

# MAPPING DIGITAL TECHNOLOGIES IN SCHOOLS



Success for every child in the virtual world and inclusion in the real world



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## I. INTRODUCTION

This report is part of the mapping of digital technologies in the project's partner schools with the aim of comparing technological resources, the use of technology in teaching practices, digital security and the level of digital literacy of students.

In view of the results of the questionnaires, some recommendations will be suggested to improve the performance of schools in these areas

These objectives are part of work package nº 3 "Inclusion in the virtual world", which is the responsibility of Escola Secundária Manuel Cargaleiro, Portugal.

Three questionnaires were created (school headmasters, teachers and students), adapted from SELFIE (Self-reflection on Effective Learning by Fostering the use of Innovative Educational technologies), a free tool designed to help schools embed digital technologies into teaching, learning and assessment and and the European Union guidelines for assessing digital competences.

The scale of answers for most of the questions in the questionnaires for head teachers and teachers follows the SELFIE guidelines:

1. Strongly disagree – I/we/they do not do this // Strongly disagree –In my experience, this is not true at all
2. Disagree
3. Slightly agree
4. Agree
5. Strongly agree – I/we/they do this really well // Strongly agree –In my experience, this is very true

In the student questionnaire, we used simpler response scales appropriate to the type of question.

The following number of responses were obtained from 24 April to 31 May 2023

- 5 school headmasters (Leaders School)
- 65 teachers
- 281 students

We would like to thank everyone involved in mapping the digital technologies of the partner schools in the project Erasmus "Success or every child in the virtual world and inclusion in the real word":

- Zakladni skola, Uherske Hradiste, Za Aleji, Czech Republic
- Osnovna škola Bol, Croatia
- Colegio Nuestra Señora Del Rosario, Spain
- Pumpuru vidusskola, Latvia
- Escola Secundária Manuel Cargaleiro, Portugal

We hope that the results will contribute to a reflection on digital technologies and the use we make of them, in favour of improving school results.

## II. SCHOOL LEADER

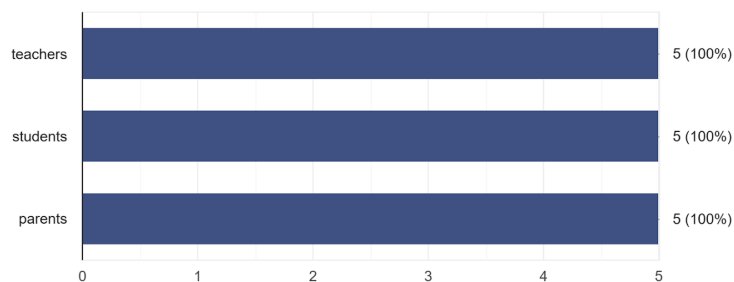
### 1. GENERAL CHARACTERIZATION OF THE SCHOOL

The schools have different characteristics in terms of their human resources. The total number of students is between 430 and 1,060.

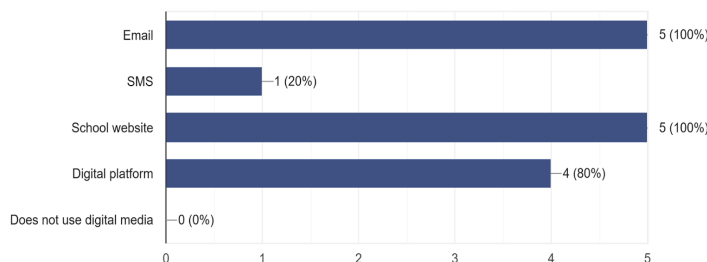
The number of pupils between the ages of 11 and 15 is between 220 and 350. The total number of teachers is between 41 and 109.

All the principals of the project's partner schools use information and communication technologies to communicate with teachers, students and parents, with a predominant use of email, the school website and digital platforms.

5. Does the school management use technology to communicate with...  
5 respostas



6. Usually, the school management uses the following digital means of communication.  
5 respostas



As for digital security, only one of the schools is recognized with the eSafety Label, portuguese school.

The schools can obtain one of the following labels, based on their school's level of online safety and other factors assessed through the evaluation process.

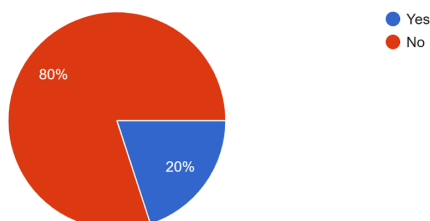
Iron - basic online safety level

Bronze - minimal awareness of online safety

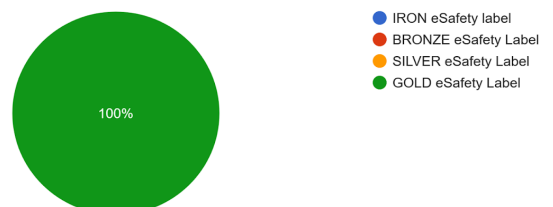
Silver - more advanced approach to online safety

Gold - outstanding practice in all areas of online safety and education on online safety

7. Your school has an eSafety Label.  
5 respostas



7.1 If yes, which one?  
1 resposta

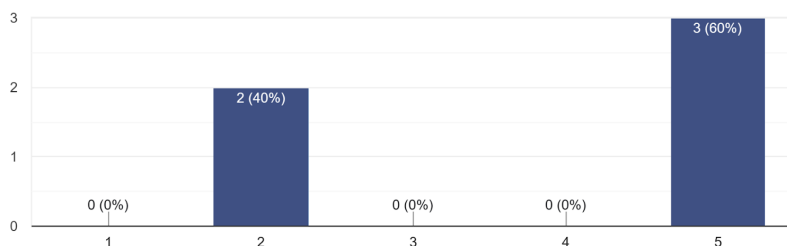


## 2. LEADERSHIP

Although the majority of schools do not have the eSafety Label recognition, 3 of the schools have a Digital Action Plan or a digital strategy (Czech Republic, Spain and Portugal).

1. In our school, we have a Digital Action Plan or a digital strategy.

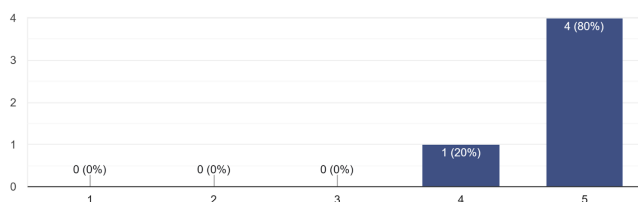
5 respuestas



With or without a digital strategy, all schools promote teaching and learning with the use of digital technologies, the sharing of digital resources and the application of copyright and licensing rules when using digital technologies for teaching and learning.

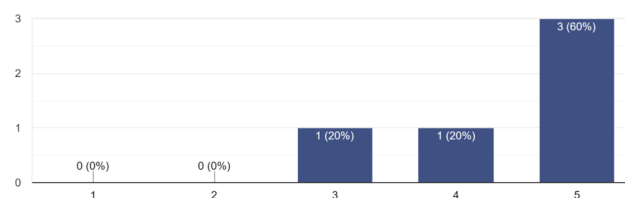
2. We support teachers to try out new ways of teaching with digital technologies.

5 respuestas



3. In our school, we apply copyright and licensing rules when using digital technologies for teaching and learning.

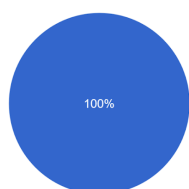
5 respuestas



4. Does the school have subscriptions to digital applications/tools shared with all teachers? For

example: Padlet

5 respuestas



● Yes  
● No

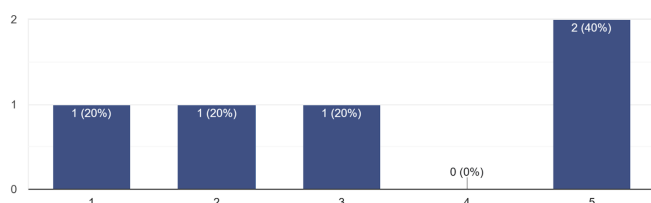
## 3. COLLABORATION AND NETWORKING

In three of the schools (Czech Republic, Spain, Portugal), the management provides collaborative working hours in the teachers' schedule to teach and apply digital technologies.

All schools use digital technologies in their partnerships with other organisations.

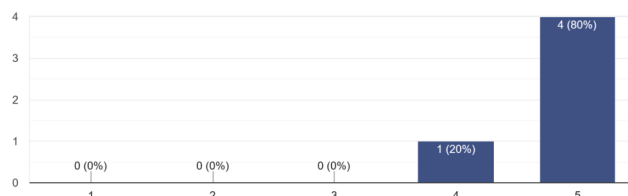
1. Our school provides collaborative working hours in the teachers' schedule to teach and apply digital technologies.

5 respuestas



2. In our school, we use digital technologies in our partnerships with other organisations.

5 respuestas

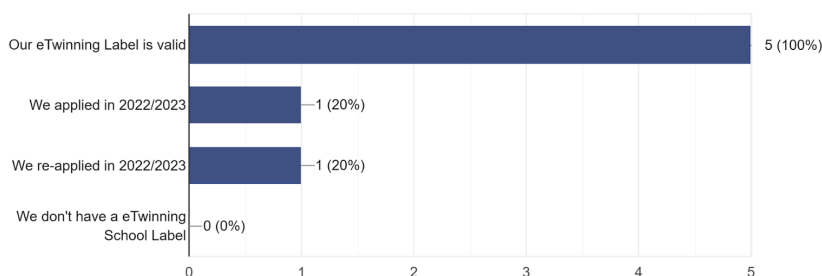


## 4. COLLABORATION AND NETWORKING

As an example of eTwinning, an international platform that encourages collaborative work, all the schools have been awarded the eTwinning School Label.

3. Mention the school situation referring to the eTwinning School Label.

5 respuestas

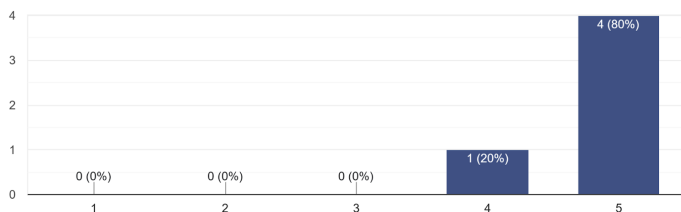


## 5. INFRASTRUCTURE AND EQUIPMENT

All schools have digital devices to use for teaching, with access to the Internet for teaching and learning, technical support is available in case of problems with digital technologies and data protection systems in place.

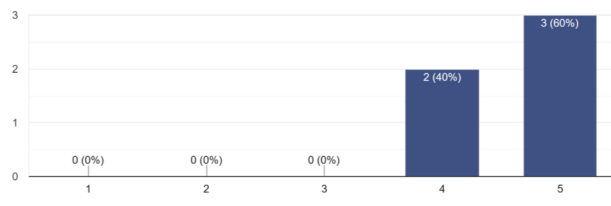
1. In our school, there are digital devices to use for teaching.

5 respuestas



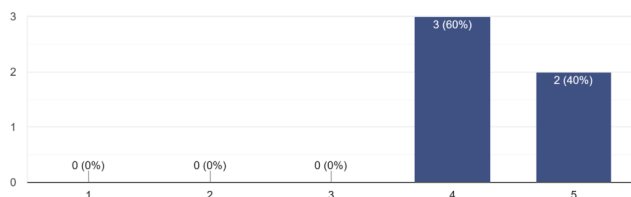
2. In our school, there is access to the Internet for teaching and learning.

5 respuestas



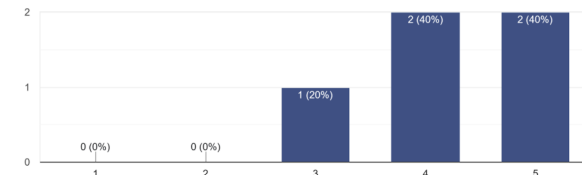
3. In our school, technical support is available in case of problems with digital technologies.

5 respuestas



4. In our school, there are data protection systems in place.

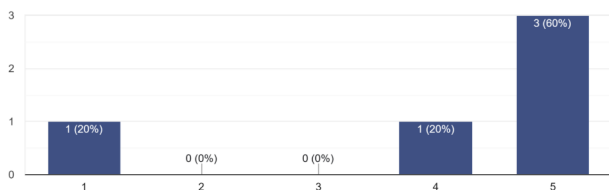
5 respuestas



Regarding the provision of computers to students, it can be concluded that four of the schools provide computers for students to work on at home (except for Spain), , if necessary, and four of the schools (except for Czech Republic) allow the use of personal computers during lessons.

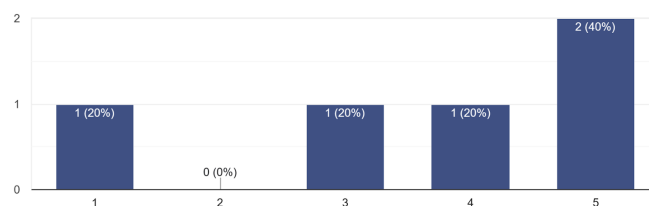
5. In our school, there are school owned and managed portable devices that students can take home when needed.

5 respuestas



6. In our school, students bring and use their own portable devices during lessons.

5 respuestas

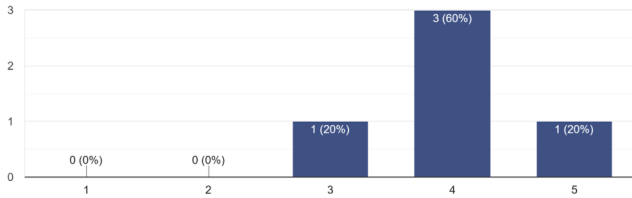


## 6. INFRASTRUCTURE AND EQUIPMENT

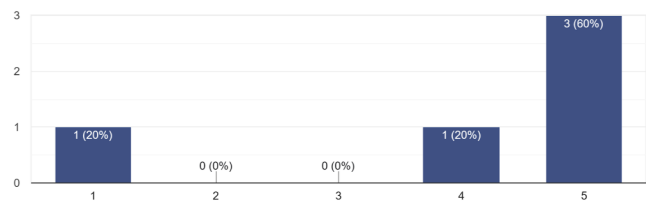
All schools physical spaces support teaching and learning with digital technologies.

With the exception of the school in Croatia, students who need special support have access to assistive technology.  
In four of the schools (Czech Republic, Latvia, Spain and Portugal) there are online libraries or repositories with teaching and learning materials.

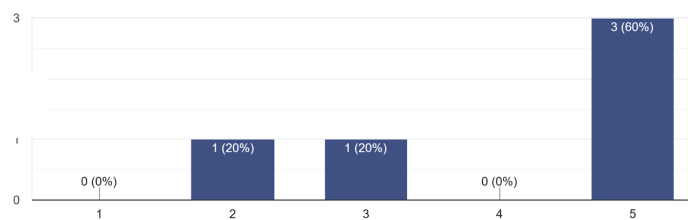
7. In our school, physical spaces support teaching and learning with digital technologies.  
5 respostas



8. In our school, students in need of special support have access to assistive technologies.  
5 respostas



9. In our school, there are online libraries or repositories with teaching and learning materials.  
5 respostas

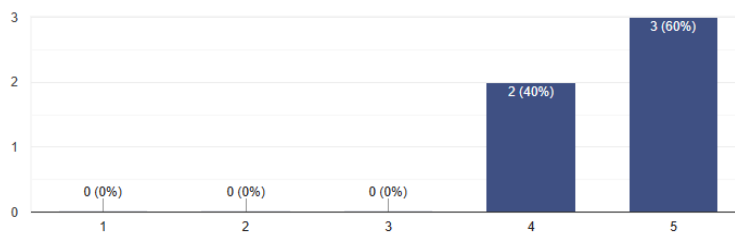


## 7. CONTINUING PROFESSIONAL DEVELOPMENT

In all schools, the teachers have opportunities to participate in CPD (Continuing Professional Development) for teaching and learning with digital technologies e all school management support our teachers to share experiences within the school community about teaching with digital technologies.

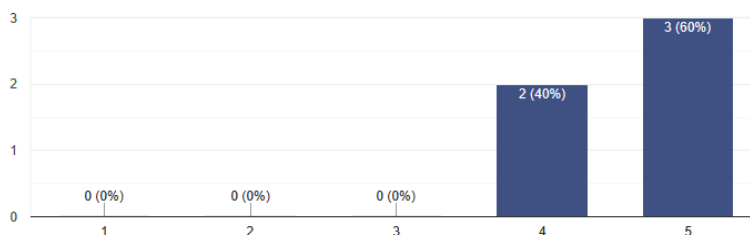
1. Our teachers have opportunities to participate in CPD for teaching and learning with digital technologies.

5 respostas



2. We support our teachers to share experiences within the school community about teaching with digital technologies.

5 respostas



### III. TEACHERS

The overall analysis of the questionnaires answered by the teachers surveyed leads to the conclusion that:

#### 1. PEDAGOGY: SUPPORTS AND RESOURCES

All teachers use digital educational resources and create their own teaching resources. All of them use virtual environments with students, digital communication technologies and open educational resources.

#### 2. PEGAGOGY: IMPLEMENTATION IN THE CLASSROOM

All teachers, to a diferent degrees, implement pedagogical practices using technology for students with special needs; to promote student creativity; to develop activities that engage students; to facilitate collaborative work between students.

#### 3. ASSESSEMENT PRACTISES

The use of technology for assessment practices is used by all teachers to assess their students' competences, to provide timely feedback to students, to enable students to reflect on their own learning and to enable students to provide feedback on other students' work, with the exception of Portugal which does not use technology in this last item.

#### 4. STUDENT DIGITAL COMPETENCE

All teachers, to a diferent degrees, the students learn how to behave safely online and how to behave responsibly when they are online.

The students learn how to check if the information they find online is reliable and accurate and how to communicate using digital technologies.

Teachers recognise that their school leaders ensure that students develop their digital skills across subjects.

Teachers recognise that their students learn coding or programming and how to solve technical problems when using digital technologies.

Schools in Latvia and the Czech Republic are the best performers at developing their students' digital competences.

	LATVIA	SPAIN	CZECH REPUB	CROATIA	PORTUGAL
<b>A. PEDAGOGY: SUPPORTS AND RESOURCES</b>					
1. digital educational resources	Strongly agree	Strongly agree	Strongly agree	Strongly agree	Strongly agree
2. create digital resources	Strongly agree	Disagree	Disagree	Disagree	Strongly agree
3. use virtual learning	Slightly agree	Strongly agree	Disagree	Disagree	Disagree
4. digital technologies for communication	Strongly agree	Strongly agree	Strongly agree	Disagree	Strongly agree
5. open educational resources	Disagree	Disagree	Strongly agree	Strongly agree	Disagree
<b>B. PEGAGOGY: IMPLEMENTATION IN THE CLASSROOM</b>					
1. digital technologies to students' individual needs.	Slightly agree	Disagree	Slightly agree	Disagree	Disagree
2. digital technologies to foster students' creativity.	Disagree	Disagree	Slightly agree	Disagree	Disagree
3. digital learning activities that engage students	Slightly agree	Strongly agree	Slightly agree	Disagree	Disagree
4. digital technologies to facilitate students' collaboration	Strongly agree	Disagree	Disagree	Disagree	Disagree
<b>C. ASSESSEMENT PRACTISES</b>					
1. digital technologies to assess students' skills	Slightly agree	Disagree	Strongly agree	Disagree	Disagree
2. digital technologies to feedback to students	Disagree	Disagree	Strongly agree	Disagree	Disagree
3. digital technologies to reflect on their own learning	Disagree	Disagree	Disagree	Disagree	Slightly agree
4. digital technologies to feedback on other students' work	Slightly agree	Disagree	Slightly agree	Slightly agree	Disagree
<b>D. STUDENT DIGITAL COMPETENCE</b>					
1. students learn how to behave safely online	Strongly agree	Disagree	Strongly agree	Disagree	Disagree
2. students learn how to behave responsibly when they are online	Strongly agree	Disagree	Strongly agree	Strongly agree	Slightly agree
3. students learn how to check if the information	Strongly agree	Slightly agree	Strongly agree	Disagree	Slightly agree
4. students learn to communicate using digital technologies	Strongly agree	Disagree	Strongly agree	Strongly agree	Strongly agree
5. ensure that students develop their digital skills across subjects	Strongly agree	Strongly agree	Disagree	Disagree	Disagree
6. students learn coding or programming	Strongly agree	Slightly agree	Strongly agree	Disagree	Slightly agree
7. students learn how to solve technical problems	Disagree	Slightly agree	Disagree	Disagree	Slightly agree

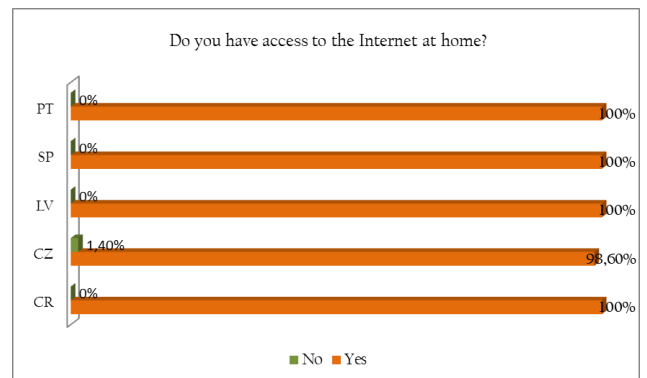
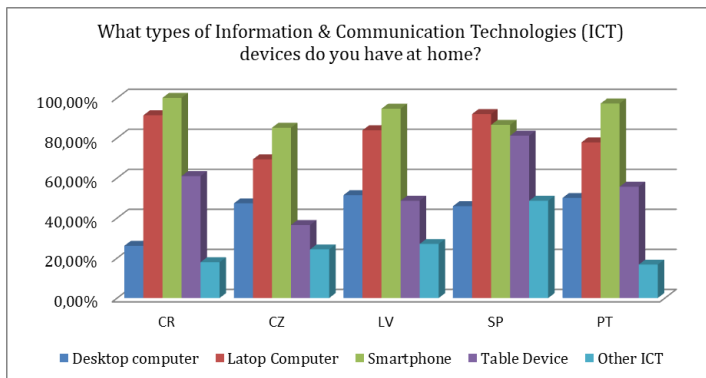
Strongly agree	Strongly agree – I/we/they do this really well // Strongly agree –In my experience, this is very true
Agree	Agree
Slightly agree	Slightly agree
Disagree	Disagree
Strongly disagree	Strongly disagree – I/we/they do not do this // Strongly disagree –In my experience, this is not true at all



## IV. STUDENTS

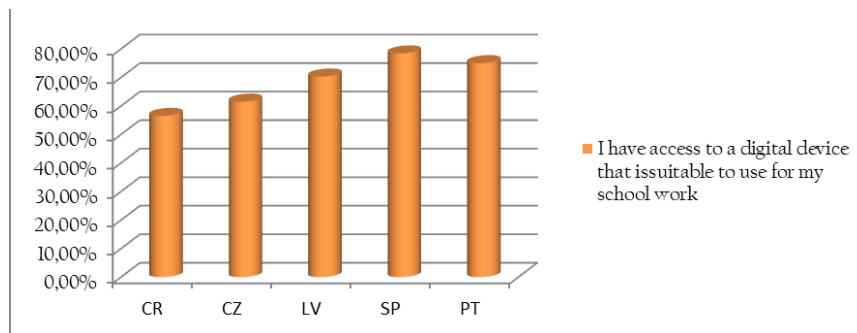
### 1. GENERAL INFORMATION

The majority of students in the five schools have a mobile phone and/or laptop, but there is a downward trend in desktop use and have access to the internet at home.



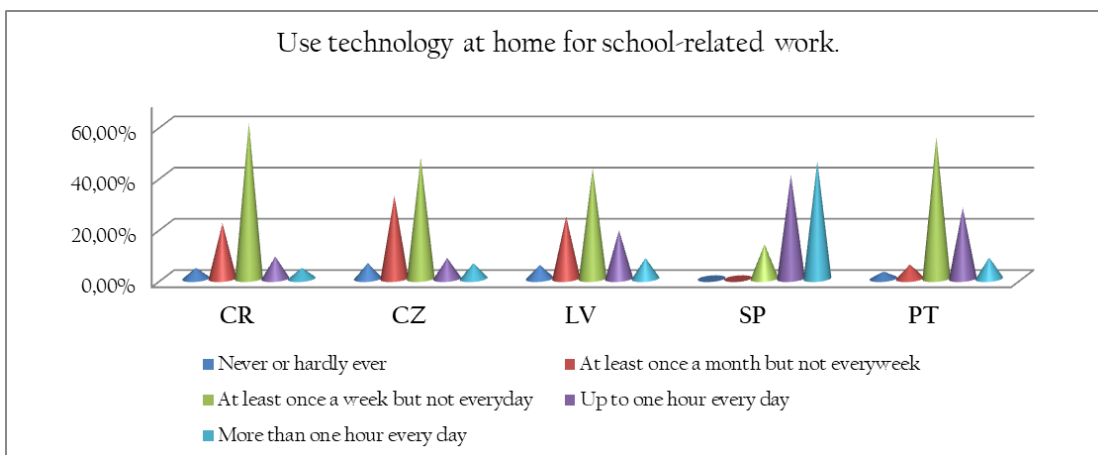
On average, 69% of the students surveyed have access to digital devices at home to use for their school work.

In terms of knowledge, the mobile phone is the device that the students use best, applying its functions most effectively, followed by the laptop.



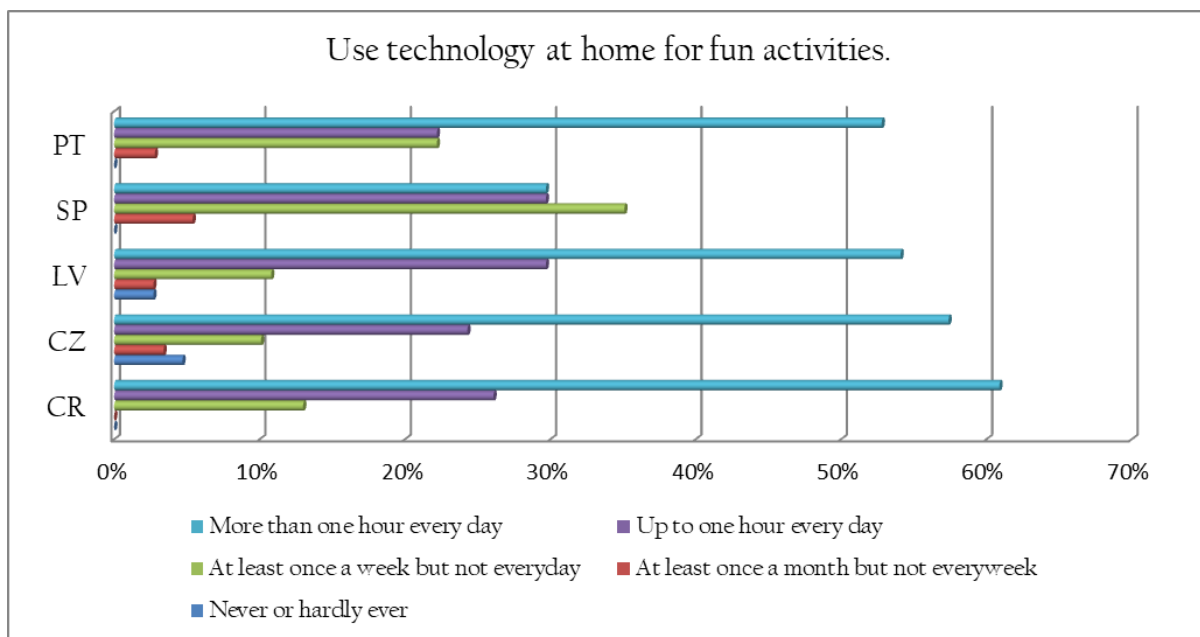
The mobile phone is undoubtedly the digital device most used on a daily basis by all the students. The desktop is the least used by students who reported using it at least once a month.

The Students use digital resources at least once a week, but not every day, to carry out their schoolwork. With the exception of Spain, where students do it every day.



For leisure activities, students use technology more than an hour every day, with the exception of Spanish students who do so at least once a week, but not every day.

The average use of technology for leisure activities, more than an hour a day, is close to 51%.



Regarding out-of-school activities without the use of technology, the results are very different: 57 % of Croatian students said that they do extracurricular activities where they don't use technology for more than an hour every day, while in Latvia the figure is 22%.

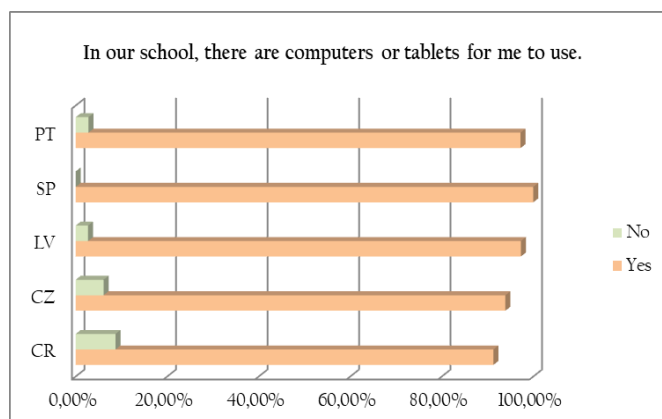
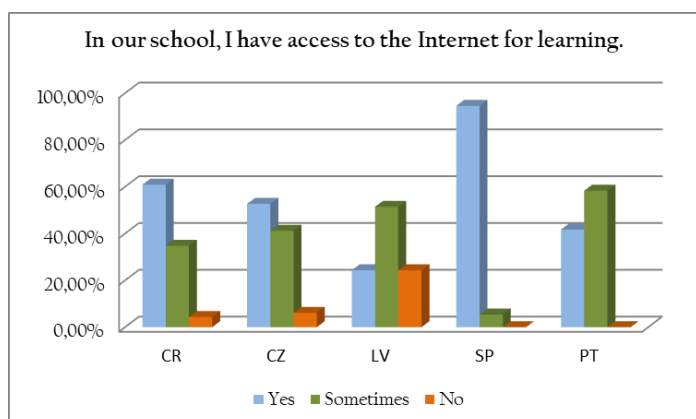
The average is 32%, where students at least once a week, but not every day, do an extra-curricular activity where they don't need to access digital resources.

## 2. INFRASTRUCTURE AND EQUIPMENT IN OUR SCHOOL

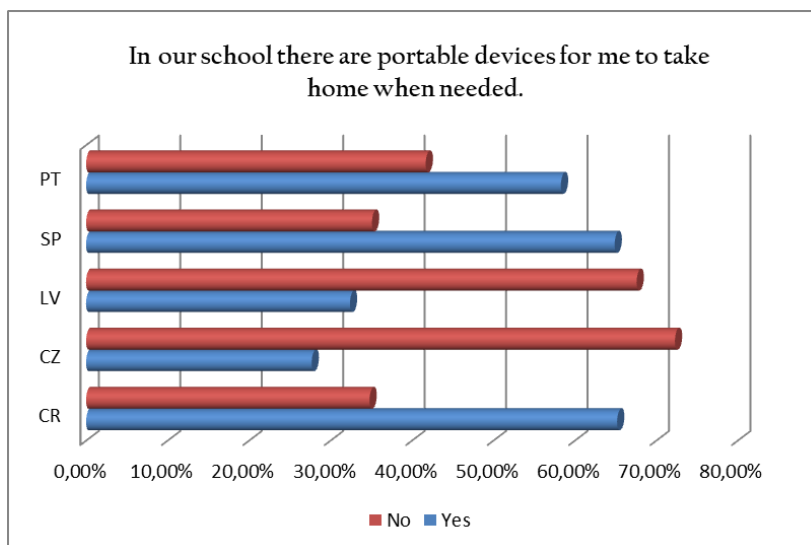
Internet access is problematic in almost all schools, with the most frequent answer being "Sometimes", with the exception of Spain.

Analysing the data shows that there is technical support whenever a problem occurs, with the problem being resolved in 53% of cases.

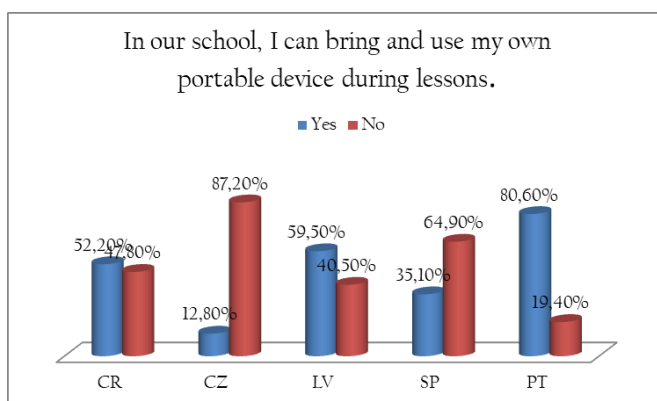
More than 90% of students responded that the school has resources (computers/tablets) for students to use.



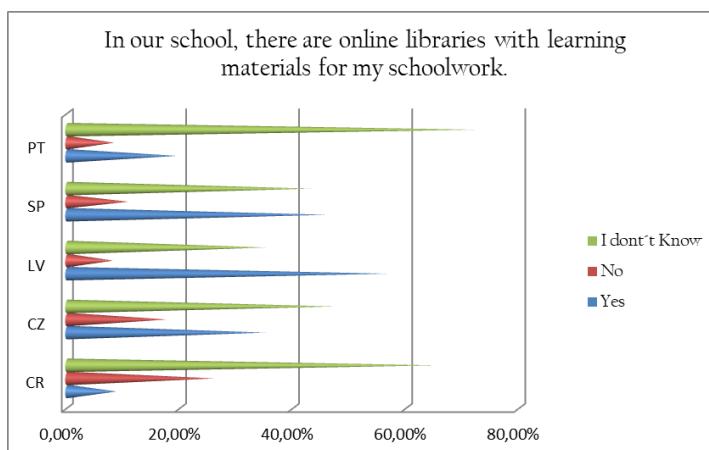
Regarding the availability of laptops provided by the school for use by students who need them, it can be concluded that the Portuguese, Spanish and Croatian schools have digital devices that they provide for students to carry out their schoolwork at home, but this is not the case in Latvia and the Czech Republic.



With the exception of Portugal, in the other countries the percentage of students taking their personal computers to school is low.

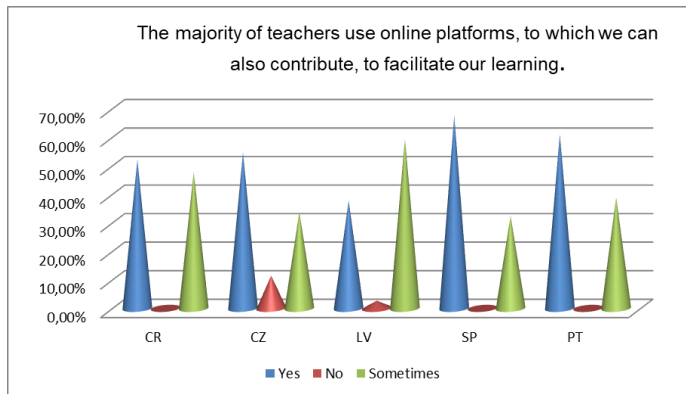


With the exception of Latvia, more than 50% of students are unaware that their school has teaching materials available in its online libraries.



### 3. PEDADOGY: SUPPORTS AND RESOURCES. IMPLEMENTATION IN THE CLASSROOM

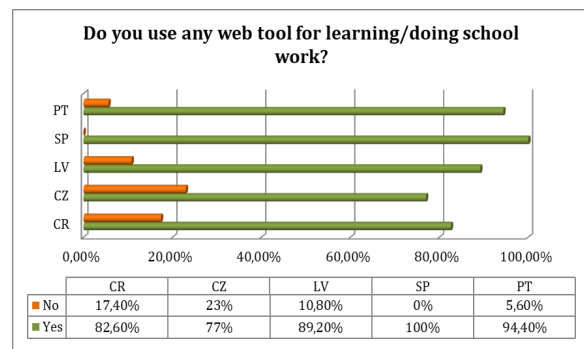
In three of the schools (Spain, Portugal and the Czech Republic), 50% or more of the students recognise that the majority of their teachers use online platforms, to which we can also contribute, to facilitate our learning.



The majority of students, over 77%, use a web tool for learning/doing school work.

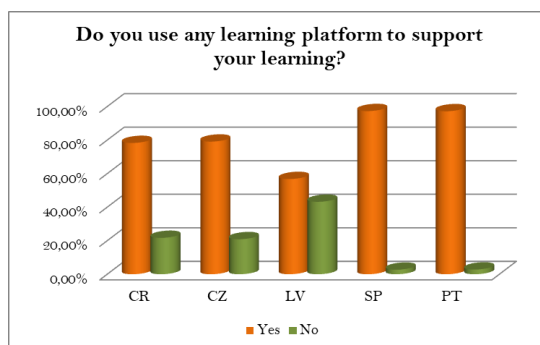
The web tool for learning/doing school work are:

School	webtool
Croatia	Kahoot
Czech Republic	Kahoot
Latvia	Kahoot
Spain	Canva, Kahoot, Genially
Portugal	Canva, Kahoot



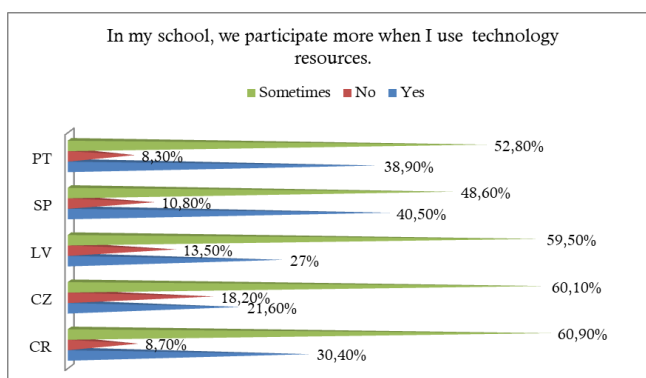
The majority of students, over 50%, use a learning platform to support your learning.

The most used learning platform is classroom (Czech Republic, Spain and Portugal).



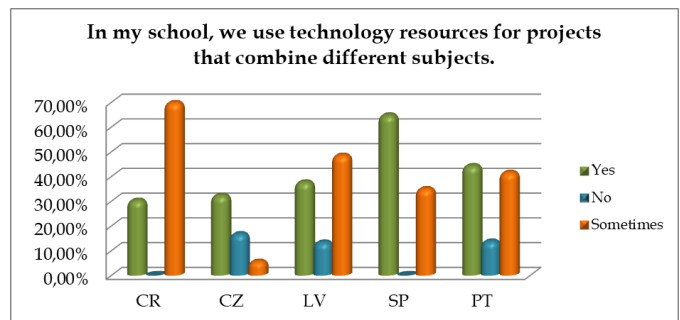
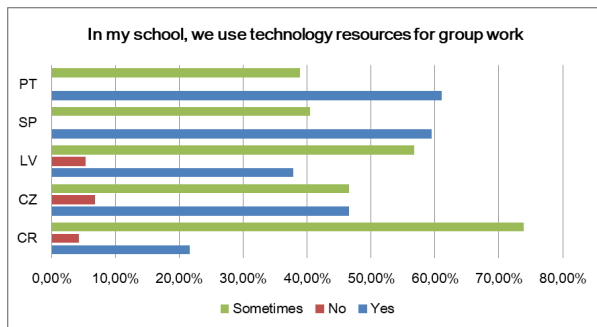
More than 50% of students recognise that they sometimes participate more when I use technology resources.

The results show that student participation may not be directly associated with the use of technology.



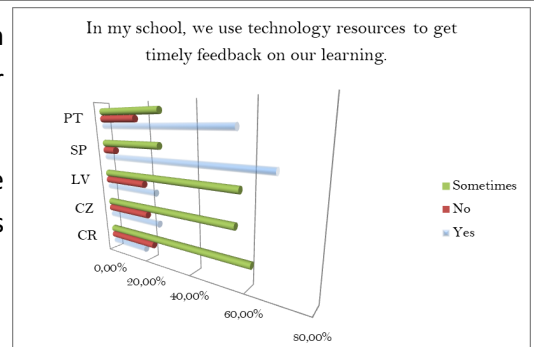
The use of technology for group work is recognised by more than 50% of Spanish and Portuguese students. Students from other countries sometimes use technology, especially students from schools in the Czech Republic and Latvia.

This trend is also reflected in the use of technology resources for projects that combine different subjects.



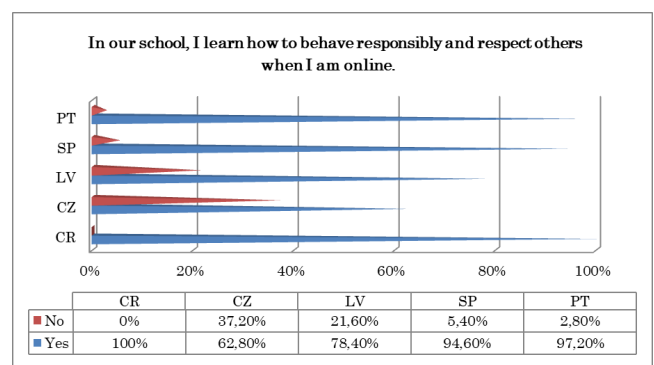
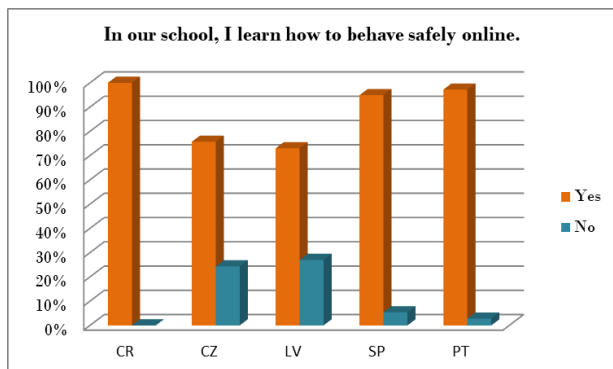
The majority of Spanish and Portuguese students recognise that in their schools use technology resources to get timely feedback on our learning.

More than 50 per cent of pupils in schools in Croatia, Latvia and the Czech Republic say that they sometimes use technological resources for this purpose.

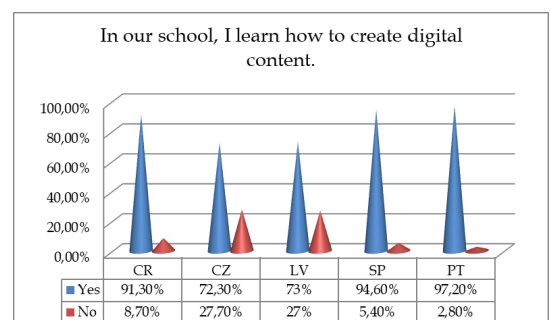
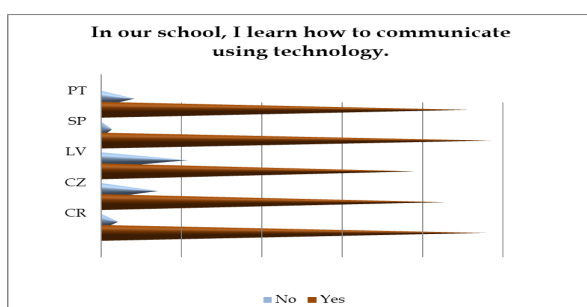
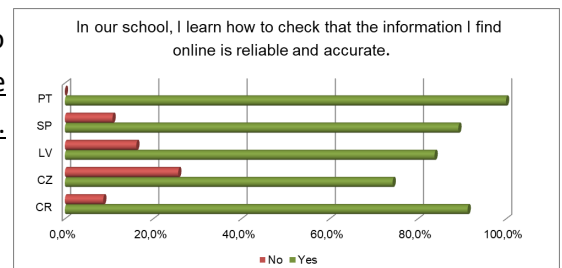


#### 4. DIGITAL COMPETENCE

Every school is concerned about digital safety. More than 75% of the pupils surveyed say that they were taught safe online behaviour at school. There is also concern at school about responsibility and respect for others online.



Almost all the students surveyed said that at school they learnt to research and check the veracity of information, learn how to create digital content and how to communicate using technology.



## V. CONCLUSIONS. RECOMMENDATIONS.

- In general, the schools have a similar profile in the areas of technological resources, digital security, the use of technology in teaching practices and students' digital competences.
- Students' use of technology follows current trends both in the device they use frequently and in the frequency of use.
- Teachers use technology to improve learning and empower students to use it correctly and safely.
- According to the students, they don't always learn better using technological resources in the classroom, which explains the multiplicity of variables in the learning process, such as motivation, for example.

Based on the results, we suggest:

- schools should apply for the digital security seals recognised by the European Union.
- The eSafety Label is a European Schoolnet initiative . Its aim is to provide European schools and the extended school ecosystem with a European-wide accreditation and support service and an online environment and community for teachers, heads of schools, ICT coordinators and school staff.

This recognition also allows schools to reflect on and draw up a digital plan, as well as recognising good digital practices in the European Digital Plan.

- The provision of collaborative working hours in some schools for teachers to create digital resources suitable for their student.
- Promote the use of online libraries (open resources) in schools.
- Promoting the use of technology, particularly collaborative tools, to motivate learning.

Report produced by Fátima Veríssimo, Escola Secundária Manuel Cargaleiro

18. March.2024