promoting cross-curricular learning and allowing learners to acquire domain knowledge while solving concrete challenges.<br><br>2. A number of events in 5 EU countries were organized, focusing on testing and promotion of the outputs.<br><br>**Outcomes**<br>DISCOVER has contributed to:<br>• Strengthening university-school partnerships in the VET sector<br>• Promoting science education outreach to SE VET learners<br>• Increasing the interest of SE VET learners in fields such as in Robotics, Mechatronics, Programming and Physical Computing, as well as the interest of learners without strong STEM proficiency in areas linking STEM with Art & Design (STEAM).<br><br>**Outreach** |

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| | 300 participants in the project's events in total<br><br>**Impact**<br>The sustained utilization of the project's outputs is expected to enable "democratization" of the learning process in STEM education by involving co-creation by diverse actors from universities and SE VET education- students, teachers, academics.<br>In the long run, DISCOVER improved the quantity and quality of science outreach activities and non-formal STEM education for SE VET learners, introduced innovations in curricular STEM education and increased SE VET students' motivation to pursue a STEM-related career.<br>As a result of the project, a publicly accessible Robotics Lab has been created in Gabrovo. This lab provides hands-on training opportunities to all students in the region, exploiting Robotics Invention Systems technology. |

| **Challenges to the Good Practice** | |
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| What are the weaknesses, challenges, or issues encountered during the implementation of the Good Practice? | The challenges that the DISCOVER project faced were entirely related to the complex planning and coordination efforts that are needed when such a large-scope outputs are being developed by large and heterogeneous groups of people in terms of nationality, background and expertise. |

| **Applicability of the Good Practice** | |
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| 1. What key lessons can be applied or used in INSTALL Youth educational activities?<br>2. Are there any digital citizenship and science literacy training or educational resources, tools, or material produced during the | 1. An important lesson derived by DISCOVER project is that schools are in an excellent position to initiate and lead the organization of science literacy promoting practices. Thus, involving educators who are school staff should be prioritized in the selection process of our project's blemded mobility. |

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| Good Practice lifetime that could be applied or used in INSTALL Youth? | Another important element to remember is that educational outreach activities for schools can be focused on a number of subjects and topics, but the general rule is that the subjects have to be interesting to students and presented in a youth-friendly and accessible manner.<br><br>2. The **compendium of good practices of science outreach** for SE VET schools, including practices targeted at disadvantaged and under-served groups and the **resource pack with activities and lesson plans,** are rich sources of both educational approaches, training materials and troubleshooting tips that can be utilized in the development of INSTALL Youth learning activities. |

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| **The partner responsible for collecting the Good Practice** | **C.R.E. A. European Youth Group APS** |

| **Information about the organisation/institution/entity responsible for the Good Practice** | |
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| Name of the entity | Girls into Global STEM |
| Type | It is a partnership between nine organisations in Cyprus, Poland, Sweden and the UK, a 3 year Erasmus+ Key Action 2<br>Practical Action (UK)<br>Centre for Citizenship Education (PL)<br>Centre for Advancement of Research and Development in Educational Technology Ltd-CARDET (CY)<br>University of Boras (SE)<br>de Ferrers Academy (UK)<br>Zespole Szkół w Siennicy (PL)<br>The Grammar School, Nicosia (CY)<br>Sandgärdskolan (SE) |
| Contact email | Ray Kirtley<br>Ray.Kirtley@gmail.com |

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| Website (for reference purposes) | http://gigstem.weebly.com/ |

| **Information about the Good Practice** | |
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| Name | Girls into Global STEM |
| The problem context focusing on the needs, gaps, issues, or challenges the Good Practice aimed at addressing. | At the moment we know that many more boys than girls are interested in STEM subjects and in going on to STEM subjects in higher education and in their careers. We also know that an area of STEM that particularly interests girls is when STEM skills are used to improve the lives of others, including those in the developing world. That is why the project is focussed on a number of global issues and ways in which STEM based skills can be used to help lift people out of poverty.<br><br>For the first year the project concentrated on the Global STEM Challenges and the project's schools had a big role to play in making this year a success. |
| Objective(s) | To increase the employment potential of young Europeans, especially girls, by improving their interest and engagement in STEM linked with wider awareness of global issues and facilitated through digital skills<br>To support teachers in the embedding of digital skills and global learning methodologies into their STEM teaching<br>To integrate digital literacy set within a global context into STEM education policy and practice |
| Duration | 01 September 2016 (start date)<br>31 August 2019 (date of completion) |
| Geographical location | The UK, Poland, Sweden and Cyprus |
| Targeted group(s) | school students and especially girls in STEM (science, technology, engineering and maths) subjects |

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| Summary of the best practice (to be used for joint report) | The 'Girls into Global STEM' project aims to create materials and establish new methodologies that schools across Europe and in the wider world can use. At the moment, we know that many more boys than girls are interested in STEM subjects and in going on to STEM subjects in higher education and in their careers. We also know that an area of STEM that particularly interests girls is when STEM skills are used to improve the lives of others, including those in the developing world. That is why the project is focussed on a number of global issues and ways in which STEM based skills can be used to help lift people out of poverty. |


| **Results of the Good Practice** | |
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| **Outputs:**<br>1. What were the tangible outputs of the practice?<br>2. What are the services or activities provided during the Good Practice? | Outputs<br>Global STEM Challenges<br>The development of innovative methodologies and the students' eBooks<br><br>Teacher Training Materials<br>teacher training in a variety of formats including an online course |

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| **Outcomes**<br>1. What is the degree of positive change (in terms of knowledge, skills, and attitudes) in the served targeted group(s) in relation to the Good Practice's objectives?<br><br>**Outreach**<br><br>1. How many people were reached or served by the Good Practice?<br><br>**Impact**<br>1. How did the Good Practice contribute to broader changes in the community, (e.g. through the work of the served or reached targeted group/s)? | Teacher Toolkit<br>See www.gigstoolkit.com for further details<br><br>Training Curriculum<br>brings much of the work of the project together<br><br>Academic Outputs<br>These include presentations, abstracts and academic papers<br><br>Outcomes<br>With the completion of the project we anticipate measurable impact resulting from the work of the project to reach well beyond these local and national target audiences. The partnership aims to produce at least two academic papers outlining the work of the project and presenting some evaluative data. We will ensure that these are presented at influential conferences and seminars where representatives from organisations with an interest in gender equality, global education and in the promotion of STEM subjects to girls will be present. Our desired impact will be for these organisations to link to our website and to adopt or recommend resources and training methodologies. Our MESH Guide and our links with the existing MTTEP network (teacher educators worldwide with an interest in mobile technology) will enable the work of our project to reach a very diverse audience well acquainted with IT and the new learning associated with eBooks. We anticipate that this audience will be keen to adopt exemplars of good practice in collaborative authoring and create impact both within and outside of the EU.<br>The final dissemination event for our EU funded Girls into Global STEM (GIGS) project which included partners in Cyprus, UK, Poland and Sweden was held at the University of Nicosia, Cyprus. This international conference included workshops, presentations, speakers, and many opportunities to |

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| | share knowledge and experiences related to the project.<br><br>Outreach<br>As part of the EU funded project Girls Into Global STEM ( GIGS), 32 pupils ages 14-15 years from Poland, Cyprus, Sweden and the UK gathered together for a 5 day conference where they shared their experiences, knowledge and work they had already done on the project with each other. They also attended a number of workshops to increase their understanding of the Global Goals, STEM careers and how to produce effective e-books as a record of their projects. These videos capture some of their reflections at the conference.<br>During the local activities more students participated.<br>https://youtu.be/3FoXsRb_UE8<br>https://youtu.be/i24qaSkN1tw<br><br>Impact<br>After the project some of students involved in the project, taught lessons they learned in this project to younger children.<br>Some participants had never travelled outside their country or even their town prior to this project.<br>Many of the students involved in this project kept touch with their peers from the other countries. |

| **Challenges to the Good Practice** | |
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| What are the weaknesses, challenges, or issues encountered during the implementation of the Good Practice? | One of the challenges faced was the actual implementation of the project because there was pressure on the school curriculum in the different countries. Teachers have to carry out other activities and finding the time for this project was challenge.<br><br>Another challenge was the language barrier particularly for the Polish students. The students in this projects had to cooperate and collaborate in |

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| | different activities. Polish students did not have solid English language skills.<br>In the third challenge was that in some countries, students did not have the necessary technology to complete the tasks require. For example, the project coordinator had to substitute the webpages for iBook because some students did not have mobile devices such a ipads, or tablets at school in order to work on the tasks. |

| **Applicability of the Good Practice** | |
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| What key lessons can be applied or used in INSTALL Youth educational activities?<br>Are there any digital citizenship and science literacy training or educational resources, tools, or material produced during the Good Practice lifetime that could be applied or used in INSTALL Youth? | The educational activities exist largely as non-facilitated versions usable without additional resource and could therefore easily be incorporated into the teacher training curriculums of Universities. Anyone with access to Higher Education networks, it is expect that this will occur in other HE institutions and also be incorporated into the practices of the in-service providers and schools within and outside of the partnership.<br>It is also anticipated that the focus of the Girls into Global STEM, will enable users of this manual to build new relationships with organisations and individuals. In the UK alone, there are a number of co-operative companies and NGOs who are keen to explore more gender sensitive contexts that motivate girls into science and engineering. This best practice provides the opportunity to formally approach these organisations. INSTALL youth can determine if they would like to include the STEM challenges (or adaptations of them) in their own outreach activities. |

## Scientific knowledge and competences

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| **The partner responsible for collecting the Good Practice** | **C.R.E. A. European Youth Group APS** |

| **Information about the organization/institution/entity responsible for the Good Practice** | |
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| Name of the entity | **University of Padova** |
| Type | **Higher education institution** |
| Contact email | cristina.peggion@unipd.it |
| Website (for reference purposes) | **https://it.search.yahoo.com/search?fr=mcafee&type=E211IT885G0&p=competizione+the+organic+game+ITEDU** |

| **Information about the Good Practice** | |
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| Name | **The Organic Game – Team Race** |
| The problem context focusing on the needs, gaps, issues, or challenges the Good Practice aimed at addressing. | • 1st year students<br>• large class (110)<br>• «prejudices» on the difficulty of organic chemistry<br>• to learn how to use digital devices<br>• to study and have fun at the same time<br>• to Incentivate to constant study (punctuality in correction): |

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| | • Active participation opportunities for student workers (since this is done online)<br>• Challenging game for learning and self-testing<br>• understanding of the lessons |
| Objective(s) | • Help the students to be active protagonists of the path of learning<br>• Stimulate the revision of subjects<br>• Training: continuous training<br>• Involve students more<br>SPECIFIC OBJECTIVES FOR ORGANIC CHEMISTRY<br>• Making the subject "more pleasant"<br>• Apply general rules to different classes of molecules (properties, reactivity, structure)<br>• Give an overview of the many molecules |
| Duration | 64 teaching hours during the semester , completed<br>Date it started: 2016 |
| Geographical location | Padova<br>University of Padua |
| Targeted group(s) | University Chemistry students |
| Summary of the best practice (to be used for joint report) | It is a team competition in which all those enrolled in the course participate. The competition takes place throughout the duration of the course and aims to help students follow<br>the course in an active and fun way.<br>An initial challenge will be launched: during the game it will be necessary to guess the precise structure of a complex molecule, and this will be done by collecting a series of clues.<br>Eventually the teams learn how to dare the structure of the molecule discovered. Whoever guesses the<br>molecule will be the winner of the race. A points ranking will be drawn up (points that each team will collect during the match). |

| **Results of the Good Practice** | |
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| **Outputs:**<br>1. What were the tangible outputs of the practice?<br>2. What are the services or activities provided during the Good Practice?<br><br>**Outcomes**<br>1. What is the degree of positive change (in terms of knowledge, skills, and attitudes) in the served targeted group(s) in relation to the Good Practice's objectives?<br><br>**Outreach**<br><br>1. How many people were reached or served by the Good Practice?<br><br>**Impact**<br>1. How did the Good Practice contribute to broader changes in the community, (e.g. through the work of the served or reached targeted group/s)? | **Outputs**<br>*Organic Game*<br>The Rules of the Game<br>8 clues will be provided, one every 3-4 lessons: it will go hand in hand with what students have learned in class until then.<br>Teams must view the clue and produce HYPOTHESIS. It is mandatory to provide at least 3 HYPOTHESIS; ADDITIONAL ASSUMPTIONS can be provided up to a maximum of 10 ASSUMPTIONS per team.<br>If at least 3 hypotheses have been provided, the tutor will "unlock the level" and will make the "SECOND CLUE".<br><br>HOW THE ASSUMPTIONS ARE PROVIDED and WHAT THEY ARE VALID FOR<br>To provide your hypotheses you will need to fill in the appropriate wiki page "HYPOTHESIS of the team "by inserting the chosen molecules.<br>In the hypothesis wiki page, students find detailed help on how to insert the molecules correctly.<br>Each team will have a dedicated forum in which to discuss with teammates team to decide which assumptions to provide.<br>Each "GOOD HYPOTHESIS" corresponds to "1 POINT". A "good hypothesis" is a plausible hypothesis, that is, a molecule that satisfies the clues given up to that moment.<br>However, incorrect assumptions are worth ZERO POINTS.<br>The tutor checks students' hypotheses and give them feedback that will help them in choosing<br>next molecules.<br><br>TEAM PLAY<br>Students must not forget that it is a "team game": every student must feel responsible for |

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| | the success of the game (they must not make the team lose points) and therefore cannot provide "random molecules".<br>WHO WINS?<br>Eventually the teams have to give the structure of the discovered molecule. The tutor will check the correctness of the formula and will decide the WINNERS of the competition.<br>RANKING BY POINTS: a ranking will be drawn up based on the score obtained during the whole competition.<br>This score will be "translated" into "EXAMINATION POINTS" whichwill contribute to the final evaluation.<br><br>MOODLE TOOLS<br>♣ Composition of teams → GROUPS tool<br>♣ To provide hypothesis → WIKI page<br>♣ For feedback → WIKI page<br>♣ To compare and discuss → GROUP FORUM<br><br>**Outreach**<br>Number of teams: 21 (3-4 students each)<br>Students enrolled in the game: 98 (course: 106)<br>Active participants: 92<br>Molecules inserted in total: 1026<br><br>**Impact**<br>• **Active participation of students**<br>• **Ongoing revision of subject matter**<br>• **continuous training**<br>• **student engagement**<br>• use of ICT tools |

| **Challenges to the Good Practice** | |
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| What are the weaknesses, challenges, or issues encountered during the implementation of the Good Practice? | • **This best practice was experimental but its implementation can be improved** |

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| | • **The practice requires tutors and many hours to provide feedback to students**<br>• **Teams: some students were more involved than others, and it was difficult give a correct evaluation of their involvement** |

| **Applicability of the Good Practice** | |
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| 1. What key lessons can be applied or used in INSTALL Youth educational activities?<br>2. Are there any digital citizenship and science literacy training or educational resources, tools, or material produced during the Good Practice lifetime that could be applied or used in INSTALL Youth? | The idea of an team online competition can be used for INSTALL as it would engage a large number of participants from any country in Europe.<br>MOODLE TOOLS<br>♣ Composition of teams → GROUPS tool<br>♣ To provide hypothesis → WIKI page<br>♣ For feedback → WIKI page<br>♣ To compare and discuss → GROUP FORUM |


| **The partner responsible for collecting the Good Practice** | **C.R.E. A. European Youth Group APS** |
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| **Information about the organisation/institution/entity responsible for the Good Practice** | |
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| Name of the entity | University of Nova Gorica |
| Type | Higher education institution |
| Contact email | info@ung.si |
| Website (for reference purposes) | https://www.ung.si/en/news/news/5956/european-researchers-night-2020-at-the-university-of-nova-gorica/ |

| **Information about the Good Practice** | |
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| Name | Researchers' Night |
| The problem context focusing on the needs, gaps, issues, or challenges the Good Practice aimed at addressing. | As a research and educational institution, the mission of the University of Nova Gorica is also to raise the awareness of the general public on the importance of research and innovation, and of their impact on the society, economy and the career orientation of the young. To inspire the young for research-oriented professions we prepared a set of activities for secondary schools, covering topics in humanities, arts and natual sciences |
| Objective(s) | This is a Europe-wide public event that brings researchers closer to the public. The Night:<br>• provides researchers the opportunity to showcase the diversity of science and its impact on citizens' daily lives, and to<br>• stimulate interest in research careers especially among young people. |
| Duration | **Ongoing** |
| Geographical location | **Slovenia** |
| Targeted group(s) | **Youth in general** |
| Summary of the best practice (to be used for joint report) | University of Nova Gorica organizes a series of lectures of well-known established scientists (including Nobel prize winners) as well as young, promissing researchers and other outstanding professionals. The aim of the lectures is to present high quality achievements from different disciplines to the wider audience. From 2005 till now. The talks can be viewed also on YouTube. |

| **Results of the Good Practice** | |
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| **Outputs:**<br>1. What were the tangible outputs of the practice?<br>2. What are the services or activities provided during the Good Practice?<br><br>**Outcomes**<br>1. What is the degree of positive change (in terms of knowledge, skills, and attitudes) in the served targeted group(s) in relation to the Good Practice's objectives?<br><br>**Outreach**<br><br>1. How many people were reached or served by the Good Practice?<br><br>**Impact**<br>1. How did the Good Practice contribute to broader changes in the | Outputs<br>*Recorded lectures*<br>There were 93 lectures recorded with abstracts in English. The talks can be viewed also on YouTube<br>Main lecture: Black Holes, lecturer Prof. Dr. Andreja Gomboc. The lecture has been prepared in cooperation with the Lavrič Library Ajdovščina.<br>*Scientific Café*<br>*T*he virtual Scientific Cafe titled On black holes, tidal disruption of stars and other interesting astronomical facts with young researchers of the University of Nova Gorica Katja Bricman and Taj Jankovič.<br>The event took place on the Zoom platform on the 27th November 2020<br>*Online movie collection of the School of Arts*<br>https://vimeopro.com/ungakademijaumetnosti/noc-raziskovalcev-2020-skozi-filmsko-prizmo-ung-au<br>*Scientific Marathon*<br>In the large hall of the Nova Gorica Centre of Culture the European Researchers' Night 2017 held the so-called Scientific Marathon of the university of Nova Gorica. It was carried out in two parts – at 9:00 "warm up" through a series of three short 20-minute popular scientific lectures aimed mainly at the young population, especially secondary-school students. Through interesting short lectures covering selected and perhaps less widely known areas of science the researchers of the University of Nova Gorica will brought science closer to the general public and presented the profession of a researcher. After each lecture, the audience was invited to a discussion. This "warmer up" , after a 30-minute break, followed by the second part of the Scientific Marathon – the round table "Science is cool!" (at 11:00).<br><br>Outreach<br>The project brought together more than 30 cultural, research and educational institutions across Slovenia, and several ten thousands of individuals of different target groups joined the event online. |

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| community, (e.g. through the work of the served or reached targeted group/s)? | |

| **Challenges to the Good Practice** | |
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| What are the weaknesses, challenges, or issues encountered during the implementation of the Good Practice? | Due to this year's challenging circumstances and the Covid-19 restrictions, all our activities will, for the first time ever, be carried out online, in the form of live webinars as well as pre-recorded lectures and presentations. We are glad that numerous schools from our wider cross-border region will host our webinars during lessons of various subjects and give their students the opportunity to learn about the latest discoveries in science. Another event which will hopefully inspire the young to take up any of the research-related professions is also the virtual Scientific Café with two young researchers from the University of Nova Gorica, streamed live on the Facebook page Noč ima svojo moč.<br>For all those who are unable to follow live online events on on 27th November 2020, we have also prepared pre-recorded lectures and an online movie collection dealing with the intersection of art, science and technology. The highlight of the programme is the lecture titled Black holes by a renowned researcher, astrophysicist and professor at the University of Nova Gorica Prof. Dr. Andreja Gomboc. The lecture has been prepared in cooperation with the "Lavrič Library Ajdovščina". |

| **Applicability of the Good Practice** | |
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| 1. What key lessons can be applied or used in INSTALL Youth educational activities? | **The scientific cafe and the scientific marathon are two** |

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| 2. Are there any digital citizenship and science literacy training or educational resources, tools, or material produced during the Good Practice lifetime that could be applied or used in INSTALL Youth? | **activities that INSTALL could apply as outreach activities**<br>**The recorded lectures and the online movie collection seem to be great resources and tools to be used** |

## Contextual understanding of science

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| **The partner responsible for collecting the Good Practice** | **C.R.E. A. European Youth Group APS** |

| **Information about the organisation/institution/entity responsible for the Good Practice** | |
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| Name of the entity | The MAST consortium |
| Type | The MAST consortium combines a host of hi-profile institutions with excellent references across the sci-art-tech triangle, and some truly remarkable individuals — a mix that should attract the best student candidates and provide most meaningful and ambitious solutions to the MAST challenge! Partner roles in the MAST consortium typically combine academic, managerial and professional (business) profiles with |

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| | two institutions of big outreach capacity, as well as several topically relevant associate partners:<br>Full partners<br>MANAGERIAL/LEAD \| University of Nova Gorica, School of Arts (Slovenia)<br>ACADEMIC, R&D \| Madeira Interactive Technologies Institute (Portugal) \| Graz University of Technology, Institute of Spatial Design (Austria)<br>ENTREPRENEURIAL & PRODUCTION \| Kersnikova Institute (Slovenia) \| Kitchen Budapest (Hungary)<br>NETWORKING & OUTREACH \| Culture Action Europe (Belgium/EU) \| Croatian Cultural Alliance / Unicult programme (Croatia)<br>Associated Partners<br>EQ-Arts (Netherlands) \| University of Madeira – UMa(Portugal) \| Stromatolite (Sweden/UK) \| The University of Arts Belgrade (Serbia) \| Institute for Development and International Relations – IRMO (Croatia) \| Hakan Lidbo Audio Industries (Sweden) \| European Creative Business Network – ECBN (EU wide) \| European Digital Art and Science Network (EU wide) |
| Contact email | Prof. Peter Purg, PhD<br>**peter.purg@ung.si** |
| Website (for reference purposes) | **https://mastmodule.eu/** |

| **Information about the Good Practice** | |
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| Name | The MAST project |
| The problem context focusing on the needs, gaps, issues, or challenges the Good Practice aimed at addressing. | The project MAST (Master Module in Art, Science and Technology)* invites students to respond to this challenge with a unique and innovative solution that may become either an industry product or a public service, an art piece or an experimental design — or anything in between. Students are expected to present and pitch as well evaluate their solution eventually not with a crowd of fellow interdisciplinary innovators, but also with |

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| | potential employers, opinion-leaders and decision-makers. |
| Objective(s) | This good practice example of using mainstream social media for dissemination and exploitation purposes in international academic projects and networks; to enhance teaching and learning experience, build and/or support trans-institutional academic communities and (publically) archive documentary materials. |
| Duration | **2018-2021** |
| Geographical location | Funchal, Madeira, Portugal<br>Spatial Design Challenge \| Graz, Austria<br>New-media & Contemporary Art \| Nova Gorica, Slovenia<br>Idea to Concept \| Budapest, Hungary<br>MAST Interfacing Academy \| Rijeka, Croatia |
| Targeted group(s) | |
| Summary of the best practice (to be used for joint report) | The MAST project developed an applied study module at the intersections of Art, Science and Technology, combining methodologies and practices that intertwine the academic sphere closely with the Culture and Creative Sectors. Nurturing a critical perspective on the historical, economical, social and above all cultural relevance of this interdisciplinary blend within the new digital shift, the MAST project develops innovative, ICT-enhanced teaching and learning methods. Students from different countries and disciplines will, under mentorship of engineers, scientists and artists, in partnership with relevant NGOs and industry partners, jointly tackle challenges emerging from the paradox between the obviously disparate agendas of Europe's ambition towards innovation on the one side, and the need for social equity on the other. |


| **Results of the Good Practice** | |
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| **Outputs:**<br>1. What were the tangible outputs of the practice?<br>2. What are the services or activities provided during the Good Practice?<br><br>**Outcomes**<br>1. What is the degree of positive change (in terms of knowledge, skills, and attitudes) in the served targeted group(s) in relation to the Good | Outputs<br><br>The MAST Manual is a culmination of condensed knowledge from the 2 years of the project itself. It consists of guidance and deep reading on best practices and lessons learned in the implementation of the MAST project. The manual provides a practical focus on the combined curriculum co-design, mobility, partnering strategies, teaching methodologies as well as coherent peer criticism. The Manual is an open resource for those who are experimenting and implementing cross-disciplinary projects in the space between technological and social innovation agendas.<br>https://mastmodule.eu/manual<br>* MAST ONLINE COURSE – Towards an Innovation Catalyst<br>MAST's online course is a free and open-source module designed to guide students through methods that foster innovation and inspiration in the milieu of art, |

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| Practice's objectives?<br><br>**Outreach**<br><br>1. How many people were reached or served by the Good Practice?<br><br>**Impact**<br>1. How did the Good Practice contribute to broader changes in the community, (e.g. through the work of the served or reached targeted group/s)? | technology and science. It serves as an immersive interactive suite, a virtual learning platform and knowledge transfer model. The course curriculum includes 10 lectures, available online on the MAST website.<br>https://mastmodule.eu/online-course<br>* MAST project events<br>Recommended Watching+<br>* MAST Hybrid Interfacing Academy Sessions<br>At this concluding event of the MAST project, participants from a variety of disciplines have jointly explored and identified the vectors of possible policy impacts and priorities for the future of Europe as well as created alliances for forward-thinking future actions. The event itself presented the pinnacle of the MAST project, supported by Creative Europe, dedicated to developing an applied study module at the intersections of Art, Science and Technology, combining methodologies and practices that intertwine the academic sphere closely with the Culture and Creative Sectors.<br>* Best of MAST Showcase<br>* Symposium Videotalks<br>The MAST symposium took place 18. & 19.11.2019 in ex-Daimond (xD), Nova Gorica, Slovenia, connected to and cohabited with Pixxelpoint 2019 Festival. It sought to address an open variety of topics among Art, Science and Technology, discussing them through different prisms of the festival topic — "Checked Reality. The Work at the Interface Continues".<br>* podMAST Conversations<br>podMAST is a series of open conversations among relevant voices from the crossings of Art, Science and Technology. Springing from an apparent need for (archiving and reflecting) in-depth knowledge about this timely crossover, it shall remain publicly accessible to incite dialog with other interested practitioners and thinkers.<br>The profile is linked also to a dedicated video album within:https://vimeo.com/album/2542331, and the fb profile can be liked at https://www.facebook.com/adriart.net |

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| | Outcomes<br>The MAST project (2018-2021) developed an international master study programme in contemporary arts and applied practices named MAP - Media Arts and Practices, aiming at the areas of audio-visual arts (film, animation, photography), inter-media arts (spatial, new-media, trans-media) as well as (historical, theoretical, critical) arts discourses. The programme includes a Master Module in Art, Science and Technology. The consortium believes that these results and outputs set solid foundations for further advancements and developments in the cross-domain field of Arts, Science and Technology.<br><br>Outreach<br>This project was possible due to the collaboration of over 100 students and mentors from all participating institutions, and further external stakeholders, and are being further exploited in several main-stream social media contexts such as vimeo, pinterest, twitter, google-groups etc<br><br>Impact<br>The international academic experience of students from three universities will, along the two semesters of 2018/19, travel through the realms of interface and experience design (Funchal, Madeira in November), interdisciplinary entrepreneurship in digital technologies (Budapest, Hungary in January), a choice of current new-media (art) topics such as biotechnology and (post)internet artistic practices (Nova Gorica, Slovenia in March), and studies of space design as pertaining to the human body (Graz, Austria in April), to eventually culminate at an "Interfacing Academy" event in RIjeka, Croatia (June/July).<br>The complete two-year implementation cycle strongly focused on short location-specific mobility runs and promoted participation of best mentors and students from the region and around the world. Among several countries and in five languages the programme discussed site-specific (demographical, social, cultural, ecological, migratory etc.) topics in interdisciplinary |

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| | ways, while stimulating multi-cultural academic exchange and graduates' development towards self-sustainability. |

| **Challenges to the Good Practice** | |
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| What are the weaknesses, challenges, or issues encountered during the implementation of the Good Practice? | Although there was a possibility to modify and improve the original concept that was written during the submission of the project application, when you have EU funding , you have to comply with what you said you were going to do during the project application process. During the implementation, the coordinators considered they could do other things, but have to be limited but what they wrote on the application of the project a couple of years before. If they had had more funding, the project could have been extended.<br><br>The different languages spoken in the consortium, the different work styles somehow made the collaboration challenging. |

| **Applicability of the Good Practice** | |
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| 1. What key lessons can be applied or used in INSTALL Youth educational activities?<br>2. Are there any digital citizenship and science literacy training or educational resources, tools, or material produced during the Good Practice lifetime that could be applied or used in INSTALL Youth? | MAST PROFESSIONAL and PERSONAL DEVELOPMENT // Career Development Guide for Art – Science – Technology (PDF)<br>The MAST project Career Development Guide serves as a professional and personal development reference in the realm of Art, Science and Technology (AST). It aims to support a variety of needs for emerging practitioners and will also continue to be supported through Unicult learning events and opportunities through the project network partnerships.<br>* Cross-sector Innovation Transfer // MAST Business Plan (PDF) |

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| | The economic analysis showed that the MAST project is justified and represents added value for all users, the financial feasibility of carrying out the MAST project as such was confirmed. The set business model of the MAST project was proved to be sustainable in the long run, as the project from 2022 onwards shows considerable self-sustainability. Not only during its implementation but also at its finish the project may be estimated low-risk also for its possible future developments, as it clearly promotes an innovative idea and features a clear business model based on a professional team in capacity to face all the challenges and risks.<br>* "Progressive Pedagogies for Innovation among Art, Science and Technology: The Case of MASTmodule.eu"<br>(upcoming scientific article publication, pending editorial decision at the iJADE, The International Journal of Art & Design Education (upcoming link when published) |


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| **The partner responsible for collecting the Good Practice** | **C.R.E. A. European Youth Group APS** |

| **Information about the organisation/institution/entity responsible for the Good Practice** | |
|---|---|
| Name of the entity | Jozef Stefan Institute |
| Type | scientific research institute |
| Contact email | Matija Ovsenek matija.ovsenek@videolectures.net |
| Website (for reference purposes) | **http://videolectures.net/** |

| **Information about the Good Practice** | |
|---|---|
| Name | **Video lectures** |
| The problem context focusing on the needs, gaps, issues, or challenges the Good Practice aimed at addressing. | **Create an open access to scientific information and not just to people who are able to participate in conferences, workshops, summers schools or science promotional events.** |
| Objective(s) | To promote science<br>To exchange ideas and foster knowledge<br>To share by providing high quality didactic contents not only to the scientific community but also to the general public |

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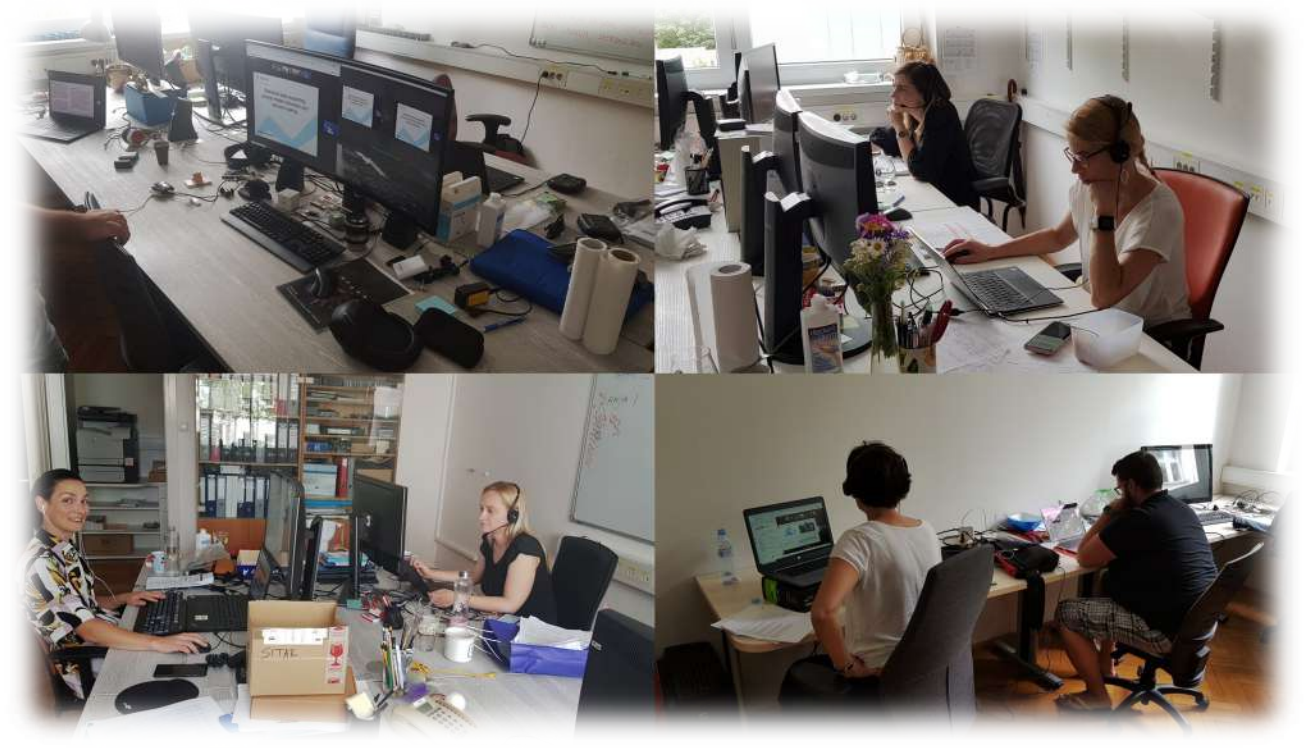
| Duration | **Ongoing** |
| Geographical location | **Slovenia** |
| Targeted group(s) | **Scientific community and the general public** |
| Summary of the best practice (to be used for joint report) | VideoLectures.Net<br>is an award-winning free and open access educational video lectures repository. The lectures are given by distinguished scholars and scientists at the most important and prominent events like conferences, summer schools, workshops and science promotional events from many fields of Science. The portal is aimed at promoting science, exchanging ideas and fostering knowledge sharing by providing high quality didactic contents not only to the scientific community but also to the general public. All lectures, accompanying documents, information and links are systematically selected and classified through the editorial process taking into account also users' comments. |



| **Results of the Good Practice** | |
|---|---|
| **Outputs:**<br>1. What were the tangible outputs of the practice?<br>2. What are the services or activities provided during the Good Practice?<br><br>**Outcomes**<br>1. What is the degree of positive change (in terms of knowledge, skills, and attitudes) in the served targeted group(s) in relation to the Good Practice's objectives?<br><br>**Outreach**<br><br>1. How many people were reached or served by the Good Practice?<br><br>**Impact**<br>1. How did the Good Practice contribute to broader changes in the community, (e.g. through the work of the served or reached targeted group/s)? | Output<br>A portal with educational video lectures, accompanying documents, promotional videos, interviews, live streaming shows, TV shows. This portal keeps evolving because more material is being uploaded. It is expected to have more feature in December.<br><br>Outcome<br>Scientific content is available to the public at no cost. People are increasingly accessing to this information in the portal because they want to learn.<br><br>Outreach<br>They are currently working data in regards to how many people access the portal. However, the data is not available. What is evident is that some topics are more viewed than others and this is something the Institute would like to further research. They are interested in Knowing what are the topics that the general public is looking for.<br><br>Everyday more and more people are accessing the content in the portal. The institute is currently working on statistical data on the impact and in particular which topics are more viewed. |

| **Challenges to the Good Practice** | |
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| What are the weaknesses, challenges, or issues encountered during the | Working space and storage: there are 8 people working on this project, so it is |

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| implementation of the Good Practice? | difficult to have a place big enough for all of them and the equipment they use. Because the funding has finished , they are struggling to find people who can collaborate to help with translating the video lectures and creating the subtitles. Another challenge is to get users' attention and encourage them to be more interactive. For example, users don't write many comments, create playlists or upload their own videos. |

| **Applicability of the Good Practice** | |
|---|---|
| 1. What key lessons can be applied or used in INSTALL Youth educational activities?<br>2. Are there any digital citizenship and science literacy training or educational resources, tools, or material produced during the Good Practice lifetime that could be applied or used in INSTALL Youth? | Video lectures are a great tool to make content more accessible to all at any time and any place in the world**.**<br><br>In December, their website will be updated with all the resources they have created so far which includes promotional videos, TV shows, live streaming shows, interviews, lectures, etc, |

| The partner responsible for collecting the Good Practice | C.R.E. A. European Youth Group APS |
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| Information about the organisation/institution/entity responsible for the Good Practice | |
|---|---|
| Name of the entity | 1st Primary School of Rafina, Greece |
| Type | **Public school** |
| Contact email | Facilitator: Nancy Pyrini<br>**nancypyrini@icicte.org** |
| Website (for reference purposes) | Home - Education Bridge to The Future - CleverBooks |

| Information about the Good Practice | |
|---|---|
| Name | STEM Augmented Reality for Education |
| The problem context focusing on the needs, gaps, issues, or challenges the Good Practice aimed at addressing. | Interdisciplinary and Constructivist Approach<br>A classroom with an active learning approach increases student motivation, knowledge retention, and content transferability. Parental involvement Family engagement in schools improves student achievement, reduces absenteeism, and restores parents' confidence in their children's education. Active Citizenship Many of the ideas, concepts and discussions associated with the workshop, such as habitats conservation, will cause students to analyze the community they live in and hopefully instill a need for active citizenship. |
| Objective(s) | CleverBooks provides STEM-oriented global curriculum-based teaching and learning solutions for primary education To change the way the educational content is delivered and the way the education is personalized through seeing, doing, using imagination, enabling students and teachers to merge the realities right in the classroom or at home. |

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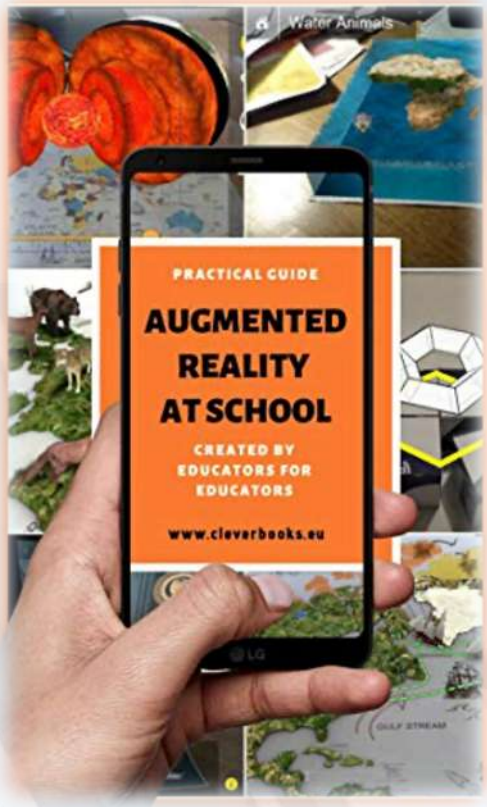
| Duration | from: 01/05/2019 to present |
| Geographical location | CleverBooks is a company based in Dublin, Republic of Ireland. However, the teacher who used this was in Greece. |
| Targeted group(s) | **Primary school children** |
| Summary of the best practice (to be used for joint report) | Augmented Reality (AR) applied to CleverBooks educational products is the most affordable way to use modern technology for the benefit of your classroom or school learning. You only need a mobile device (a tablet or mobile phone based on Android or Apple), the free apps from CleverBooks and products like DYI building blocks, map of the world, pocket workbooks in Geography and Geometry.   |

| **Results of the Good Practice** | |
|---|---|
| **Outputs:**<br>1. What were the tangible outputs of the practice?<br>2. What are the services or activities provided during the Good Practice?<br><br>**Outcomes**<br>1. What is the degree of positive change (in terms of knowledge, skills, and attitudes) in the served targeted group(s) in relation to the Good Practice's objectives?<br><br>**Outreach**<br><br>1. How many people were reached or served by the Good Practice?<br><br>**Impact**<br>1. How did the Good Practice contribute to broader changes in the community, (e.g. through the work of the served or reached targeted group/s)? | Outputs<br>"Practical Guide: Augmented Reality at school" available at https://www.cleverbooks.eu/shop/<br><br>Outcomes<br>Augmented Reality applied to the CleverBooks app will help young learners to visualize 3D objects and interact with them. Students will be able to learn about other countries without travelling, geometrical shapes, which are difficult to conceptualize through a flat images in a text book, allowing them to freely manipulate and observe them from any angle, thus greatly improving their visualisation.<br>1. GEOGRAPHY<br>• Geographical peculiarities of the continents<br>• Political structure<br>• Monuments and other heritage<br>• Flora and fauna<br>• Water animals!<br>• Interactive weather for each season<br>• Interesting facts about each animal, feed the Animal mode … and much more!<br>2. GEOMETRY<br>• View geometric 2D and 3D shapes from all angles Voiceover for all the shapes and interactions made by kids<br>• See sides of 3D shapes unfold into 2D shapes (decomposition is visualized!)<br>• Cross section in 3D<br>• Find out about different variations of 2D shapes<br>• Learn and understand fractions<br>• Compare and identify objects in the environment with geometric shapes using Augmented Reality<br>• Develop spatial imagination by observing 3D and flat models<br>• Learn properties of geometric 2D and 3D shapes and fractions<br>• Interactive knowledge test |

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| | Impact<br>Augmented Reality:<br>• New, inspiring technology which enhances learning using real world 3D images<br>• 3D Graphics<br>• Facilitates educational visualization process<br>• School Curriculum based: Validated by teachers and tested by happy users (school kids)<br>• Enhances Motivation to Learn: Great combination of technology and interactive education for modern kids |

| **Challenges to the Good Practice** | |
|---|---|
| What are the weaknesses, challenges, or issues encountered during the implementation of the Good Practice? | The students faced the following challenges:<br>• Poor battery life<br>• Tablet/Phone or App crashes. Students have been advised to bring extra devices just in case there were technical problems so there was no real inconvenience just frustration the moment the problem came up. |

| **Applicability of the Good Practice** | |
|---|---|
| 1. What key lessons can be applied or used in INSTALL Youth educational activities?<br>2. Are there any digital citizenship and science literacy training or educational resources, tools, or material produced during the Good Practice lifetime that could be applied or used in INSTALL Youth? | Augmented Reality is brilliant for classroom environment. All is needed is a projector and tablet/mobile phone connected to it. The application works on both apple and android devices at no extra cost. Use your device with pre-installed app, flash cards and a projector for group instruction. Teachers can use the app along with a whiteboard or projector connected to a phone or tablet to create an engaging and dynamic learning environment where students can interact with 3D objects. Using their imagination, the possibilities are endless! |

# CONCLUSION

This collection of best practices chosen by the partners within their country contexts and at the international level, offers real experiences framework for promoting Digital skills and scientific literacy in different parts of world. The scope of a transnational partnership in this field is to promote new approaches to teaching and assessing digital literacy skills and science education, starting from the consideration that digital and science literacy must be considered as important as any other literacy (linguistic or mathematic.) in the contemporary educational and scholastic curricula. From the experiences described above, it can be highlighted that introducing the concepts related to digital citizenship and science education represents a valuable practice to train digitally and scientifically literate citizens, and create a more balanced and connected digitalized society. This clarifies to the stakeholders in the educational system, the importance of a concrete, sustainable investment in resources, projects and initiatives, that promote digital citizenship and Science literacy For this reason, including ICT training and science education does not aim exclusively to teach to the students how to use computers or specific software, or train them in generic technological skills, but also to develop their "basic" skills like investigation, critical thinking, modelling solutions, synthesis, creativity, communication and cooperation and to prepare them for participation in contemporary society. From the above manual of best practices, comprehensive of feedbacks from researchers in the partner countries, it can be underlined that making digital resources and science educational materials available has the positive effect of keeping young users safe and when surfing online, and of educating parents and teachers to the risks and dangers of using social media, such as cyberbullying. The concepts of privacy, safe web surfing and security tools are widely promoted. For this reason, the first strategical step in making an investment towards digital literacy and science education should be addressed to improve the IT infrastructures and teacher training in science education. This is, indeed, the challenge for the future European educational system, and a shared priority to guide the new generations towards the new global digital economy, a dimension which requests more and more human resources that are digitally competent, skilled and responsible. All the partners highlighted a common weakness, challenge, or issue encountered during the implementation of the Good Practice. The most common was the lack of IT infrastructure or funding to make the best practice sustainable. Most activities were suspended once the funding was finished leaving all the progress in the air.

There are further steps and efforts to be made to fully include the use ICT technologies and STEM didactics , but there is a growing consensus that, in order to keep young 'digital native' learners engaged, and to prepare youth to be prepared employees for the future digital economy, there is a current need to invest in teacher training (aimed to upskill the teachers in the use of digital resources and Science education), and to structure the digital and scientific competences in young people. The review of the good practices in use in the partner countries of the project and at international level, show a dynamic reality and a starting point to intensify the effort in offering youth workers and

teachers the tools and opportunities to improve their abilities for educating to a responsible use of digital and science resources in a connected world.

# RECOMMENDATIONS

The desk research based on the overview of the national best practices in the teaching/learning of digital skills and of the responsible use of digital resources, constitutes an opportunity for the INSTALL project partners to design a pedagogical framework, in which they can elaborate suggestions and practical guidelines, addressed to teachers, educators, and other key stakeholders and policy makers of the educational sector. After the review of the past and current experiences in digital learning and science education, what can be particularly recommended for the improvement of the teaching/ learning of digital skills and scientific competences is the following: 1) Define a clear methodological approach that, adopting both formal and non-formal education, combines teacher training, programs, curricula and educational material, suitable to digitally and scientifically supported teaching models, in order to guide youth through the complexity of the digital world and science literacy; 2) Elaborate, encourage, promote and finance specific initiatives to introduce these two concepts in the school curricula, through the incorporation of information technology, i.e. computing lessons constituting a stand-alone discipline taught by expert teachers, with the support of specific trainings and programs to orient them on how to deliver the lessons and get the most out of the resources; 3) Engage youth through the implementation of active learning methods, that are more effective in educating young people to some of the most difficult and sensitive topics; 4) Favour the access and use of open data resources and collaborative digital technology tools and science methods, in order to promote the above-mentioned changes in both the formal and informal education systems; 5) Promote and strengthen the teaching of fundamental values (e.g. freedom, democracy, human dignity and respect for fellow human beings), as the starting point for providing lifelong skills and spreading safe, appropriate and responsible behaviour; 6) Carry out programs/initiatives with the aim to develop youth scientific skills, providing teachers with concrete support and additional training materials, to ensure their confidence in educating; 7) Give special attention to initiatives and tools aimed at developing the topics related to online safety and cyberbullying with pupils, teachers and school leaders, and create more opportunities to share information on such matters with parents and care-givers; 8) Invest more resources (i.e. professional training activities, budget and equipment) in order to support, update and further develop teacher training activities and projects, in the framework of a general strategy and specific policy guidelines and plans 9) Create, manage and support national repositories, platforms and databases for the collection of best practices, in order to achieve an effective and wide sharing of teaching/learning experiences, materials, free tools and suggestions for future activities, that involves not

only teachers and school managers, but also parents and, in general, all the school system stakeholders.

# REFERENCE LIST

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