Funded by the Erasmus+ Programme of the European Union

Report on Schools for 21st century pilot courses

GA 2019-1-ES01-KA201-064187

Erasmus + Programme

Key Action 2 – Strategic Partnerships in the field of School education

November 2021

Funded by the Erasmus+ Programme of the European Union

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Please cite as: Fernández-Morante, C., Cebreiro López,B., Trigo Miranda, M., Vaivadiene, E. & Navickiene, V. (2022). **Report on Schools for 21st century pilot courses**. School21Cproject Resul #3. Santiago de Compostela: University of Santiago de Compostela. http://dx.doi.org/10.5281/zenodo.5894549

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Contents

Rationale / Context

Schools21C is a Strategic Partnerships for education conducted across 4 EU countries and involving a partner network of 6 institutions among which are profiles such as educational institutions, technology or communication companies, and institutions responsible for educational policy.

The project aims to integrate audiovisual and ICT skills into the learning process, to validates the teaching strategies that can be used to achieve high-quality teaching adapted to the needs of the 21st century. To reach this aim the Online courses "Schools21C" has been developed and strategies of a high level of educational innovation and entrepreneurship that improved audiovisual and digital literacy were implemented. Each project partnership country involved at least three schools to pilot this online course.

The pilot schools had the opportunity to experiment by working with professionals from a commercial radio station, and creating mobile applications, and produce artifacts using augmented reality.

The Course has been translated into four partnership countries languages: Lithuanian, Italian, Portuguese and Spanish, also to English, adapting the examples to their own language.

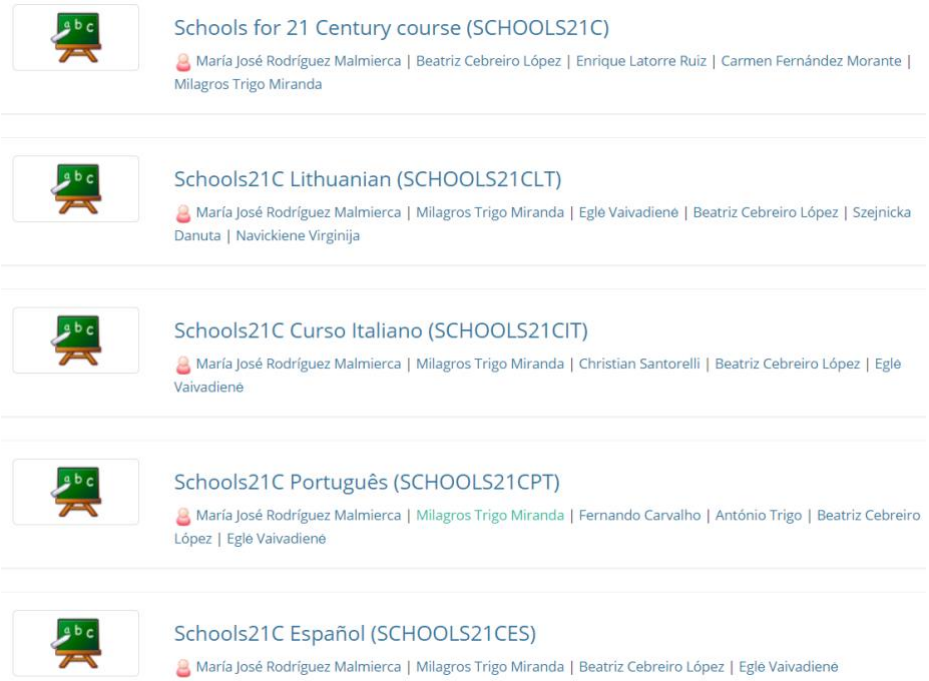


FIGURE 2: THE courses in all project partnership languages

Course background

Schools for 21 Century is a project co-funded by the European Union under the Erasmus+ KA2: Strategic partnership for education programme. The aim of the project is to improve audiovisual and digital literacy through strategies involving a high level of educational and business innovation designed for 21st-century education.

In a global and hyper-communicated world, it is essential to collaborate between subjects with different profiles with the aim of enriching our teaching and learning practices and leading them to excellence. The incorporation of the media as an active agent and educational resource offers the opportunity to create a broader educational community connected to the real world. This Project, for improvement of digital competence, involves collaboration at a European level between:

- Teachers of Infant, Primary, and Secondary Education. University Teachers.
- Higher Education students (future European teachers of Infant, Primary, and Secondary Education).
- Educational administrations and permanent training centers for teachers.
- Media companies.
- National Agency for Education,
- Technology Center.

Digital competence is based on digital literacy. Digital literacy means having the skills need to live, learn, and work in a society where communication and access to information is increasingly through digital technologies like internet platforms, social media, and mobile devices.

Developing critical thinking skills is essential. Nowadays pupils are confronted with so much information in different formats – searching, sifting, evaluating, applying and producing information all require to think critically. **Communication** is a key aspect of digital literacy. When communicating in virtual environments, the ability to clearly express ideas, ask relevant questions, maintain respect, and build trust is just as important as when communicating in person. **Practical skills** in using technology to access, manage, manipulate and create information in an ethical and sustainable way is also very important. It's a continual learning process.

Digital literacy is really important now, while pupils' study at school. It'll also be really important in the future when they will study t universities and enter the professional world. In workplace they'll

be required to interact with people in digital environments, use information in appropriate ways, and create new ideas and products collaboratively. Above all, they'll need to maintain their digital identity and wellbeing as the digital landscape continues to change at a fast pace.

The digital capability modelled by Jisc consist of the six elements. The Jisc model below illustrates the idea that proficiency in ICT (Information and Communication Technology) is a core element, whilst other skills overlap and build on this capability, and overarching it all is our digital identity and wellbeing.

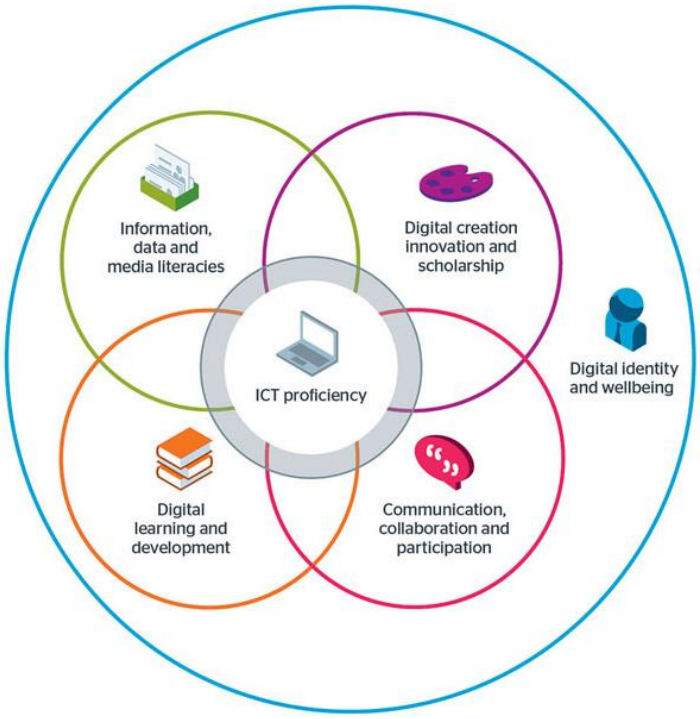


FIGURE 2: The digital capability modelled by Jisc[1]

According to the Digital Competence Framework for Educators (DigCompEdu), a scientifically sound framework describing what it means for educators to be digitally competent, which provides a general reference frame to support the development of educator-specific digital competences in Europe (figure 3).

[1] Jisc. (2016). Digital capabilities: The six elements. Retrieved from https://www.jisc.ac.uk/rd/projects/building-digital-capability.

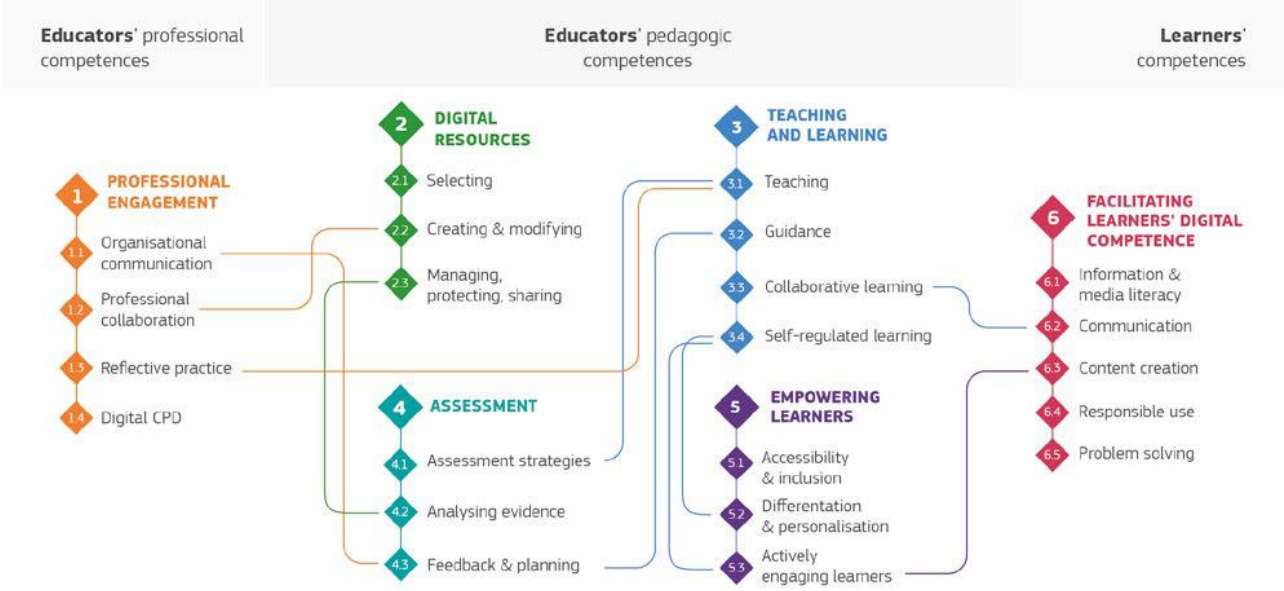


Figure 3: The DigCompEdu framework

The Schools for 21 Century online course mainly orientated to develop the six elements of Jisc the digital capability Modell and DigCompEdu Area 2: Digital Resources (Sourcing, creating and sharing digital resources), Area 3: Teaching and Learning Managing and orchestrating the use of digital technologies in teaching and learning, and Area 5: Empowering Learners Using digital technologies to enhance inclusion and learners' active engagement.

About the choice and setup of platform

The platform for the online course is Aula Cesga. The choice of platform was decided on reasoning from the coordinator. Aula Cesga is the e-learning platform of Galicia Supercomputing Center (CESGA). The choice of platform was decided by the coordinator as they use it in most of their courses because they and participants are satisfied with it.

Aula CESGA Platform is an adaptation of the Chamilo platform, which is free to be used by all Galician schools in their Erasmus + projects and also to teachers' courses can use it. The platform is continuously updated, and users are very satisfied with it. It is a friendly environment; you can do with it everything you expect.

The main reasons for choosing this platform are:

Option 1: Learning Management Systems. Learning Management Systems function as an online classroom where instructors can hold discussions, upload readings, show videos and play audio, carry

out learning activities, make announcements and assess and grade student work. The platform store and deliver materials developed in a variety of different formats — everything from MS Office documents to videos and third-party applications. They support synchronous (at the same time) and asynchronous (not at the same time) interactions. Online learning management systems can be hosted locally or remotely, demand high-speed connectivity and strong bandwidth.

Option 2: Social Media and Peer-to-Peer Platforms. The biggest factors are:

- Cost. It is free (and promises to remain so)
- Ease of use. Educational focus: designed for teachers and students and online learning. It does not have or promote commercial content.
- Appearance (look and feel)
- The ability to integrate with existing Information Systems/Education Information Management Systems
- Suite of supports (hosting the course, course design, help with upgrades, etc.)
- Special features (suite of applications)
- Familiar and easy to use

About add-ons and apps chosen.

Essentially platform has features:

- Apps
- Assignment submission
- Discussion forum
- File upload/ download capacity
- Grading
- Instant messages
- Online news and announcement (institution and course level)

Some complexity was added using additional plugins (activities, question types, certificates, registration and authentication) to the course platform:

• Registration was handled by the project coordinator (Universidade de Santiago de Compostela. Each project partner involved at lest 30 participants and give their names surnames and emails to the coordinator.

- Authentication was set up by the project coordinator by sending an authentication code to the participants. Each participant needed to confirm their email and had to fill in a questionnaire using the indicated code and only those who submitted the questionnaire could participate in the course.

- A Wildcard SSL certificate was acquired to enable secured communications

- The activities of each module were chosen in the way that teachers with limited digital and audiovisual skills could participate, as well complex creative and innovative tools have been introduced in the modules of the course in order to engage students in the learning process and participating teachers find the tools useful.

About security. Security is an important aspect of online services. It is important to protect the online course site and its users as much as possible from potential eavesdropping from malicious third parties. The site access used in the pilots which offers a higher level of security. In addition to that it is now supported by all modern browsers. The server hosting the online course has disabled vulnerable SSL protocols allowing only protocols that are currently deemed safe by the security community such as Transport Layer Security (TLS). Some important forms, such is the registration are protected with Completely Automatic Public Turing Test to Tell Computers and Humans Apart (usually by means of an image with letters and numbers that are not easily recognizable by a machine) (CAPTCHA) fields.

There is also a password policy in place that disallows weak passwords: the password must have at least 8 characters, at least 1 digit(s), at least 1 lower case letter(s), at least 1 upper case letter(s) The servers hosting the Aula Cesga service are placed behind firewall and proxy servers which add another layer of protection against attacks.

Registration forms. In the registering form attendants were asked about the following:

- username and password

- email address

- first name and surname

- city/town and country (optional fields)

- age and gender

- main language

• highest level of education (optional field)

The registering form was mandatory: participants were asked to complete a questionnaire, which showed their digital competence at the beginning of the course. Consortium asked as many as possible to add the information requested in an attempt to collect data for further research.

Certificates. In Spain participants will receive a certificate from A Xunta de Galicia of 35 h. What corresponds to a participant for participating in an Erasmus + project for KA1. In Lithuania participants received a certificate of 40 h from National Agency for Education (for piloting the curse and competences gained). In Italy and Portugal, participants received 25 h competency development certificates.

Course content

To prepare the course content and agree on the course structure were organized several international activities. Project meetings – preparing the course:

- During Feb-March 2020 meeting between the coordinator and Portugal (26 of February 2021). Topics covered:
  - Course contents
  - Platform
  - Evaluation

Participants: Hélder Barbosa; Fernando Carvalo; Marco Barbosa, Antonio Trigo and Milagros Trigo

Participants talked about the tools used for the course and how to correct them. Also, which were the criteria to pass the course.

- Meeting with Italian coordinator March 5, 2021 and the USC. Topics covered:
  - Course contents
  - Platform
  - Evaluation

Participants: Christian Santorelli, Milagros Trigo.

Meeting with Lithuanian partner. The discussion about all the project. Participants: Eglė Vaivadienė, Virginia Navickienė and Milagros Trigo discussed topics related to the course and did a review of the content. The purpose of the meeting was to resolve any questions about the course. During the face-

to-face kick-off meeting in Lithuania (19-20 of November 2019) and online meetings the online course were composed.

Main components and content.

The main objectives of the course were set:

- Increase innovation and quality of education
- Explore new ways to learn / teach and assess in an innovative way
- Develop teaching skills to motivate and train the student
- Implement digital skills and audiovisual literacy

To reach mentioned goals, the structure of the courses is organised in three thematic units which cover all the basic competencies of digital literacy:

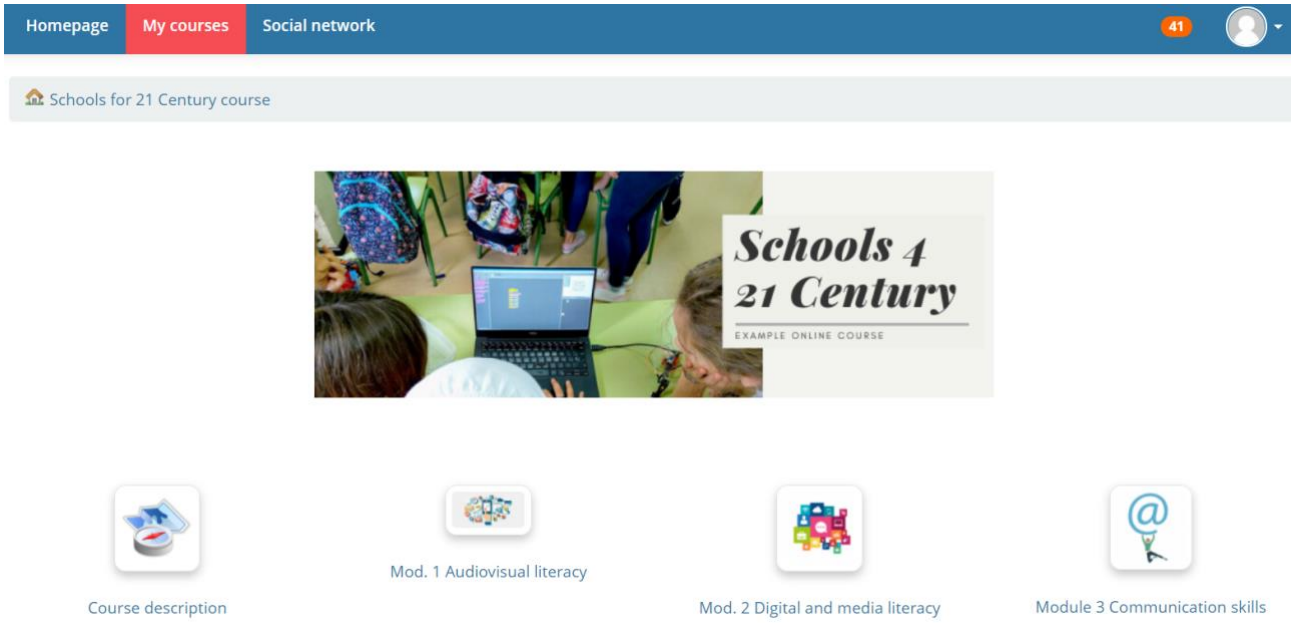


FIGURE 4: Course content.

Course content:

- Course description
- Module 1 Audiovisual literacy
- Module 2 Digital and media literacy
- Module 3 Communication skills
- Module 4 Teachers produce "learning designs" that put theory into practice.

In each thematic module presented introduction to the module, module presentation, different ICT tools, Assignments. Different ICT tools presented from 3 different points of view (What is for; creating; examples), for example in the module 1 Audiovisual literacy:

- PODCAST. What is a podcast and What is it for?
- Create a podcast
- Podcasts - examples

Content of module 1: Audiovisual literacy

- Introduction to module 1
- Module Presentation
- PODCAST
- Video editing- YouTube Editor
- ANIMATIONS - PUPPET PALS
- Animation – CoSpace
- TED TALK

Content of module 2. Digital and media literacy:

- BLOGGING
- Interactive videos - H5P
- Virtual Reality- CESGA APP
- CODING APP INVENTOR
- LIVE WORD CLOUDS- Mentimeter

Content of module of Module 3 Communication skills

- RADIO GENRES
- TALK SHOWS
- FAKE NEWS

All tools are presented in the same way. As well each module includes task for participants. To pass the course participating in the course teachers have to do:

- Two learning practices of the Module 1: participants choose the tools they like and creates learning object using it.

- Two learning practices of the: Module 2, participants choose the tools they like and creates the learning/teaching object using it.
- Module 3: “Make an audiovisual project". This project might be created by 2 teachers and their students.
- Module 4: “Make project”. Participants must develop a project that includes at least one digital tool from those worked in the course; experience it with his/her students and send it along with work samples. This project can also be designed and implemented by 2 teachers and their classes.

In all modules’ participants developing their digital competence by creating, using, sharing, while addressing different topics. Each lecture is supposed to take approximately 45 minutes, but since social forums were opened, participants could elaborate on their learning. This enables the participants to customize their learning. The lectures are also designed in way that does not require doing the whole lecture at once. Participants can choose to do one and one task/content block, and using the app for smartphones be flexible and can work with the course anywhere and at any time. The pilot courses also include an introductory part, as well as a closing section (Module 4). In the closing section, it adds a final test after finishing the course, to check participants’ competencies developed and a link to an evaluation questionnaire, a Padlet has been created for the teachers’ comments and reflection.

Target group:

Target audiences

In a global and hyper-communicated world, it is essential to collaborate between subjects with different profiles with the aim of enriching our teaching and learning practices and leading them to excellence. The incorporation of the media as an active agent and educational resource offers the opportunity to create a broader educational community connected to the real world This Project involves collaboration at a European level between:

- Teachers of Infant, Primary and Secondary Education. University Teachers.
- Higher Education students (future European teachers of Infant, Primary and Secondary Education).
- Educational administrations and permanent training centers for teachers.
- Media companies.
- Technology Center.

- Teachers of primary secondary schools and vocational schools
- Advisors, teachers, trainers …

Main Objectives

- To learn about how to integrate digital projects in students learning
- To know how to engage students in the learning process
- To Identify exactly what innovative practices are appropriate to student engagement in the learning process
- To be able to Implement playful and creative learning environments that foster imaginative solutions, collaboration, innovation and entrepreneurship facilitated through technologies.
- To acquire skills to develop a new didactical approach by designing a sequence of complex tasks with relevant teaching strategies (Analyze Requirements, Identify Learning Objectives., Develop Design. .....)..
- To find new ways to assess digital competences and skills

Learning Outcomes

- Teachers get competent in learning design
- Improved audiovisual, digital and communication literacy of teachers and students
- Teachers become proficient in immersive learning through the use of virtual reality, augmented reality, interactive videos, 3D design ...
- Teachers learn about how to integrate teaching practices in students' curricula
- Methodology of the course
- A general introduction on each of the topics
- Sharing participants' experiences and expertise on the course topics
- Using Learning Design methodology and cutting edge technology for the dissemination of materials
- Learning by doing with the support of professors and trainers
- Working in teams - collaborative learning

Recruitment

Teacher training acts as a critical factor in the quality of teaching. The teacher helps to create a common context of experiences within the classroom that enhances inclusive education.

Technology expands the possibilities of pedagogy, but it does not replace it. Current learning should focus on the content and on the interactions that occur around them.

The digital society requires competencies that educational systems have to develop (personal autonomy, information search, information processing, capacity to create and use augmented reality objects, etc. and that is one of the CHALLENGES that schools must set themselves to offer an innovative and quality education through using suitable pedagogies and tools (Augmented & virtual reality, 3 D printing, Animations, ...)

During the period March 2021 – October 2021, 21st century provided four language courses as pilots in Italian, Lithuanian, English, Portuguese and Spanish. The intention was to pilot Open Educational Resources (OERs) in order to improve teachers' digital competence.
The courses were based on authentic materials, created under the Creative Commons License and delivered for free on a course platform. The courses will remain open and supported for at least five years, and the partners are free to edit and improve the courses throughout the whole period. The courses, both instructions, tasks curriculum and assessments, were delivered in the mother tongue of the languages provided in order to attract at least 30 participants from each country and in the future – as many users as possible. The OERs remained in the mother tongue.

All partners faced the challenge of a pandemic. Due Coronavirus issues and lockdown, piloting of the course was complicated. Remote teaching and learning Heavy workloads, overtime, which affected participation in project activities:

In Spain teachers had sing up in March 2020, but due to COVID-19 pandemic, 4 were on sick leave the whole year. The teachers belong to O Cruce and some are from associated schools. The registration was handled by the USC but were the headmasters from schools who pass the data. The average of submitted task was:

- Module 1. Audiovisual literacy – 76,9%,
- Module 2. Digital and media literacy – 74,4%,
- Module 3. Communication skills – 66,7%,
- Module 4. Learning experiences – 61,5% .

In Portugal the school is very big and participants are from one school. At the end of piloting time 39 participants successfully completed the course. The average of submitted tasks and provided learning experiences was:

- Module 1. Audiovisual literacy – 79,4%,
- Module 2. Digital and media literacy – 79,4%,
- Module 3. Communication skills – 79,4%,
- Module 4. Learning experiences – 82,4%.

In Lithuania, as the partner National Agency for Education is a national body, participants from partner seven different schools were involved. in March 2020. Due to COVID-19 pandemic, the translation of the course into Lithuanian language was done in beginning of March and the registration, teachers sing up started in March 2020 too. In general, 35 participants from seven schools have been registered. Three participants were on sick leave the whole year. At the end of June, the progress of the course was: Mod. 1 Audiovisual literacy - 75%, Mod. 2 Digital and media literacy - 13%, Module 3 Communication skills - 11%. Was taken decision to continue piloting in October 2021 and all participants finished the course. The average of submitted tasks and provided learning experiences was:

- Module 1. Audiovisual literacy – 45,7%,
- Module 2. Digital and media literacy – 48,6%,
- Module 3. Communication skills – 34,3%,
- Module 4. Learning experiences – 31,4 %

In Italy teachers come from the partner school. At the end of June, the progress of the course, submitted tasks and provided learning experiences was:

- Mod. 1 Audiovisual literacy – 62,1%,
- Mod. 2 Digital and media literacy – 62,1%,
- Module 3 Communication skills – 27,6%,
- Module 4. Learning experiences – 41,4%.

Pilot evaluation

The USC registered all participants after they sent the prequestionnaire. All participants filled out post-questionnaire after completing the course. This report summarizes the main findings from all partnership countries.

Piloting overview

A comparative analysis of National Pilot of online Courses.

The activity of the in presence training activities, as can be seen from the table below, were held in the various partner countries from January 2021 until November 2021. The target of participants comprised a number between 30 and 41.

Pilot timeframe

Partner Country	Expected starting date of the course	Expected ending date of the course	Ending date of the course	Planned Number of participants	Number of registered in the course participants
Spain	25th January 2021	7th March 2021	7th May 2021	30	40
Portugal	1st March 2021	23rd May 2021	20th June 2021	30	37
Lithuania	1st March 2021	30th May 2021	30th October 2021	30	41
Italy	1st March 2021	30th May 2021	5th November 2021	30	33

The online training activities were carried out, although according to an agreed planning and precise procedural instructions, with some specificities and differences, in the respect of the different competences of the partner countries and covid-19 pandemic situation, which influenced the ending of the course. In Italy and Portugal piloting was extended till the 20-06-21, in Italy extended till the 05th of November 2021 and in Lithuania till the end of October 2021.

In the piloting of the course participated teachers from Centro Público Integrado O Cruce (Spain), Agrupamento de Escolas de Barcelos school (Portugal), Scuola Secondaria Di Primo Grado A. Criscuolo (Italy), and form 9 Lithuanian schools: Grinkiskis Jono Poderio gymnasium; Kuršėnai Pavenčiai School multifuncion centre of the Šiauliai Region; Velzys Gymnasium Panevezys District; Neringa gymnasium; Vilnius Gediminas Technical Engineering Lyceum; Panevėzys Berzu progymnasium; Panevezys Vytautas Zemkalnis gymnasium; Vytautas Mikalauskas art gymnasium and Kaišiadorys Algirdas Brazauskas Gymnasium.

The participants in all the countries had professional experience in formal education and are teachers of various subjects (e.g. science, arts, ICT, language teachers). Most of them had the role of educator in their institution focused on basic and secondary education. The heterogeneity of the professional profiles allowed the exchange of expertise and acquired competencies.

Piloting overview in each country

The course in Spain was organized the piloting from 25-01- 2021 till 07-05-21 and as it is shown in the table above – extended till 20-06-2021/ For some teachers was need to give an extra time, 7 teachers finished the course at the beginning of June. In Spain have express the intention to participate 40 teachers but only 37 sent the pre-questionnaire because 3 of them were sick leave. Only when the teachers answered the pre-questionnaire, they were registered in the platform. But later another teacher was on sick leave.

When the course was running 4 teachers didn´t start, 2 of them said that it ´ll take too much time and other 2 said the course was more difficult than they expected.

Tasks 3 and 4 of the course were to be done with students so one teacher didn´t like to go on, he was teacher of math. 31 teachers finished the course successfully.

All teachers and their students were engaged with the radio activities very much. Also the animation tools and Virtual Reality was well accepted by some teachers. The activities 3 and 4 also had a very good reception among the teachers. The teachers had support of the USC during the course. Most of the teachers were excited about the course even it was a difficult year at school. There is a Padlet with the teachers' comments: https://es.padlet.com/asocpice/dezy7mz1l7eh37w6 . All of them got 35 h certificate of piloting and attendance.

In Portugal the course started in 01-03-2021 and the plan was to finish the course on 23-05-2021 but because of COVID the school was closed and course piloting was finished on 20-06-21. 37 teachers signed up for the course and 32 of them sent the pre-questionnaire. The course was very well received in Portugal they liked the course, and found the course has a very practical approach. There is a Padlet with the teachers' comments: https://es.padlet.com/asocpice/zvie0q0d05ny67t1 Even all teachers took part in the course till the end those teachers who didn´t do the activities didn´t get the certificate and only 27 teachers filled out the post-test questionnaire and completed successfully finalized the course. All of them got 25 h certificate of piloting and attendance.

In Italy 33 teachers signed up for the course and only 31 send the prequestionnaires but because of the situation with COVID-19 (school had to close) so the course began with delay because the teachers had to teach on line and this take more time then classes face to face and was extend till the 20 of June and at the moment only 19 finished the course, in the application we said the as the school was not very much familiar with this king of projects the partner didn´t have the same commitment as the other partners. The Italian course and others counted with the supported by the

USC however it was because it started with delay if not the partner will have a better result. With the support of USC, 27 teachers successfully finalized the course.

In Lithuania signs up 41 teachers, 35 send the pre questionnaires, one of participants filled it in 3 times. Of the issues of COVID-19 situation and lockdowns, school went to remote learning and teachers needed to learn how to proceed in this situation, organize the remote learning, exams, etc., and the course began with difficulties and delay, as teachers had to reorganize the whole educational process. The piloting of the course was extended till the end of September 2021(as June-August is holiday time in Lithuania). As it was agreed among partners, at the end of June piloting situation was not completed: only 3 finished the course successfully, in the module 1 only 10 of participants submitted the task done. Task of the Module 2 done by 11 participants, of the Module 3 – by 8 participants and module 3 – by 8 participants. The Lithuanian course was supported by the Nacional Agency of Education (two online meetings have been organized) and USC. So, pandemic made a big influence to the piloting of the course. Due to overloaded work at partner institution (NSA) and schools and summer holidays time, the results do not satisfy us. Was taken decision to extend the piloting until the end of October 2021 and the partner got a better result (30 teachers successfully finalized the course). The all of them got 40 h certificate of piloting and attendance.

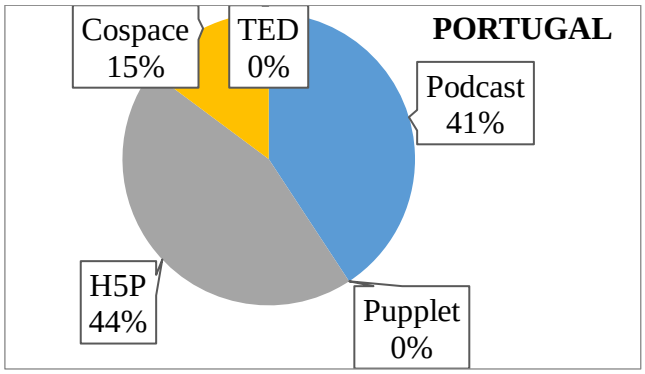
Number of participants throughout the modules:

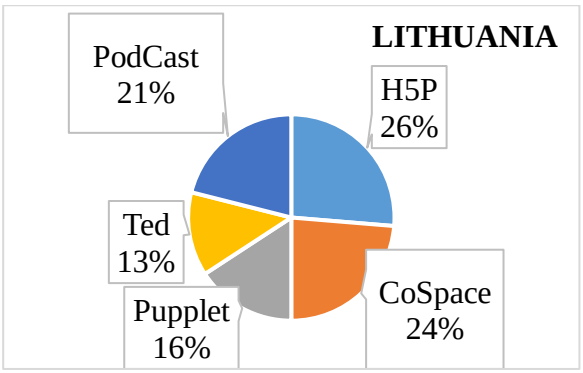
	Subscribed	**Module 1**	**Module 2**	**Module 3**	**Module 4**	**Number of post-test questionnaires completed**
Italy	33	28	27	27	27	14
Lithuania	41	35	35	35	35	30
Spain	40	39	39	38	39	31
Portugal	37	29	29	29	29	27
Total	**151**	**131**	**131**	**130**	**131**	**102**

In the project was planned to involve 30 teachers from each country in the piloting. In general, was involved 151 participants and 102 of them successfully completed the course (total planned number of participants – 120).

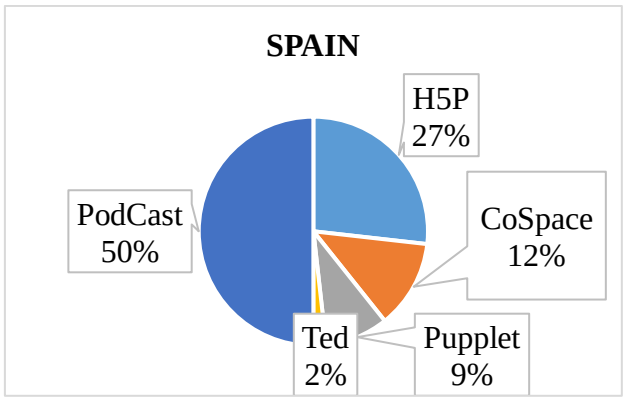
Module 1. The most used tools

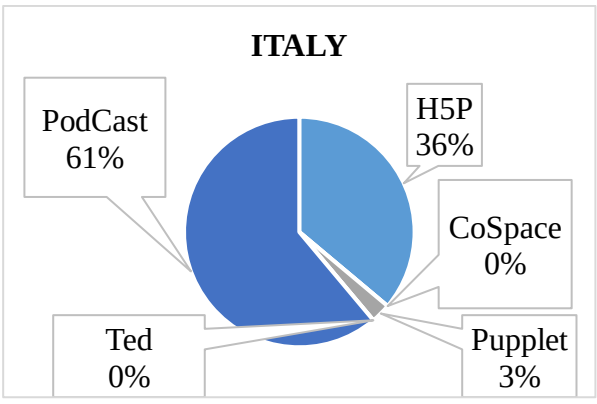
10 different tools were provided in the course on the modules No 1 and No2. The most used tool of first module was Podcast in all countries. The tables below show the popularity of the tools in each county and of the summary of tools popularity in countries:



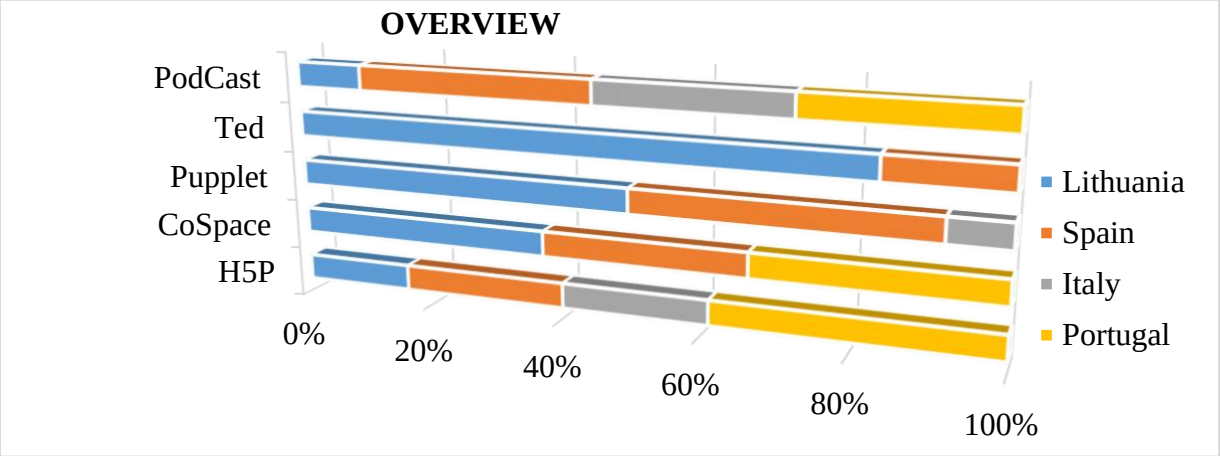


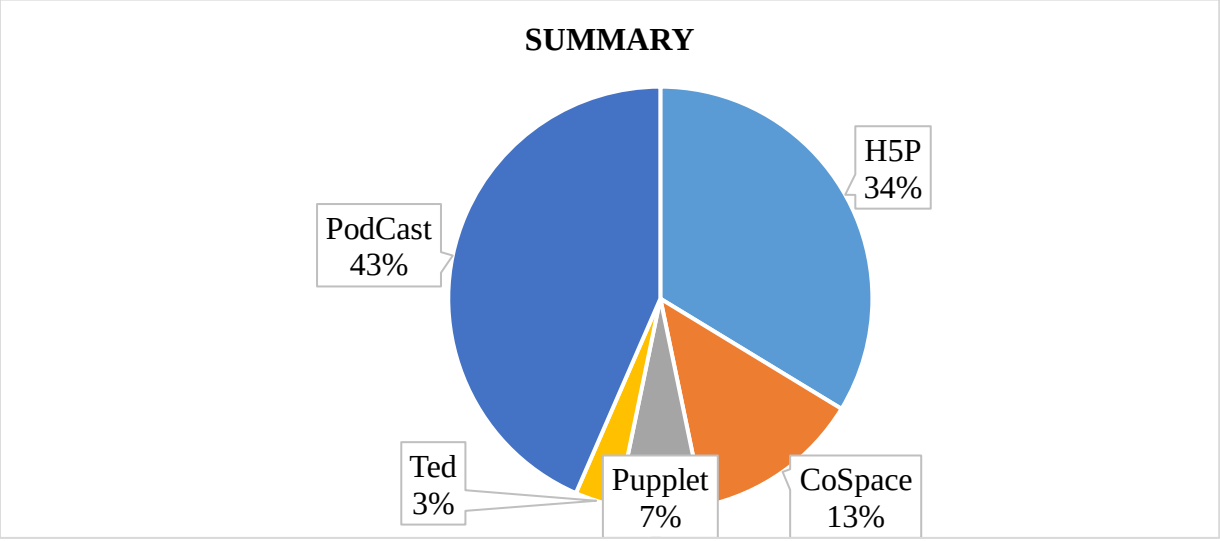
In Portugal (left chart above) and Lithuania (right chart above), the most popular tool was an HTML5-based interactive video content type, which allows users to add multiple choice and fill in the blank questions, pop-up text and other types of interactions to their videos using only a web browser. Interactive video, as one of the most diversified technologies, was chosen by participants because offers numerous opportunities and possibilities for developing effective teaching and learning contexts. Video constitutes a critical factor in achieving learning outcomes and is an effective tool for teaching and learning in various disciplines.





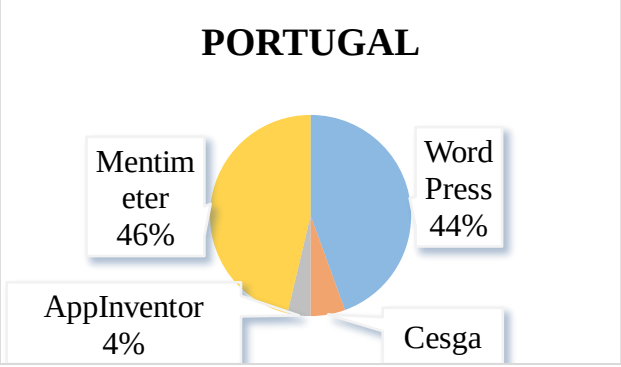
In Spain (left chart above) and Italy (right chart above) the most popular tool was Podcast. Podcasting offers the opportunity for lecturers to easily broadcast engaging audio content, which students can then listen to at any time and wherever they are. Also, a podcast by participants was used to students talk: express their opinion about the topic given, reflect on the lesson learned, etc.

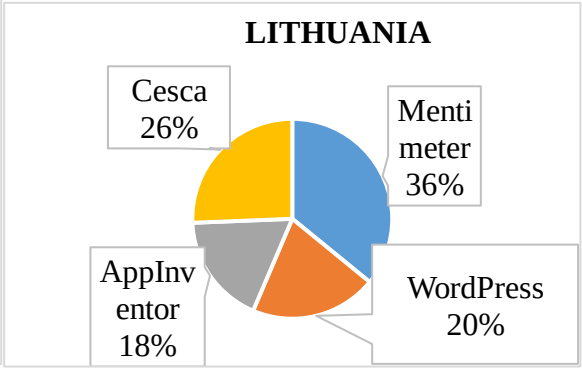




The summary of tools popularity in countries shows, that in general the most popular tool was Podcast.

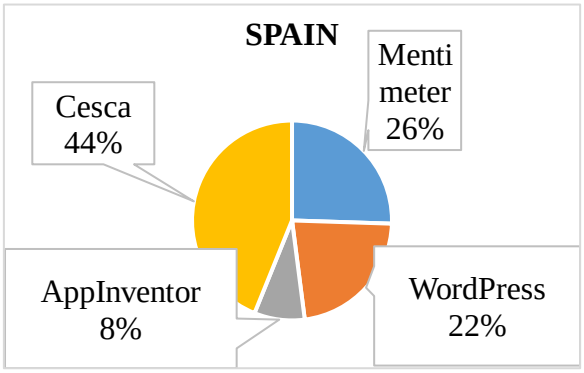
Module 2. The most used tools

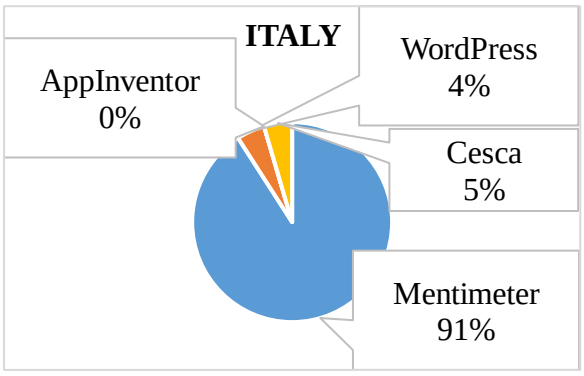




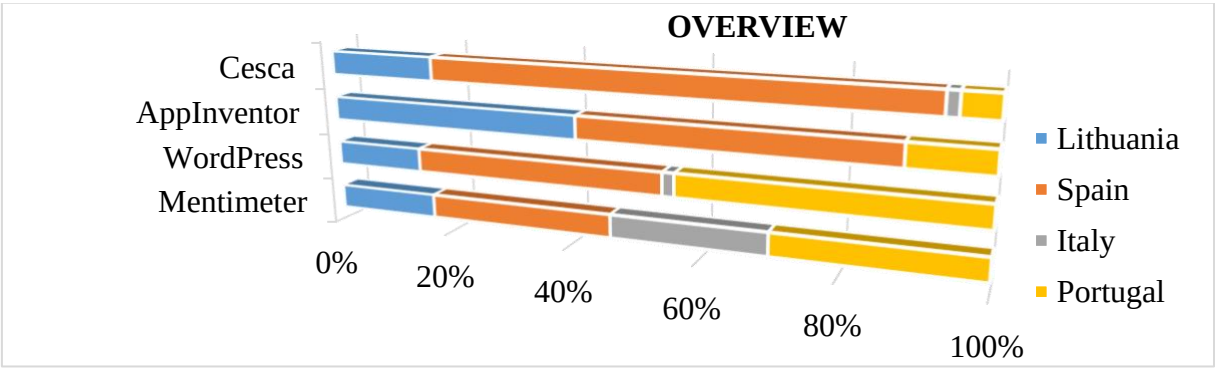
In Portugal (left chart above), Lithuania (right chart above) and Italy (right chart below) the most popular tool was Mentimeter. Mentimeter.com was used to:

- vote,
- see what audience wants to learn,
- prioritize the ideas,
- assess students' knowledge,
- know what are the takeaways from the keynote,
- know what's most important to audience,
- engage the audience throughout an event,
- manage audience's expectations,
- get feedback after the lesson,
- Etc.

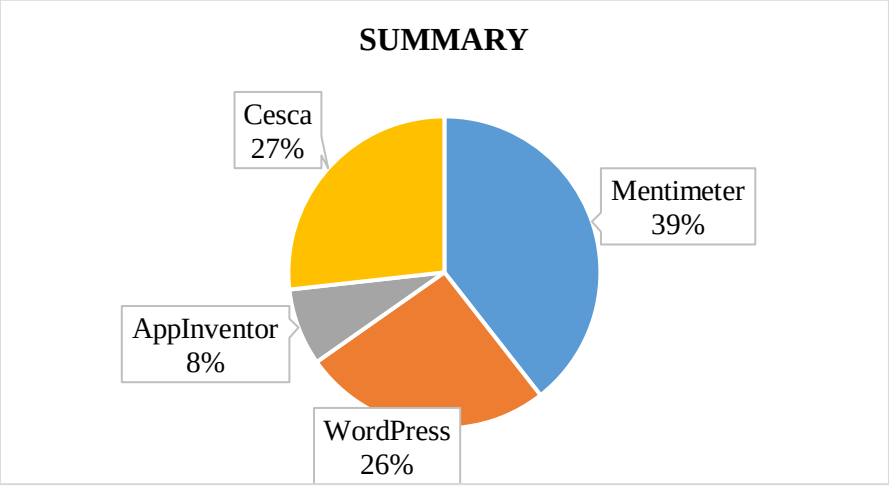




In Spain (left chart above), the most popular was Virtual Reality tool- CESGA APP.



The summary of tools popularity in countries shows, that Cesca and App Inventor tolls were the most used in Spain, WordPress in Portugal, Mentimeter in Portugal and Spain. In Lithuania, the choice of tools was quite proportionate.



In general, the most popular tool was Mentimeter.

Module 3 - the areas covered and their quality

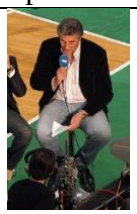
Various radio genres, talk shows, and fake news has been discussed and used as a tool for pupils' involvement. The themes were well chosen. The topic was given by the teacher and/or chosen by students. Project dialogue took place. Music and sound effects were added. Distribution provided with internet platforms like Speaker.com, etc. The main radio genres used were reportage and interview. Subjects covered: history, music, art, literature, technology, etc. Very good student participation. There was a dialogue between one or more interviewers and one or more interviewees. Sound elements and narration were used.

Examples of practices

Throughout the course, participants developed many examples of good practice. The most used tools were shown above. The number of prepared good practices in each module is presented in the table below:

Country	**1 module**	**2 module**	**3 module**	**4 module**
Italy	36	22	14	18
Lithuania	38	39	17	11
Portugal	58	53	40	41
Spain	54	96	38	36
Total	**186**	**210**	**109**	**106**
			Total	**611**

In module 3 and 4 there are fewer examples than in previous modules, because it was an activity that could be done by one or two teachers with one or more classes. Examples of good practices were uploaded to the project platform. A few examples:

	Italy	Lithuania	Portugal	Spain
PODCAST				
	La novella di LISA	Favorite computer game	Interview with the president of 19/20 Student Association	Fernando Romay

Italian, Lithuanian, Spanish and Portuguese partners' participating in the course teachers have done questionnaire and the reflection on the Padlet platform was done by Spanish and Portuguese participant. There is a Padlet with the teachers' comments:

- Spanish: https://es.padlet.com/asocpice/dezy7mz1l7eh37w6
- Portuguese: https://es.padlet.com/asocpice/zvie0q0d05ny67t1

A pre-questionaire and a posquestionaire acording to european frame work of competences was done to evaluate participants comptences. This product was not foreseen in the design of the project but we thought it would be interesting to assess with evidence the results obtained in terms of competences by the teaching staff. The results are being evaluated and will be published shortly in education and scientific journals.

Funded by the Erasmus+ Programme of the European Union

Annex

Teacher- selfassesment

Questionnaire

Schools for 21st Century

COMMON DIGITAL COMPETENCE FRAMEWORK FOR TEACHERS

DIGITAL COMPETENCE FOR TEACHERS

Funded by the Erasmus+ Programme of the European Union

Data protection:

1. By answering this questionnaire you accept your participation in this research and the processing of the information derived from it.
2. This questionnaire will be anonymised in accordance with data protection regulations.
3. Participation in this research is voluntary; once School21C project (and audits) it has been completed, the data will be destroyed.
4. The results of the research linked to this questionnaire will be published (in different journals or other publications).
5. Privacy and data protection policy of the USC: https://www.usc.gal/es/normativa/protecciondatos/Politica-privacidade.html (https://www.usc.gal/es/normativa/protecciondatos/Politica-privacidade.html) The contact details of the data protection delegate of the University of Santiago de Compostela (USC) are: dpd@usc.es (mailto:dpd@usc.es)

KNOW YOUR PERSONAL STRENGTHS AND THE AREAS WHERE YOU CAN IMPROVE THE WAY IN WHICH YOU USE DIGITAL TECHNOLOGIES FOR TEACHING AND LEARNING. ANSWER THE QUESTIONS IN THIS SELF-ASSESSMENT TO DISCOVER YOUR ACHIEVEMENTS.

WE GREATLY APPRECIATE YOUR PARTICIPATION

l THE DURATION OF THE QUESTIONNAIRE IS ESTIMATED TO BE ABOUT 5 MINUTES.

About the Questionnaire

This anonymous questionnaire is part of the "School21C for 21st century" project, funded by the Erasmus + program KA201 agreement 2019-1-ES01-KA201-064187; Its objective is to reflect through the teachers' self-perception on their level of digital teaching competence and Identify possible areas for improvement. It takes as a reference the adaptation of the "DigCompEdu CheckIn" questionnaire published in 2017 by JRC based on the European digital competence framework for teachers and its subsequent adaptation by Cabero, J and Palacios, A.

We invite you to self-evaluate with 22 items that are representative of the 22 competencies of the European framework of digital competence (DigCompEdu)

1. ¿Cómo crees que es actualmente tu competencia digital como docente? Asigna un nivel de competencia de A1 a C2, donde A1 es el más bajo y C2 el más alto. Probablemente soy un/a...

Choose an aswer

- ☐ A1 Foundation
- ☐ A2Foundation level
- ☐ B1 Intermediate level
- ☐ B2 Intermediate level
- ☐ C1 Advanced level
- ☐ C2 Advanced level

Area 1: Professional Commitment

Teachers' digital competence is expressed in their ability to use digital technologies not only to improve teaching, but also to interact professionally with classmates, students, family and different agents of the educational community. In addition, this communication through technology allows individual professional development and collective and continuous innovation in the educational organization. This is the focus of Area 1.

Response options are organized by different levels of engagement with digital technologies. Choose the option that best reflects your current practice.

☐ **2. I systematically use different digital channels to improve communication with students, families and my colleagues. For example: emails, WhatsApp messaging applications, blogs, the school website…** *Choose an aswer*

I rarely use digital communication channels
☐ I use basic digital communication channels. For example, email.
☐ I combine different communication channels. For example: email, class blog, center website, ...
☐ I systematically select, adjust and combine different digital solutions to communicate effectively.
☐ I reflect, discuss and proactively develop my communication strategies

☐ **3. I use digital technologies to work with my colleagues inside and outside my educational organization**. *Choose an aswer*

☐ I rarely have the opportunity to collaborate with other colleagues
☐ Sometimes I exchange materials with colleagues. For example: via pendrive, email ...
☐ Between colleagues, we work together in collaborative environments or use shared drives.
☐ I exchange ideas and materials with teachers outside my organization. For example, in online teacher network.
☐ I create materials collaboratively with other teachers on an online network.

☐ **4. I actively develop my digital teaching competence.** *Choose an aswer*

☐ I rarely have time to work on my digital teaching competency
☐ I improve my competence through reflection and experimentation.
☐ I use different resources to develop my teaching digital competence.
☐ I discuss with my colleagues how to use digital technologies to innovate and improve educational practice.
☐ I discuss with my colleagues how to use digital technologies to innovate and improve educational practice

☐ **5. I participate in online training courses. For example: administration online courses, MOOCs, webinars ...** *Choose an aswer*

☐ It is something I have not considered yet.
☐ Not yet, but I'm interested in it.
☐ I have participated in 1 or 2 online teacher training courses.

☐ I have participated in more than 2 online teacher training courses
☐ I frequently participate in all kinds of online courses that enhance my training as a teacher.

Area 2: Digital Resources

One of the key competencies that any teacher must develop is to identify good educational resources. Additionally, she must be able to modify, create, and share them to suit her goals, learners, and teaching style. At the same time, she must know how to use and manage digital content responsibly, respecting copyright rules and protecting personal data. These themes are the heart of Area 2.

Response options are organized by different levels of engagement with digital technologies. Choose the option that best reflects your current practice.

☐ **6. I use different internet sites (web pages) and search strategies to find and select a wide range of digital resources.** *Choose an aswer*

☐ I rarely use the internet to find resources.
☐ I use search engines (eg Google) and / or educational platforms to find educational resources.Evalúo y selecciono los recursos digitales que encuentro en función de su idoneidad para mi grupo de alumnos.
☐ I compare resources using a set of criteria relevant to my educational practice. For example: quality, pedagogical adjustment, design and interactivity ...
☐ I advise colleagues on suitable digital resources and search strategies for them..

7. I create my own digital resources and modify existing ones to adapt them to my needs as a teacher. *Choose an aswer*

☐ No I don't create my own digital ressouces
☐ I create activity sheets with the computer and then print them.
☐ I create digital slide shows. For example: Power Point, Prezi ...Creo y modifico diferentes tipos de recursos digitales.
☐ I configure and adapt complex and interactive resources, For example interactive video, Virtual Reality, animation; podcasts, Media education, Radio Programs- Radio journalism,

☐ **8. I protect sensitive content safely. For example: exams, grades, personal data** ... *Choose an aswer*

☐ I don't need to do that, because the school takes care of this.
☐ I avoid storing personal data electronically.
☐ I protect some personal data.
☐ I password-protect files with personal data.
☐ I comprehensively protect personal data. For example: combining hard-to-guess passwords, encrypting files, performing frequent software updates ...

Área 3: Digital Pedagogy

The fundamental competence of the entire DigCompEdu framework is knowing how to design, plan and implement the use of digital technologies in the different stages of the teaching and learning process. In addition, a change in approaches and methodologies that are student-centered is advocated. This is the real power of digital technologies and the most important aspect of Area 3.

Response options are organized by different levels of engagement with digital technologies. Choose the option that best reflects your current practice.

9. I carefully consider how, when and why to use digital technologies in class, to ensure that their added value is harnessed. Choose an aswer

☐ I do not or rarely use technology in class
☐ I make basic use of the equipment available. For example: audio equipment, television, projector, digital whiteboard …
☐ I use a wide variety of digital strategies in my teaching.
☐ I use digital tools to systematically improve teaching.
☐ Uso herramientas digitales para implementar estrategias pedagógicas innovadoras.

10. I monitor the activities and interactions of my students in the online collaborative environments that we use. *Choose an aswer*

☐ I don't use digital environments with my students.
☐ I do not monitor student activity in the online environments we use.
☐ De From time to time I review them and take it into account
☐ I regularly monitor and analyze my students' online activity.
☐ I regularly intervene with comments to motivate or correct the online activity of my students

11. When my students work in groups or teams, they use digital technologies to acquire and document knowledge. *Choose an aswer*

.

☐ My students do not work in groups
☐ It is not possible for me to integrate digital technologies into group work.
☐ I encourage students working in groups to search for information online or to present their results digitally.
☐ When working in groups, I always ask that they use the Internet to find information and present their results in digital format.
☐ My students share and create knowledge together in a collaborative online space. For example: class blog, virtual platform, wiki, podcasts, Radio Programs- Radio journalism... …

12. I use digital technologies to allow students to plan, document, and assess their learning on their own. For example: self-assessment tests, digital portfolio, blogs, forums ... *Choose an aswer*

.

☐ It´s not possible in my working environment..
☐ My students reflect on their learning, but not with digital technologies.
☐ I Sometimes use, for example, tests for self-assessment

☐ I use a wide variety of digital tools to enable students to plan, document or reflect on their learning..
☐ I systematically integrate different digital tools to enable learners to plan, monitor and reflect on their progress

Área 4: Evaluación y Retroalimentación

Digital technologies can improve existing assessment strategies and lead to new and better assessment methods. Additionally, by analyzing the vast amount of (digital) data available on individual students' (inter-) actions, teachers can offer more specific feedback and support. Area 4 addresses this change in assessment strategies.

Response options are organized by different levels of engagement with digital technologies. Choose the option that best reflects your current practice.

13. I use digital assessment strategies to monitor student progress. Choose an answer.

☐ I do not monitor student progress.
☐ I monitor student progress regularly, but not with digital media
☐ I sometimes use digital assessment tools. For example: a questionnaire, online multiple choice tests ...
☐ I use a wide variety of digital tools to assess and monitor student progress.
☐ I consistently use a wide variety of digital tools to assess and monitor student progress.

14. I analyze all available data to identify students who need additional support. "Data" includes: student participation, performance, grades, attendance, activities and social interactions in online settings ... The "students who need additional support" are: those at risk of dropping out of school, poor performance, learning disorder , specific learning needs or lack of transversal skills (social, verbal or study skills). Choose an answer

☐ These data are not available and / or it is not my responsibility to analyze them.
☐ I only analyze academically relevant data. For example: performance, grades ...
☐ I consider data on student activity and behavior to identify students who need additional support.
☐ I regularly examine all available evidence to identify students who need additional support.
☐ I systematically analyze data, identify students in need of additional support, and intervene in a timely manner.

15. I use digital technologies to provide effective feedback. Choose an answer**.**

☐ Feedback is not necessary in my work environment.
☐ I provide feedback to students, but not in digital form.
☐ I sometimes use digital ways to provide feedback. For example: automatic scores in online quizzes, comments or "likes" in online environments ...
☐ I use a wide variety of digital forms of feedback.
☐ I systematically use digital media to provide feedback.

Área 5: Empower Students.

One of the key strengths of digital technologies in education is their potential to promote the active participation of students in the learning process and their autonomy over it. In addition,

digital technologies can be used to offer learning activities tailored to each student's level of competence, interests and learning needs of her. However, care must be taken not to exacerbate existing inequalities (for example, in access to digital technologies) and to ensure accessibility for all students, including those with special learning needs. Area 5 addresses these issues.Las opciones de respuesta están organizadas por distintos niveles de compromiso con las tecnologías digitales. Elige la opción que mejor refleje tu práctica actual.

16. When proposing digital tasks, I consider and address potential issues such as equal access to digital devices and resources; compatibility problems or low level of digital competence of students. Choose an answer

☐ I don't usually propose digital tasks.
☐ My students have no problems with the use of digital technology.
☐ I adapt the task to minimize difficulties.
☐ I discuss possible obstacles with the students and propose solutions.
☐ I am flexible with digital tasks, I allow variety. For example: I adapt the task, discuss solutions, offer alternative ways to complete the task ...

17. I use digital technologies to offer students personalized learning opportunities. For example: assigning different digital tasks to address individual learning needs, taking into account preferences and interests ... Choose an answer

.

☐ In my classes, all students must do the same activities.
☐ I provide students with additional digital resources.
☐ I provide optional digital activities for students who have a more advanced level or need reinforcement.
☐ Siempre que es posible, uso tecnologías digitales para ofrecer oportunidades de aprendizaje diferenciadas.
☐ Adapto sistemáticamente mi enseñanza para vincularla con las necesidades, preferencias e intereses individuales de aprendizaje de los estudiantes.

18. I use digital technologies so that students participate actively in class. Chose an answer.

☐ It is not possible to actively involve students in my classes.
☐ I actively involve students, but not with digital technologies.
☐ In my classes, I use motivational digital stimuli. For example: videos, animations, cartoons …
☐ In my classes, I use motivational digital stimuli. For example: videos, animations, cartoons
☐ My students systematically use digital technologies to research, discuss and create knowledge, eg Podcasts, Radio Programs- Radio journalism.

Área 6: Facilitate the Digital Competence of Students

The ability to facilitate students 'digital competence is an integral part of teachers' digital competence and is the main theme of Area 6.

Response options are organized by different levels of engagement with digital technologies. Choose the option that best reflects your current practice.

19. I teach students how to assess the reliability of information searched online and to identify erroneous and / or biased information. Choose an aswer

☐ This is not possible in my subject or work environment.
☐ I remind you from time to time that not all information online is reliable.
☐ I teach them to distinguish between reliable and unreliable sources.
☐ I discuss with the students how to verify the accuracy of the information.
☐ We thoroughly discuss how information is generated and can be distorted.

20. I propose tasks that require students to use digital media to communicate and collaborate with each other or with an external audience. Chose an answer

☐ This is not possible in my subject or working environment.
☐ Only rarely are my students required to communicate or collaborate online.
☐ My students use digital communication and cooperation mainly among themselves.
☐ My students use digital ways to communicate and cooperate with each other and with an external audience.
☐ I schedule systematic assignments that allow students to expand their communication skills by communicating with each other and with external audiences.

21. I propose assignments that require students to create digital content. For example: videos, audios, photos, presentations, blogs, wikis, podcasts, Radio Programs- Radio journalism ...

☐ This is not possible in my subject or work environment.
☐ This is difficult to implement with my students.
☐ Sometimes as a fun activity.
☐ My students create digital content as an integral part of their learning.
☐ Es una parte integral de su aprendizaje y sistemáticamente incremento el nivel de dificultad para desarrollar más sus habilidades.

22. I teach students how to behave safely and responsibly online. Choose an answer
.
☐ This is not possible in my subject or working environment
☐ I inform them that you should be careful when transmitting personal information online.
☐ I explain the basic rules to act safely and responsibly in online environments.
☐ We discuss and agree rules of behavior online.
☐ We systematically develop social rules for students in the different digital environments we use.

23. I encourage students to use digital technologies creatively to solve concrete problems. For example, I knew remove obstacles or emerging challenges in their learning process. Choose an answer.

☐ This is not possible with my students due to the work environment.
☐ I rarely have the opportunity to encourage students to problem solving with digital tools.
☐ Occasionally, whenever an opportunity arises.
☐ We often experiment with technological solutions to specific problems.
☐ I consistently integrate tasks for problem solving creatively and with digital tools.

Finally... …
Some questions about you.

To improve this questionnaire, we would like to ask you a few questions about yourself. We will only use this information to better understand what type of user you are.

24 Name .....
25 Country: incluir las opciones de los países del proyecto
26 School:
27 Genero

- **Male**
- **Female**
- **Non-binary**
- **I prefer not to indicate**

28 Please indicate your age (number)
29 For how many years have you been Teaching (number)
30In which educational level do you teach?

- **Kindergarten**
- **Primary**
  Secondary
- **High schol**
- **Vocational training**
- **Other_____**

31 What subject(s) do you teach?

- **Kindergarten teacher**
- **Generalist teacher - Primary**
- **Education/guidance practitioners**
- **Experimental Sciences**
- **Foreign Languages**
- **Mathematics**
- **Music**
- **Native Language**
- **Philosophy**
- **Plastic and Visual Arts**
- **Social Sciences**
- **Technology and Information**
- **Physical Education**
- **Others_____**

32. How many years have you been using technology as an educational tool? (number**)**

What kind of digital tools do your students use for their learning? you can choose several answers

☐ Listening audios
☐ Create audios
☐ Watch videos
☐ Create videos
☐ Slide shows
☐ Educational websites
☐ online activities
☐ Online quizzes

☐ Educational platform
☐ Videogames
☐ Digital posters, concept maps, planning tools ...Blogs o wikis
☐ Robotics
☐ Gamificación (Kahoot, Plickers, Menti...)
☐ Virtual reality/Augmented Reality
☐ Podcasts; Media Education
☐ Radio Programmes- Radio journalism,.
☐ Animations
☐ Otros: _____

☐ **More or less, what percentage of time do you spend using technology in clas**s? Choose an answer x.0-10%

☐ 11-25%
☐ 26-50%
☐ 51-75%
☐ 76-100%

35. n your day to day ... mark the affirmative answers.

	Strongly disagree	In disagreement	Neither agree nor disagree	**Agree**	Strongly agree
I know how to operate a computer.					
I can operate a tablet.					
I can handle a smartphone.					
I consider myself competent when it comes to handling the internet.					
I consider myself competent in the handling of Radio Programs, Radio Journalism					
I'm curious about new apps, programs, and digital resources.					

36 In your work… mark the affirmative answers.

	Strongly disagree	In disagreement	Neither agree nor disagree	**Agree**	Strongly agree
Dispongo de pizarra digital en todas las aulas.					
I have tools for the production of Podcast, Radio Programs, Radio Journalism					
Students have access to digital devices (laptops and / or tablets) in the classroom.					

The school's internet connection is of high quality.					
My students have access to digital devices connected to the internet at home.					
The school administration supports the integration of digital technologies in the classroom.					
The curriculum facilitates the use of digital technologies in the classroom.					
My classmates use digital technologies in the classroom.					

☐ **37 How would you evaluate your teaching digital competence after answering the questionnaire? Assign a proficiency level from A1 to C2, where A1 is the lowest and C2 is the highest. Probably a ...** *Mark only an answer*.

- ☐ A1 Foundation
- ☐ A2Foundation level
- ☐ B1 Intermediate level
- ☐ B2 Intermediate level
- ☐ C1 Advanced level
- ☐ C2 Advanced level

Thank you very much for your cooperation