e-Privacing

O1/A3

Consolidated Current Status & Needs Analysis Report

CIVIC

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

Revision History

Version	Date	Author	Description	Action	Pages
[..]	DD/MM/YYYY	PARTNER ORGANIZATION	[Creation/Insert/ Delete/Update of the document]	[C/I/D/U]	[No. of pages]
1.0	17/06/2021	CIVIC	Creation of template	C	5

(*) Action: C = Creation, I = Insert, U = Update, R = Replace, D = Delete

Referenced Documents

ID	Reference		Title
1	2020-1-UK01-KA226-SCH-094506		e-Privacing Proposal
2			

Applicable Documents

ID	Reference	Title
1	[PARTNER ORGANIZATION]	[TITLE OF THE REFERENCED DOCUMENT]

PUBLIC/DRAFT

CIVIC	Deliverable: O1A3	
e-Privacing	**Version: 1.0**	1
Consolidated Current Status & Needs Analysis Report	**Issue Date: 22/09/2021**	

1 Table of Contents

PUBLIC/DRAFT

CIVIC	Deliverable: O1A3	
e-Privacing	Version: 1.0	2
Consolidated Current Status & Needs Analysis Report	Issue Date: 22/09/2021	

2 Current state-of-play of e-Learning in Europe

This section will identify best practices adopted by European countries outside the partnership that have already established mechanisms or frameworks focused on e-learning procedures in education in the COVID-19 era. The research should focus on methods, tools, technical characteristics connected to data protection.

The outcomes of the transnational report will be compared with the national reports to reveal potential gaps and best-practices in regard to the e-learning procedure in secondary education in Europe.

2.1 COVID-19 and distance learning

The deadly and infectious disease Corona Virus also known as Covid-19 has deeply affected the global economy. This tragedy has also shaken up the education sector, and this fear is likely to resonate across the education sector globally. The Covid-19 pandemic outbreak forced many schools and colleges to remain closed temporarily. Several areas are affected worldwide and there is a fear of losing this whole ongoing semester or even more in the coming future. Various schools, colleges, and universities have discontinued in-person teaching. As per the assessment of the researchers, it is uncertain to get back to normal teaching anytime soon. As social distancing is preeminent at this stage, this will have negative effects on learning opportunities. Educational units are struggling to find options to deal with this challenging situation. These circumstances make us realize that scenario planning is an urgent need for academic institutions [1]. This is a situation that demands humanity and unity. There is an urgent need to protect and save our students, faculty, academic staff, communities, societies, and the nation as a whole.

Several arguments are associated with e-learning. Accessibility, affordability, flexibility, learning pedagogy, life-long learning, and policy are some of the arguments related to online pedagogy. It is said that online mode of learning is easily accessible and can even reach to rural and remote areas. It is considered to be a relatively cheaper mode of education in terms of the lower cost of transportation, accommodation, and the overall cost of institution-based learning. Flexibility is another interesting aspect of online learning; a learner can schedule or plan their time for completion of courses available online. Combining face-to-face lectures with technology gives rise to blended learning and flipped classrooms; this type of learning environment can increase the learning potential of the students. Students can learn anytime and anywhere, thereby developing new skills in the process leading to life-long learning. The increasing importance of online learning in this dynamic world is non-negotiable. The severe explosion of Corona Virus disease can make us add one more argument in terms of online learning, that is, online learning serves as a panacea in the time of crisis.

The exploding spread of the virus found most countries of EU unprepared on the critical issue of education. Although all countries chose to close temporarily their schools and to continue providing education through online courses, the practices of each country differ to others', mostly because of the differences regarding the level of preparedness and

---

[1] https://journals.sagepub.com/doi/full/10.1177/0047239520934018

PUBLIC/DRAFT

CIVIC	**Deliverable:** O1A3	
e-Privacing	**Version:** 1.0	3
Consolidated Current Status & Needs Analysis Report	**Issue Date:** 22/09/2021	

familiarisation of their educational systems on using digital instruments but also to the policy that have chosen to confront COVID.

For example, according to OECD, in France and Germany, excluding the non-compulsory part of the curriculum, each week of school closures represents about 26 and 24 hours of face-to-face compulsory instruction time at school respectively (lower secondary school – general orientation), that is to say 2.8% ND 2.7% of annual compulsory instruction time. Schools were forced to replace this time in class with online learning and home schooling, in most cases facilitated by teachers and parents[2].

On the other hand, Sweden has followed a unique policy concerning school closures, keeping schools for children aged 7 to 15 and preschools open. On 13 March 2020 a new act was adopted, allowing the Government to temporarily close preschools, schools and other educational activities should the situation deteriorate. A new ordinance was put in place, giving the responsible organiser the right temporarily to close an educational activity under certain conditions, for example if a large number of teachers should be unable to teach due to illness or if Covid-19 should become widespread locally. Following recommendations from the Public Health Agency of Sweden, upper secondary schools, have provided distance learning since mid-March and will continue to do so until further notice. The overall impression thus far is that the shift to distance learning has worked out well. Schools have made great efforts to overcome digital challenges and safeguard access to online resources. Many schools were already utilising digital platforms and digital tools even before the pandemic outbreak. The use of existing digital tools and teaching strategies facilitated a smooth transition to distance learning[3].

2.2 Methods and tools for distance learning

A variety of platforms has been used during COVID lockdown which took place across all Europe. A vast number of them have been created during this period. Simultaneously, the number of users of pre-existent platforms have been increased. Since Germany is a world-leading developer and producer of high-tech products in many domains a reference should be made

German federal regulations restrict the adoption of software that is successfully used in education in other parts of the world. Teachers are strictly banned from using cloud services, social platforms, micro-blogs, or document sharing tools that are hosted outside of the EU, because of these technologies' lack of (full) compliance with EU standards for privacy and data protection, telemetric practices, and the imponderables of data leaving EU territory. Germany proudly has world's possibly strictest privacy and information protection legislation. The general ruling is not based on the aim of 'securing' data access and transport, but on the idea of Datensparsamkeit which could be translated as 'data

---

[2] (Etienne Albiser, Alfonso Echazarra, Pablo Fraser, Gabor Fülöp, Markus Schwabe and Karine Tremblay, 2020)

[3] https://www.cedefop.europa.eu/en/news-and-press/news/swedish-actions-education-response-corona-
pandemic#:~:text=Sweden%20has%20followed%20a%20unique,activities%20should%20the%20
situation%20deteriorate.

PUBLIC/DRAFT

CIVIC	Deliverable: O1A3	
e-Privacing	Version: 1.0	4
Consolidated Current Status & Needs Analysis Report	Issue Date: 22/09/2021	

minimalism' or 'data austerity' (Fowler 2013): the less data you store, the less data can be misused. While in some countries data is perceived as the 'new oil,' as a resource to run new businesses, Datensparsamkeit suggests that the best data is no data at all. Unsurprisingly, ambitious field research in learning analytics, which is often based on the exploitation of private data (Prinsloo and Slade, 2014; Williamson, 2017), is scarce. The exception that proves the rule is research on 'trusted learning analytics' carried out by Hendrick Drachsler's group (2016).

Current school solutions are typically based on open-source products, operated by states or regional school boards, on servers situated within national (or EU) boundaries. In order to avoid usage of software applications that could make data openly available to USA or other nations' intelligence agencies, some states provide EU-compliant alternatives for document sharing and repository services. German universities have established a cooperative company, HIS Hochschul Information System eG, Hannover, to develop administrative software solutions that operate according to EU data protection and privacy regulations. Ironically, in early 2020, a bug was encountered within the jointly developed student information system that was able to reveal personal data of all (!) students from nearly all public universities in Germany (Tremmel, 2020). Digital textbooks need approval by state authorities and are hardly available. Due to inferior school infrastructure, book publishers are reluctant to invest in a somewhat unsure future—leaving not just production, but also development of expertise, to others.

Contradictions between Germany's success in producing cutting-edge technology, and German caution when it comes to using digital technology in daily educational routines, are a fascinating research topic in their own right. Very briefly, they could be related to early nineteenth century Romanticism and its sceptical attitude towards technology at large. Furthermore, they could be associated with German more recent experiences of surveillance. Most Germans know (of) a person that has suffered either from the fascist regime 1933–1945 or from the communist regime 1945–1989 (in eastern part of Germany). Both regimes heavily relied on mass surveillance and total control of public opinion, which was especially prominent in broadcasting, newspapers, schools, and universities. For Germans, misuse of information is not an imagined danger at the horizon, but a vivid experience reported by older generations. Mass murder of Jewish people was organized using a tabulator machine from German branch of IBM called Dehomag (Black 2012); population census used punch cards, where the infamous 'column 22' indicated a person with Jewish background (Luebke and Milton, 1994). Germans' ambivalent relationship to technology cuts across many different aspects of German culture, including philological and educational heritage. Its citizens may be successful engineers, yet it is hoped that they will also become well-rounded persons through Bildung.

For educators and educational (technology) researchers, the Covid-19 crisis rapidly opens new questions and develops new perspectives. Suddenly, and against earlier resistance against digital teaching and learning, teachers experience a steep learning curve while they implement all sorts of digital tools and materials in their work. They are caught by surprise when they find out that their university does not have a conference tool to communicate with more than 25 students at the same time, or that their university has limited student access licenses to online library materials. Their hectic attempts at compensation are aggravated by the 'no-use' policy for software hosted outside the EU or non-compliant with the European data protection regulations (GDPR). A solid video

PUBLIC/DRAFT

CIVIC	Deliverable: O1A3	
e-Privacing	Version: 1.0	5
Consolidated Current Status & Needs Analysis Report	Issue Date: 22/09/2021	

conferencing software serving, for example, 30,000 students at a larger university, does not seem easily available from an EU-compliant supplier. To stress that these rushed activities should not be equated with e-learning, distance education, or another form of carefully planned and administered online learning experience, Germany has quickly picked up the term 'remote teaching' (Hodges et al. 2020).

In response to its recent history, Germany is one the few world's nations where freedom of research and teaching is codified in the constitution (Bundesministerium der Justiz und für Verbraucherschutz 2020: Art 5). Amongst other things, this constitutional right implies that teachers can freely choose whether they want to use digital technology. During the Covid-19 crisis, discussions have emerged about the consequence of 'remote teaching' pointing to access inequities. While many teachers have heavily invested in remote teaching with digital tools, some teachers have demanded the immediate stop of the promotion of digital tools. For instance, a group of scholars from the well-respected Ludwig Maximilian University in Munich, with the support of many other professors from other universities, demanded the cancelation of studies for the summer semester (#nichtsemester 2020).

The following list of UNESCO[4] that refer to e-learning platforms declares the huge number of them, which accordingly declares the huge field of needs on this theme that had to be covered in a very short amount of time.

The list of educational applications, platforms and resources below aim to help parents, teachers, schools and school administrators facilitate student learning and provide social care and interaction during periods of school closure. Most of the solutions curated are free and many cater to multiple languages. While these solutions do not carry UNESCO's explicit endorsement, they tend to have a wide reach, a strong user-base and evidence of impact. They are categorized based on distance learning needs, but most of them offer functionalities across multiple categories.

Resources to provide psychosocial support

- InterAgency Standing Committee guidelines to protect and improve people's mental health and psychosocial well-being in the midst of an emergency
- WHO mental health and psychosocial guidance during the COVID-19 outbreak
- UNICEF guidance on how teachers should talk to children about COVID-19
- UNICEF guidance on how parents and caregivers can talk children about COVID-19

Digital learning management systems

- CenturyTech – Personal learning pathways with micro-lessons to address gaps in knowledge, challenge students and promote long-term memory retention.
- ClassDojo – Connects teachers with students and parents to build classroom communities.

---

[4] https://en.unesco.org/covid19/educationresponse/solutions

PUBLIC/DRAFT

CIVIC	Deliverable: O1A3	
e-Privacing	Version: 1.0	6
Consolidated Current Status & Needs Analysis Report	Issue Date: 22/09/2021	

- Edmodo – Tools and resources to manage classrooms and engage students remotely, offering a variety of languages.
- Edraak – Arabic language online education with resources for school learners and teachers.
- EkStep – Open learning platform with a collection of learning resources to support literacy and numeracy.
- Google Classroom – Helps classes connect remotely, communicate and stay-organized.
- Moodle – Community-driven and globally-supported open learning platform.
- Nafham – Arabic language online learning platform hosting educational video lessons that correspond with Egyptian and Syrian curricula.
- Paper Airplanes – Matches individuals with personal tutors for 12-16 week sessions conducted via video conferencing platforms, available in English and Turkish.
- Schoology – Tools to support instruction, learning, grading, collaboration and assessment.
- Seesaw – Enables the creation of collaborative and sharable digital learning portfolios and learning resources.
- Skooler – Tools to turn Microsoft Office software into an education platform.

Systems built for use on basic mobile phones

- Cell-Ed – Learner-centered, skills-based learning platform with offline options.
- Eneza Education - Revision and learning materials for basic feature phones.
- Funzi – Mobile learning service that supports teaching and training for large groups.
- KaiOS – Software that gives smartphone capabilities to inexpensive mobile phones and helps open portals to learning opportunities.
- Ubongo – Uses entertainment, mass media, and the connectivity of mobile devices to deliver localized learning to African families at low cost and scale,available in Kiswahili and English.
- Ustad Mobile – Access and share educational content offline.

Systems with strong offline functionality

- Kolibri – Learning application to support universal education, available in more than 20 languages.
- Rumie – Education tools and content to enable lifelong learning for underserved communities.
- Ustad Mobile – Access and share educational content offline.

Massive Open Online Course (MOOC) Platforms

- Alison – Online courses from experts, available in English, French, Spanish, Italian and Portuguese
- Canvas Network – Course catalogue accessible for free for teachers in order to support lifelong learning and professional development.

PUBLIC/DRAFT

CIVIC	Deliverable: O1A3	
e-Privacing	Version: 1.0	7
Consolidated Current Status & Needs Analysis Report	Issue Date: 22/09/2021	

- Coursera – Online courses taught by instructors from well-recognized universities and companies.
- European Schoolnet Academy – Free online professional development courses for teachers in English, French, Italian and other European languages.
- EdX – Online courses from leading educational institutions.
- iCourse – Chinese and English language courses for university students.
- Future Learn – Online courses to help learners study, build professional skills and connect with experts.
- Icourses – Chinese language courses for university students.
- TED-Ed Earth School – Online lessons about nature made available continuously during a 5-week period between Earth Day (April 22nd) and World Environment Day (June 5th).
- Udemy – English, Spanish and Portuguese language courses on ICT skills and programming.
- XuetangX – Online courses provided by a collection of universities on different subjects in Chinese and English.

Self-directed learning content

- ABRA - Selection of 33 game-like activities in English and in French to promote reading comprehension and writing skills of early readers.
- British Council – English language learning resources, including games, reading, writing and listening exercises.
- Byju's – Learning application with large repositories of educational content tailored for different grades and learning levels.
- Code It – Helps children learn basic programming concepts through online courses, live webinars and other kid-friendly material. Available in English and German.
- Code.org – Wide range of coding resources categorized by subject for K12 students offered for free by a non-profit.
- Code Week – List of online resources to teach and learn computer coding, available in all EU languages.
- Discovery Education – Free educational resources and lessons about viruses and outbreaks for different grade levels.
- Duolingo – Application to support language learning. Supports numerous base and target languages.
- Edraak - A variety of resources for K-12 education in Arabic, targeting students, parents and teachers.
- Facebook Get Digital - Lesson plans, conversation starters, activities, videos and other resources for students to stay connected
- Feed the Monster – Android application in multiple languages to help teach children the fundamentals of reading, available in 48 languages.
- History of Africa – A nine-part BBC documentary series on the history of Africa based on UNESCO's General History of Africa book collection.
- Geekie – Portuguese language web-based platform that provides personalized educational content using adaptive learning technology.
- Khan Academy – Free online lessons and practice in math, sciences and humanities, as well as free tools for parents and teachers to track student progress.

PUBLIC/DRAFT

CIVIC	Deliverable: O1A3	
e-Privacing	Version: 1.0	8
Consolidated Current Status & Needs Analysis Report	Issue Date: 22/09/2021	

Available in 40+ languages, and aligned to national curriculum for over 10 countries.

- KitKit School - Tablet-based learning suite with a comprehensive curriculum spanning early childhood through early primary levels.
- LabXchange – Curated and user-created digital learning content delivered on an online platform that enables educational and research experiences.
- Madrasa – Resources and online lessons for STEM subjects in Arabic
- Mindspark – Adaptive online tutoring system that helps students practice and learn mathematics.
- Mosoteach – Chinese language application hosting cloud classes.
- Music Crab – Mobile application accessible for music education.
- OneCourse – Child-focused application to deliver reading, writing and numeracy education.
- Profuturo – Resources in different subject areas for students in English, Spanish, French and Portuguese.
- Polyup – Learning content to build math and gaining computational thinking skills for students in primary and early secondary school.
- Quizlet – Learning flashcards and games to support learning in multiple subjects, available in 15 languages.
- SDG Academy Library - A searchable library of more than 1,200 educational videos on sustainable development and related topics.
- Siyavula – Mathematics and physical sciences education aligned with South African curriculum.
- Smart History – Art history site with resources created by historians and academic contributors.
- YouTube – Huge repository of educational videos and learning channels.

Mobile reading applications

- African Storybook - Open access to picture storybooks in 189 African languages.
- Biblioteca Digital del Instituto Latinoamericano de la Comunicación Educativa – Offers free access to Spanish language works and book collections for students and teaching staff in schools and universities
- Global Digital Library – Digital storybooks and other reading materials easily accessible from mobile phones or computers. Available in 43 languages.
- Interactive Learning Program – Mobile app in Arabic to advance reading, writing and numeracy skills created by the United Nations Relief and Works Agency.
- Reads – Digital stories with illustrations in multiple languages.
- Room to Read – Resources to develop the literacy skills of children and youth with specialized content to support girls.
- StoryWeaver – Digital repository of multilingual stories for children.
- Worldreader – Digital books and stories accessible from mobile devices and functionality to support reading instruction. Available in 52 languages.

Collaboration platforms that support live-video communication

PUBLIC/DRAFT

CIVIC	Deliverable: O1A3	
e-Privacing	Version: 1.0	9
Consolidated Current Status & Needs Analysis Report	Issue Date: 22/09/2021	

- Dingtalk – Communication platform that supports video conferencing, task and calendar management, attendance tracking and instant messaging.
- Lark – Collaboration suite of interconnected tools, including chat, calendar, creation and cloud storage, in Japanese, Korean, Italian and English
- Hangouts Meet – Video calls integrated with other Google's G-Suite tools.
- Teams – Chat, meet, call and collaboration features integrated with Microsoft Office software.
- Skype – Video and audio calls with talk, chat and collaboration features.
- WeChat Work – Messaging, content sharing and video/audio-conferencing tool with the possibility of including max. 300 participants, available in English and Chinese.
- WhatsApp – Video and audio calls, messaging and content sharing mobile application.
- Zoom – Cloud platform for video and audio conferencing, collaboration, chat and webinars.

Tools for teachers to create of digital learning content

- Thinglink – Tools to create interactive images, videos and other multimedia resources.
- Buncee – Supports the creation and sharing visual representations of learning content, including media-rich lessons, reports, newsletters and presentations.
- EdPuzzle – Video lesson creation software.
- EduCaixa - Courses in Spanish language to help teachers develop the skills and competencies of learners in areas such as communication, entrepreneurship, STEM and big data.
- Kaltura – Video management and creation tools with integration options for various learning management systems.
- Nearpod – Software to create lessons with informative and interactive assessment activities.
- Pear Deck – Facilitates the design of engaging instructional content with various integration features.
- Squigl – Content creation platform that transforms speech or text into animated videos.
- Trello - A visual collaboration tool used by teachers and professors for easier coursework planning, faculty collaboration, and classroom organization.

External repositories of distance learning solutions

- Brookings – A catalogue of nearly 3,000 learning innovations. Not all of them are distance learning solutions, but many of them offer digital education content.
- Common Sense Education – Tips and tools to support school closures and transitions to online and at-home learning.
- Commonweatlh of Learning – List of resources for policymakers, school and college administrators, teachers, parents and learners that will assist with student learning during the closure of educational institutions.

PUBLIC/DRAFT

CIVIC	Deliverable: O1A3	
e-Privacing	Version: 1.0	10
Consolidated Current Status & Needs Analysis Report	Issue Date: 22/09/2021	

- Education Nation – Nordic countries have opened up their learning solutions for the world for free, supporting teachers and learners during the school closures.
- EdSurge – Community-driven list of edtech products, including many distance learning resources for students, teachers and schools, covering primary to post-secondary education levels.
- European Commission Resources – A collection of online platforms for teachers and educators, available in 23 EU languages.
- GDL Radio: a collection of radio and audio instruction resources.
- Global Business Coalition for Education – List of e-learning platforms, information sharing platform and communication platforms.
- Keep Learning Going – Extensive collection free tools, strategies, tips and best practices for teaching online from a coalition of USA-based education organizations. Includes descriptions of over 600+ digital learning solutions.
- Koulu.me – A collection of apps and pedagogical solutions curated by Finnish edtech companies to facilitate distance for pre-primary to upper secondary learners.
- Organisation internationale de la Francophonie: Resources for primary and secondary school students and teachers for learning and teaching French.
- Profuturo Resources: Spanish language resources in different subject areas for primary and secondary school students.
- UNEVOC Resources – Tools, guides, MOOCS and other resources collected by UNESCO's International Centre for Technical and Vocational Education and Training for continued learning in the area of TVET.
- UNHCR – An extensive list of over 600 distance learning solutions from the United Nations agency for refugees.

3 Current state-of-play of e-Learning in Project Countries

This section will identify analysis of the current status and needs of digitalized education in each project country

3.1 COVID-19 and distance learning In The Netherlands

As in most EU countries, schools in Netherlands were forced to close and replace in-class learning with online learning, in an attempt to contain the spread of the virus. It is interesting to see some results from the 2018 Teaching and Learning International Survey (TALIS) that allow for researching the availability and use of the ICT technologies in the classroom before the crisis hit. For Netherlands, 51% of lower-secondary teachers used ICT for projects or class work 'frequently' or 'always'. In the same study, 49% of Dutch teachers reported that use of ICT for teaching was included in their formal education or training however 73% of teachers felt that they could support student learning through the use of digital technology (e.g., computers, tablets, smart boards) "quite a bit" or "a lot". Although 61% of Dutch teachers reported that ICT skills for teaching were included in their professional development activities, only a 16% reported a high need for professional development in ICT skills for teaching. These results may give a glimpse of what the status of pupils and teachers was shortly before the epidemic outbreak.

PUBLIC/DRAFT

CIVIC	Deliverable: O1A3	
e-Privacing	Version: 1.0	11
Consolidated Current Status & Needs Analysis Report	Issue Date: 22/09/2021	

More specifically and on the pandemic conditions, the Dutch school system combines centralised and equitable school funding with a high degree of autonomy in school management. The country has also demonstrated OECD average in school spending and reading performance. The country experienced a relatively short lockdown (of 8 weeks, starting 16th March 2020), features an equitable school funding and is characterised by world-leading rates of broadband access. For all these reasons, Netherlands has been seen as a 'best-case' scenario, as analysed in a very recent study (Engzell et al. 2020), which dealt with the learning loss to school closures during the pandemic.

There is clear evidence that schoolchildren are learning less during lockdown than in a typical year.

Lesopafstand is a website developed by Kennisnet in collaboration with the Ministry of Education, Culture and Science providing resources to ensure continuity of learning during school closures (UNESCO).

Schools adopted stricter precautions when they reopened, with the aim of preventing transmission. Since January 2021, the general testing policy for children has been updated; more children were tested, even if they did not have symptoms in order to prevent further spread. As of 31 May 2021, the 1.5-metre rule has been discontinued for secondary education, which makes it possible for more children to go to school at the same time again. The aim is to have secondary school pupils and employees do periodic (preventive) self-tests twice a week. This is also a way to detect infections earlier and limit the risk of transmission within the school.

Detailed information on 'when to go to school, when to stay at home', source and contact tracing, Hygiene in schools, and general protocols to minimise the spread of the coronavirus are offered by the website of the Dutch Government.

3.2 Methods and tools for distance learning in The Netherlands

Education in Netherlands is centrally administered by the Ministry of Education, Culture and Science (MOE) in The Hague, and sets the overall regulatory framework for education and provides funding for all levels of education. This means, that the Dutch system is decentralized with secondary level (same as all levels of education) having a high degree of autonomy in various matters, such as curriculum development or the hiring of teachers. Schools at the lower secondary level, for instance, in 2011 "made 86 percent of key decisions (compared to an OECD average of 41 percent), with the remaining 14 percent made by central government. Schools made 100 percent of the decisions regarding the organization of instruction, personnel management and resource management."

While private schools are free to design their own curricula and teaching methods, it should be noted that the MOE ensures consistency by prescribing mandatory school subjects and defined learning outcomes for these subjects. The acquisition of required knowledge in mandatory subjects is tested in an attainment test at the end of elementary education, as well as in nationwide external examinations at the end of secondary

PUBLIC/DRAFT

CIVIC	Deliverable: O1A3	
e-Privacing	Version: 1.0	12
Consolidated Current Status & Needs Analysis Report	Issue Date: 22/09/2021	

education. Both private and public schools are also evaluated by the Inspectorate of Education, a government body that monitors quality standards and prepares annual State of Education reports for the MOE. There have been discussions in recent years to introduce national exit examinations in higher education as well, but universities presently continue to conduct their own graduation exams (WENR, 2018).

Netherlands, being among the most digitalised countries with the highest rates of broadband connection and access to digital tools, also experienced learning loss which however was much smaller than in other countries, since the government pursued a so-called 'intelligent lockdown; relying on voluntary cooperation and allowing ordinary life to continue as much as possible (Engzell et al. 2020).

A survey that took place after the 1st closure of schools (from May 11th 2020 until June 1st 2020) between 160 secondary school teachers of all school courses across the Netherlands confirmed the fact that distance education complicated interaction and required bigger time investment by teachers leaving them at times feeling a loss of control over their students learning process (Notenboom, 2021). The Dutch teachers responded to this challenge with the following practices:

- Lessons were condensed to the core content
- Teachers left more responsibility with the student
- Teachers applied more formative assessments
- They let students hand in homework through digital tools

Despite of all challenges, this forced distance education led to a more positive opinion of teachers towards technology-enhanced learning, at the point that the teachers expressed their intention to keep these changes even after schools open again.

From their side, school organisations provided support on the elements of time and interaction. What all agreed on was:

- To facilitate collaboration between teachers
- The need for training on technological pedagogical knowledge
- To consolidate the psychological transition
- To provide technical support and materials
- To encourage innovation

3.3 Technical characteristics and data protection in The Netherlands

The 'digital tools' that were used in the Dutch schools included software like:

- Electronic learning environments
- Digital teaching materials
- Interactive presentation software
- School ICT infrastructure, such as Wi-Fi.

PUBLIC/DRAFT

CIVIC	Deliverable: O1A3	
e-Privacing	Version: 1.0	13
Consolidated Current Status & Needs Analysis Report	Issue Date: 22/09/2021	

Dutch students used hardware like laptops, smartphones and tablets, with the support of school organisations and the collaboration with the schools' IT department.

The Dutch secondary educational system does not focus on the medium when in asynchronous distant education; the focus is on a well-grounded pedagogy that allows the student to plan own learning and the teacher to be a mentor rather than a deliverer of the information.
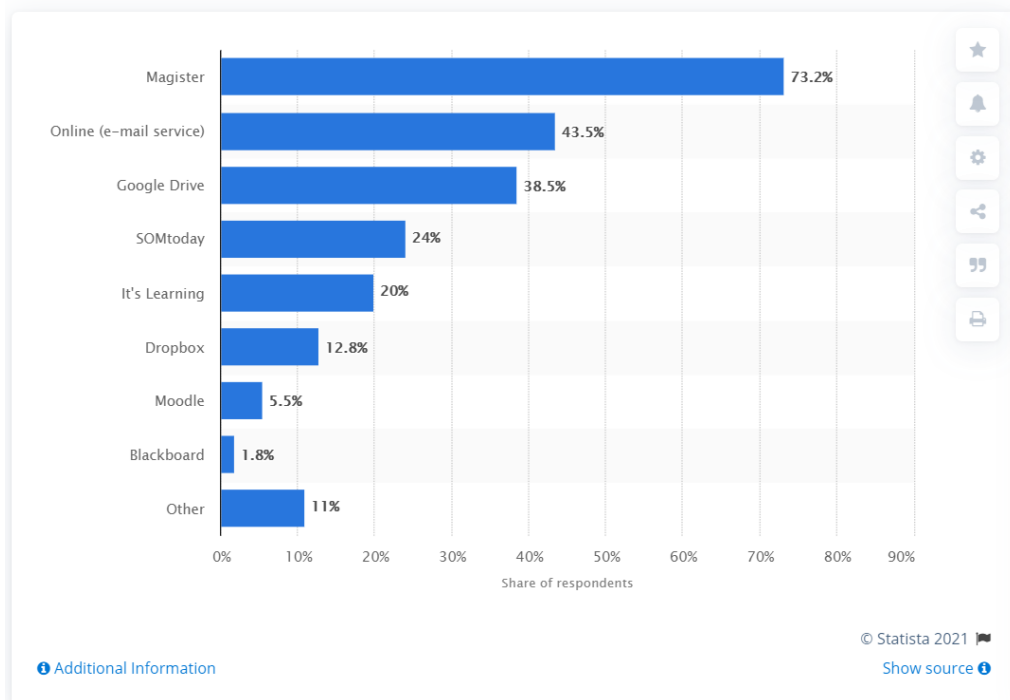
Teachers with a higher digital self-efficacy had a positive correlation with the implementation of digital tools in the classroom, and as a result these teachers experienced more positive emotions when using digital tools in the classroom.

Respondents to the survey results published by Notenboom (2021) indicated the following as the added value of digital tools:

- Flexibility in location and time - in situations that attending learning in class is not possible
- Clear overview – of students work, attendance, progress and results
- Ease of providing feedback
- Continuous accessibility of materials
- Efficiency
- More attentive students – though surprising it may sound; students are more easily engaged by a video compared to a teacher lecturing.

According to STATISTA data, the digital platforms used at schools in the Netherlands are portrayed below:

Which digital platforms do you use at school?*

Platform	Share of respondents
Magister	73.2%
Online (e-mail service)	43.5%
Google Drive	38.5%
SOMtoday	24%
It's Learning	20%
Dropbox	12.8%
Moodle	5.5%
Blackboard	1.8%
Other	11%

Share of respondents

© Statista 2021

ℹ Additional Information   Show source ℹ

PUBLIC/DRAFT

CIVIC	Deliverable: O1A3	
e-Privacing	Version: 1.0	14
Consolidated Current Status & Needs Analysis Report	Issue Date: 22/09/2021	

Magister was the most frequently used digital platform in schools or in relation to their classes. Over 70 percent of students indicated that they used Magister, while the share of students who used Moodle was just over five percent. Magister is a SaaS solution in the Netherlands, used in secondary education. Students, parents and teachers are able to access this at all times and it is used to keep up with the management, administration and health issues of students. Users can also enter the system to look at their grades, timetable, homework assignments and absences.

3.4 Needs Analysis in The Netherlands

By the account of the Dutch Report, education on data protection in the context of distance learning is reasonably well advanced, insofar as teachers tend to be quite well trained on digital issues generally. That being said, the report does also conclude that it remains unclear the degree to which the sorts of practices required under GDPR and other such laws are consistently implemented in digital classrooms in the Netherlands. As such, it is certainly worth exploring practical as well as theoretical advice that may help teachers to apply the legal and ethical best practices around data privacy and security in the classroom. Furthermore, the level of knowledge among students of their digital rights and best practices is not entirely clear, making this also an avenue worth exploring.

3.5 COVID-19 and distance learning In The UK

It is somewhat difficult to summarise a whole-country approach to distance learning during the COVID pandemic in Scotland, even in secondary schools alone, as approaches differed between each of Scotland's 32 local authorities, and of course to varying degrees between the schools within them. Early pandemic guidance documents indicate that arrangements for remote learning had to a large degree been localised, but nevertheless, plenty of national-level directives and guidance do exist. Significant among such directives, for example, was in August 2020 when local authorities were advised to put in place arrangements for remote learning (Education Scotland, 2020).

Another such national directive stated that in-person exams, which in Scotland are the normal means of assessment for courses in secondary school between the ages of roughly 16 and 18, were scrapped entirely in 2020 as they were considered unworkable in the circumstances. Grading and assessment instead relied on student coursework and teacher estimates.

Beyond this, it is worth noting the existence of Glow, Scotland's national education intranet, which was launched officially in 2009. A project coordinated by the Scottish Government and the 32 local authorities and delivered by the company RM Education, Glow contains a significant array of tools and applications that students and teachers can use to facilitate learning through digital platforms. It was natural, therefore, that Glow made up a significant part of e-learning efforts, including use of its chat, live video, and recorded video.

PUBLIC/DRAFT

CIVIC	**Deliverable:** O1A3	
e-Privacing	**Version:** 1.0	**15**
Consolidated Current Status & Needs Analysis Report	**Issue Date:** 22/09/2021	

Government guidance did however continue to suggest provision of physical resources such as textbooks or laptops to learners where necessary, and continued to cite written work as one possible exercise when teaching remotely. Reports suggest that particularly those teaching practical subjects use a mixed approach, delivering materials to learners for practical activities coupled with digital tools (Education Scotland, 2021).

Naturally, there were issues and problems that arose from such a drastic and unusual situation, with some reports suggesting that access to online learning – whether that is due to a lack of devices or a lack of internet connection – is an issue. Particularly unfortunate is that this issue tends to impact on the most impoverished children most. Schools have been taking a variety of approaches to this, including use of school or government funds as well as providing more physical hard-copy materials (Education Scotland, 2021). In a similar vein, at the beginning of the COVID lockdown, some people reported issues using Microsoft Teams on the Glow network as technical issues arose. These were dealt with in due course.

A further issue reported was the difficulty for teachers in judging the levels of support that their students both need and receive. Learning from home makes it considerably harder for teachers to judge how well a student is coping with given material, how much support they might be getting at home, and therefore how much work they might be able to do independently as opposed to any support they might need from the teacher (Education Scotland, 2021).

3.6 Methods and tools for distance learning in The UK

As mentioned, Scottish secondary schools had the advantage of an intranet with a range of digital learning resources and tools that had already been previously built, namely Glow. This as such was one of, if not the, main platforms used by educators in distance learning. As a platform providing a gateway to a number of distance learning tools, educators could use glow to access video chat functions or chat messaging, as well as Google and Microsoft applications that could be used in various ways to create and share resources.

As Glow was launched in 2009, many teachers had already had experience using it, though understandably the number of teachers using it regularly increased significantly at the onset of the first COVID lockdown and those thereafter. As such, the Scottish Government provided enhanced professional development and training to teachers on digital learning.

This is corroborated to some degree by reports from Education Scotland on practices in remote learning throughout the country. The report states:

"*Some schools have trained all staff, including support staff, in the use of digital technologies. This has led to staff in almost all schools being more confident and skillful in using an increasing range of digital tools to deliver more effective remote learning.*" (Education Scotland, 2021)

That being said, the qualification of only "some" schools suggests that the rollout of this training has not been completely uniform across the country.

PUBLIC/DRAFT

CIVIC	Deliverable: O1A3	
e-Privacing	Version: 1.0	16
Consolidated Current Status & Needs Analysis Report	Issue Date: 22/09/2021	

The report goes on to assert that, "There are examples of staff accessing and participating in a wide range of professional learning opportunities", although it does not specify what these learning opportunities covered or what proportion of staff took up these opportunities (Education Scotland, 2021).

In line with laws and regulations around data protection, guidance has been issued by the Scottish Government and other relevant authorities on data protection when using digital tools for teaching. All authorities, of course, have a duty to comply with data protection laws, which despite Brexit remain largely governed by the EU's GDPR and other relevant legislation. More specifically, Glow, for example, provides guidance and documents to help teachers and others understand the data privacy issues around using such a network in this way. This guidance includes information around letting others use your account or giving them your login information, making unauthorised contact with others, storing information (including of a sensitive or personal nature), and more general information management on the Glow network (Glow).

The Glow guidance also notes, however, that some organisations may have added security dimensions or procedures that enable them to store or use certain types of more sensitive data on the Glow network (Glow). It therefore suggests to the user that they also consult their own organisation's policies and procedures on data protection. This suggests that here again there at least some degree of decentralisation to data privacy and protection policies in Scottish Education.

3.7 Technical characteristics and data protection in The UK

As mentioned above, Glow is one of the main platforms provided for teachers and schools in Scotland, given that it is a public sector product. Although it proved difficult to identify data indicating the precise proportion of teachers and students using this platform, the proportions in question could be roughly estimated from the data that is available. A freedom of information request confirmed that as of October 2020, there were 77,985 active users who were teaching staff on Glow and 499,658 who were students (Scottish Government, 2020). This suggests that most teachers and students are on Glow, as statistics from December 2020 suggest that there are 53,400 teachers in Scotland overall and 702,197 students (Scottish Government, 2021).

As also mentioned previously, Glow itself has guidelines on what should and should not be shared or stored on the platform (Glow), as do major educational trades union, albeit more generally (Educational Institute of Scotland, 2020). Overall, the advice seems to be that Glow and any other "officially agreed" platforms are to be used for any communication or live lesson, but that caution should be exercised so that all guidelines for a given school or local authority are followed as regards sensitive or private data. Although Glow does seem to be considered a secure platform, it is not universally recommended as a place to store or share sensitive information. The exception here is if specific organisations have put in place security and procedures allowing or requiring this (Glow).

More specifically, Glow comprises a number of applications that teachers can use, many of which are created by outside sources and which will therefore have their own

PUBLIC/DRAFT

CIVIC	Deliverable: O1A3	
e-Privacing	Version: 1.0	17
Consolidated Current Status & Needs Analysis Report	Issue Date: 22/09/2021	

approaches to security and privacy of information. These include services and applications such as Microsoft Office 365, Google Workspace for Education, Glow Blogs, and Glow RM Unify Launch Pad.

Glow offers further documentation, though, for its own platform to support users in maintaining privacy and security. Such support includes guidance on passwords, statements on Glow's compliance with GDPR, Glow's privacy and cookie policies, its data privacy impact assessment, and the platform's community rules (Glow Connect, 2020).

3.8 Needs Analysis in The UK

The UK report indicates that some training on digital learning has been delivered in Scotland, and that familiarity with the relevant platforms may be well-established, based on the existence of a national digital platform, Glow, which was set up in 2009. Glow itself has reasonably clear digital privacy guidelines, as of course do national laws such as GDPR and individual institutions or local authorities. There is no particular reason to suspect that these guidelines are not being broadly followed, but the existence of numerous overlapping sets of guidelines could certainly make a list of best practices when it comes to digital security and digital privacy an effective and perhaps even necessary tool. As with the Dutch example, this need extends also to informing students themselves, given that the report notes that not all students had universal access to an appropriate device or internet before the pandemic.

3.9 COVID-19 and distance learning In Romania

On March 11, 2020, the Romanian Ministry of Education and Research (MER) has suspended the courses in all the schools, encouraging and supporting the continuation of the educational activities for 2.8 million pupils in online environment.

In the very first days of the lockdown, MER - Ministry of Education and Research was prompt in announcing the following initiatives for supporting teachers and pupils in schools:

- The Repository with digital textbooks opened and updated since 2015, with resources available for a number of disciplines and classes (http://manuale.edu.ro).
- The resources along with continuous and effective involvement of the project CRED ("Relevant Curriculum and Open Education for All"), in which MER is a partner, together with the Institute of Educational Sciences (http://educred.ro).
- Free learning platforms and applications (G Suite for Education, Office 365), and open access tutorials (http://clasaviitorului.ro, https://www.eduapps.ro).
- TeleSchool, courses broadcasted by a national TV channel in partnership with MER, mainly in order to help the pupils prepare their final exams (http://tvrplus.ro/live/tvr-2).

PUBLIC/DRAFT

CIVIC	Deliverable: O1A3	
e-Privacing	Version: 1.0	18
Consolidated Current Status & Needs Analysis Report	Issue Date: 22/09/2021	

During the last two years, the project CRED provided blended training on the new curriculum, Open Education and OER for more than 18 thousand teachers, using a customized Moodle platform, with multimedia modules and webinars. On many active Facebook groups, teachers and practitioners share their online teaching experiences and different resources, and learn together with their peers: CRED (https://www.facebook.com/groups/574392349703069), Coalition for Open Educational Resources (https://www.facebook.com/groups/REDRomania/), Inspiration for school (https://www.facebook.com/groups/1229861113750975/), and other groups of teachers (http://facebook.com/groups/PROFESORI, http://www.facebook.com/groups/ComunitateaDidactic).

All private schools immediately offered temporary solutions and began looking for safe platforms for online teaching, first for students over the age of 10 (5th grade), then gradually for younger students, in kindergarten. Each school offered its own platform and its own sets of rules for online school.

Most of the public schools have a later response. Meanwhile, the ministry started Telescoala (https://digital.educred.ro/telescoala), a series of lessons for the student with national exam and a YouTube channel (https://youtube.com/playlist?list=PLxO8-C91Lp92xRiauh3jJUZxl2e32QTsU).

Regarding the access of students to online school, here are the data:

	Total number of students	Without Internet access	Without device
Public	2806550 (96%)	206219 (7.35% of public-school students)	248.144 (8.84% of public-school students)
Private	121562 (4%)	1358 (1.12% of private school students)	2549 (2.10% of private school students)

https://data.gov.ro/dataset/situatia-conectare-elevi-la-internet-in-anul-scolar-2020-2021

https://romania.ureport.in/opinion/1667/

Before the pandemic started, about 5000 teachers were instructed on https://digital.educred.ro/ - a national program about school digitalization. The course contains instruction for use of two platforms:

- GSuite
- Office 365

3.10 Methods and tools for distance learning in Romania

The most common teaching methods:

PUBLIC/DRAFT

CIVIC	Deliverable: O1A3	
e-Privacing	Version: 1.0	19
Consolidated Current Status & Needs Analysis Report	Issue Date: 22/09/2021	

- Demonstration, simulation, tutorials
- Quizzes
- Use of digital presentation (ppt, Quizziz, Menti)
- Educational games
- Learn by discovery (ex: Geogebra)
- Debates
- Projects
- Use of digital schoolbooks (https://manuale.edu.ro/) with interactive activities
- Group learning

For the mathematics teacher, looking for fast writing of symbols, different layouts and drawings, it was a real challenge to choose one good virtual whiteboard. OpenBoard (https://openboard.ch/) was one of the best solutions. Obviously, the use required the purchase of graphics tablets, The alternative was to use tablet PC and native apps.

One of the main problems during online lessons was the lack of interaction with students. Online, teachers cannot evaluate so easy what students understand and learn, since most of the Romanian evaluation are based on essay items. All teacher and students faced an increased volume of homework, few of them digital. Many parents complained that their children lacked the writing exercise, so the student continued to use paper notebooks, which were later scanned and sent to teachers for evaluation.

During the pandemic, the digital lessons were taught by::

- Google Meet (in GSuite)
- Microsoft Teams (in Office 365)
- Adservio (a Romanian platform)
- Zoom
- WebEx
- even WhatsApp – in disadvantaged areas.

The online school was recognised by ministry first in a public letter on 30th March 2020 (https://www.edu.ro/monica-anisie-ministrul-educa%C8%9Biei-%C8%99i-cercet%C4%83rii-transmis-o-scrisoare-cadrelor-didactice), stating:

- *teachers must interact with student, review the lessons taught in school, without teaching new content and without evaluation (sic!).*
- *the recommended guide for teaching online is DIGITAL pe educred.ro. Each teacher must choose or create his own resources.*
- *Students can use Telescoala for learning new content.*

Romania has 20 years of history in an attempt to digitalize schools:

- AEL (http://www.emanual.ro/index.php/articles/c32) *is a complex platform for teaching, learning, evaluation and management of multimedia educational content, providing any organization with a complete, flexible and secure training solution.* It was launch in all Romanian schools in 2001, along with the AEL laboratories. This

PUBLIC/DRAFT

CIVIC	Deliverable: O1A3	
e-Privacing	Version: 1.0	20
Consolidated Current Status & Needs Analysis Report	Issue Date: 22/09/2021	

is a *network* platform, enriched with thousands of lessons, based on *Flash* content (now, discontinued). All the content was accessible in browser at the beginning of pandemic.
- Every national exam has its site:
  - http://evaluare.edu.ro/ - for the 8th grade graduates.
  - http://bacalaureat.edu.ro/ (2004) - for the 12th grade graduates
  - http://admitere.edu.ro/ (2000) - for high school admission
  - http://titularizare.edu.ro/
  - http://definitivat.edu.ro/

Since 2018, the parents signed a GDPR agreement for the results of their child to be published. For the first three sites, where student were involved, in 10th June 2020 they decide to anonymize the results (each student receive a code) https://www.edu.ro/sites/default/files/Info_Evaluare%20nationala_MEC.pdf.

During the pandemic, Teaching-Staff Resource Center (CCD) organized a series of webinars about online tools. Pupils participate in individual and group activities, creating projects and presentations, for which they send photos and multimedia content on the online platforms. There are situations in which, in order to be connected with pupils and parents, teachers used WhatsApp or Telegram groups, and sometimes only e-mail

3.11 Technical characteristics and data protection Romania

1. **Office 365 with Microsoft Teams** was used in schools as a platform that integrates software for video conferencing, calendar, file manager, and specific teaching tools: themes and notes. The platform was accessible for schools and universities.

Data protection policies depend on how the platform is managed. Students and teachers have accounts based only on first and last name, and in the case of two-step authentication, a telephone number is also required. The only problem is that the password change process becomes very difficult. It is possible to record meetings, but the recording is stored in the cloud in the teacher's account and can only be downloaded by the teacher.

2. **Adservio –** originally designed as a virtual catalog, it has been expanded with file, theme and questionnaire manager. During the pandemic, video conferencing modules were added and free access was provided to a large number of schools. For a good management of the virtual catalog, all students of the school must be enrolled in it. Each student has an associated account, as well as accounts for parents / guardians. Each account is created based on a code. When creating the account, the user must provide contact details (phone number, email). Adservio is registered as a company that processes personal data. ([https://www.adservio.ro/ro/politica-de-confidentialitate)](https://www.adservio.ro/ro/politica-de-confidentialitate)
3. **GSuite** cu **Google Classroom** și **Google Meet** – The school has a standardized subdomain on which accounts are created for each teacher and student, through interaction with the national digital education system (SIIIR).

PUBLIC/DRAFT

CIVIC	Deliverable: O1A3	
e-Privacing	**Version:** 1.0	**21**
Consolidated Current Status & Needs Analysis Report	**Issue Date:** 22/09/2021	

4. **Zoom and WebEx** were widely used. The problem with these applications is that although they have more video conferencing facilities than Teams and Meet, they are not associated with platforms, they do not require the existence of standard accounts.

On 10th September 2020 - OMEC 5545.pdf (edu.ro) states that every school has the obligation to institute a series of measures technical and organizational information on the protection and storage of personal data concerning:

- online security
- ensuring the confidentiality of data;
- preventing the risk of data loss;
- preventing the modification of personal data;
- prohibition of unauthorized access to personal data as art. 5 of Regulation (EU) 2016/679
  o Name of the pupils and teachers using online platform
  o Image and voice of the participants
  o Messages, videoclips, files or any other material which contain data used on educational platform
  o Results of the evaluation
  o connection data to the application or educational platform

3.12 Needs Analysis in Romania

The needs implied by the Romanian report, in terms of digital privacy follow in large part the trends established in the previous countries. Again, there are guidelines in place, albeit that the Romanian report, many of these seemed to have been emphasised notably after the pandemic began, raising questions about just how familiar teachers might be with them at this relatively early stage in the tenure of these particular guidelines. Furthermore, the report notes a significant disparity between public and private schools, both in how quickly distance learning was rolled out and in the proportion of students who had access to internet and a suitable device for distance learning. This suggests that a free, public, and easily accessible set of tools covering digital privacy and security, such as those that this project intends to produce, is a key need.

3.13 COVID-19 and distance learning In Cyprus

Tackling the spread of the COVID-19 outbreak, the Cypriot government suspended the in-school operation of every public and private educational institution at all levels, starting March 13th, 2020 (MOEC, 2020).

Immediately after the lockdown of schools, educators along with academic staff and government officials, arranged meetings in which they discussed and agreed on school-specific action plans for distance synchronous and asynchronous learning options in order to ensure the continuation of education during the lockdown period. Teachers continued

PUBLIC/DRAFT

CIVIC	**Deliverable: O1A3**	
e-Privacing	**Version: 1.0**	**22**
Consolidated Current Status & Needs Analysis Report	**Issue Date: 22/09/2021**	

working from home using a set of online tools and resources, and they were only present in school premises when necessary and according to instructions from the government on the safe operation of public and private educational institutions (CEDEFOP, 2020).

On May 4th, 2020, the gradual lifting of restrictions was commenced, focusing solely on finishing the school year without compromising the quality and credibility of the education system at the different levels. The next academic year was expected to begin on September 1st, 2020, taking into consideration existed epidemiological data of the spread of the COVID-19 virus. For re-opening the schools, priority was given to the final year of upper-secondary education, both general and vocational. On May 11th, 2020, a hybrid model of in-class and remote teaching was implemented for upper secondary general and vocational education, splitting students into two groups who physically attended school lessons on weekly rotation basis (CEDEFOP, 2020).

On May 21st, 2020, primary and lower secondary schools reopened under the same weekly rotation basis. Students of the first and second year of upper secondary education did not return to in-class lessons but continued with remote learning methods. Individuals belonging to vulnerable groups received specialised support at home, through e-learning methods and tools (CEDEFOP, 2020).

The ministry of education decided that the Pancyprian Examinations, which determine learners' access to public universities in Cyprus and Greece, would begin on June 9th, 2020, taking place in school buildings with reduced numbers of learners per classroom in accordance with safety protocols. The ministry also decided that no other examination would take place in first and second years of upper secondary, lower secondary and primary general and vocational education. Remote teaching was used instead, to ensure that students acquired the necessary skills and knowledge needed for their smooth transition to the next academic year (MOEC, 2020).

Shifting to remote teaching carried numerous challenges for both public and private schools. Students' access to education and prolonged school closures that lasted more than a year brought disadvantageous effects on students' well-being, socio-emotional needs and overall school performance. Various gaps in all levels of education were identified during the crisis and Cyprus was no exception (OECD, 2020; UNESCO, 2020).

The Cypriot educational system was entirely based on traditional, face-to-face teaching and there was no legal framework to support remote education during a crisis (Hall et al., 2020). As a result, educators were struggling to shift their daily teaching routines into online modes. One of the main challenges towards remote teaching was poor digital literacy of teachers as well as students. Although Cypriot educators were familiar with using e-learning tools in their teaching practices, shifting to solely remote education proved very difficult and, in some cases, prohibitive (Nisiforou et al., 2021).

In fact, the most common issues that were identified in Cyprus primary and secondary education were:

1. Interrupting learning.

PUBLIC/DRAFT

CIVIC	Deliverable: O1A3
e-Privacing	Version: 1.0
Consolidated Current Status & Needs Analysis Report	Issue Date: 22/09/2021

23

2. Unequal access to digital learning portals.
3. Social isolation.
4. Prolonged school closures.
5. Low digital literacy.

3.14 Methods and tools for distance learning in Cyprus

The Cypriot ministry of education gave priority to ensuring that all learners had access to a computer device (PC/laptop/tablet) and Internet at home. For situations that access to the above was the case, existing infrastructure was used to support these students during distance learning. The Cypriot Ministry of Education provided more than 12 000 tablets to students that did not have access to a computer device ("In-Cyprus-Philenews"-26 January 2021). A synchronous distance education programme was implemented, and more than 110 000 licenses of Microsoft Teams were acquired and offered to students and teachers/educators (CEDEFOP, 2020). However, the whole process of setting-up the accounts and signing in the students took several weeks since the first lockdown was so sudden that caught off-guard the Cypriot education system (Sofianidis et al., 2021).

Apart from MS Teams, which was the dominant teaching delivery method, several other platforms were used for communication and remote learning, such as E-mail, Facebook/Messenger, and Zoom (Vrasidas et al., 2020).

During the first lockdown of schools, an intensive online teacher training course was provided by the Pedagogical Institute of Cyprus, starting with upper secondary teachers. Supportive educational material for learners of all ages was hosted onto the ministry's website and on individual school websites. Public and private TV channels also supported the efforts to distance learning education by broadcasting live lessons and other educational programmes for students of primary and secondary education (CEDEFOP, 2020).

At school level, many different teacher networks were formed, offering peer assistance on the use of learning tools for distance learning. Educators and students alike were taught how these tools can be used in the different contexts with other teachers' assistance and guidance (CEDEFOP, 2020; Nisiforou et al., 2021).

Although great efforts to provide a sustainable and robust action plan towards remote teaching were made, there is currently no data available related to the protection of students' personal data and overall e-privacy. The Cypriot education system implemented a systematic approach for e-learning focusing on remote learning infrastructure, adaptation of the various curriculums and training of educators, however there is no proof that these approaches also covered the important aspect of data privacy when using online tools and platforms that manage and manipulate personal data of underage students.

PUBLIC/DRAFT

CIVIC	**Deliverable: O1A3**	
e-Privacing	**Version: 1.0**	**24**
Consolidated Current Status & Needs Analysis Report	**Issue Date: 22/09/2021**	

3.15 Technical characteristics and data protection in Cyprus

The most popular platforms/tools for remote teaching in primary and secondary education in Cyprus were identified as:

- Microsoft Teams
- E-mail
- Facebook/Messenger
- Zoom

Microsoft Teams enforces two-factor authentication, single sign-on through Active Directory, and encryption of data in transit and at rest. Files stored in MS Teams are backed by high-level encryption. Microsoft has set various layers of protection for their users' data in accordance with compliance standards, the GDPR framework and other data protection frameworks. For more information regarding MS Teams technical characteristics and data protections, please visit the following link: https://docs.microsoft.com/en-us/microsoftteams/security-compliance-overview

Facebook/Messenger uses similar data protection protocols with Microsoft Teams, although one should not forget various scandals regarding Facebook's policy on data usage (https://www.techrepublic.com/article/facebook-data-privacy-scandal-a-cheat-sheet/). More information about Facebook's policies to data privacy and protection can be read in the following link: https://www.facebook.com/business/news/facebooks-commitment-to-data-protection-and-privacy-in-compliance-with-the-gdpr

Zoom is a popular tele-conferencing tool used by various organisations worldwide. During the pandemic Zoom's scandal on security and data privacy issues came to shore (https://www.bbc.com/news/technology-52133349), however the company promised fixes focusing of data privacy for its users. More information about Zoom's policies on data privacy and protection can be read in the following link: https://zoom.us/privacy

Using e-mails for remote teaching is not something new in Cyprus as well all over the world. Depending on the provider, different data protection measures and policies are implemented, however it is safe to say that providers such as Google and Microsoft have various layers of protection for their users' personal data when using their email accounts. However, one should be cautious of cyber-attacks that often happen via email, such as phishing, identity theft, pharming, virus, malware and spam. More information on how users can protect themselves from such attacks can be read in the following link: https://www.cloudsecuretech.com/types-of-email-attacks-and-the-damage-they-can-cause/

3.16 Needs Analysis in Cyprus

The needs identified in the Cypriot report are again in line with those in previous reports, albeit in places more clearly signalled. The report states that there had been no legal framework to support remote learning before the onset of the COVID 19 pandemic and

that a resulting teething period was noticeable among teachers and students. It further cites as problems unequal access to digital learning portals and low levels of digital literacy, as well as noting the lack of clear data on the e-privacy of students. Despite the intensive training that it describes being delivered to teachers, the need for comprehensive and accessible guides to e-privacy in Cypriot education is therefore clear.

3.17 COVID-19 and distance learning In Greece

The first year of the pandemic that schools suddenly closed the approaches in public school and private schools with regards to distance learning were different. As it was mentioned above at the majority of private schools students attended classes while at home after the first week of the closure of schools but students of public schools didn't have the opportunity to keep in touch with the educational process.

At the second year of pandemic the priority of the Ministry of Education was to cover the increased needs in distance learning under these exceptional circumstances because at the first lockdown the distance learning was not mandatory for public schools. Therefore, since the day schools closed distance learning began for all students via Cisco's Webex platform. During the synchronous learning the teacher could share files, presentations even his screen and notes with his students, while he could give them the floor to pose questions or just speak, participating thus in an interactive lesson. Students in public kindergartners and primary schools attended classes from 2:10 pm to 5:20pm and they had 10 minutes break every 30 minutes. In contrast students at private schools attended classes in the morning following their regular schedule. Secondary students both at public and private schools attended classes during the morning in accordance with their regular schedule.

At this point, it's crucial to present a case of a private school. During the pandemic teachers of Ellinogermaniki Agogi School were fully supported and further trained trough seminars with view to be able to use the Webex platform and create digital material. Specifically, at all educational levels used the Webex for on-line learning. In case any technical problem occurred and there was a disruption of the on-line course teachers and students were supported by the technical department of the school. In addition, they used Edmondo which is a platform that enables teachers to communicate, collaborate with students and share useful material with them. Students were already familiar with the use of this platform and were able to upload their work on it. In primary school students also use e-askiseis, which is a portal filled with exercises on several school subjects that EA teachers have created.

3.18 Methods and tools for distance learning in Greece

From the beginning of pandemic teachers had at their disposal a variety of tools such as the Interactive School Books, the Digital Educational Material ("Fotodentro") and

PUBLIC/DRAFT

CIVIC	Deliverable: O1A3	
e-Privacing	Version: 1.0	26
Consolidated Current Status & Needs Analysis Report	Issue Date: 22/09/2021	

the Advanced Electronic Scenarios ("Aesop") organized by educational level, course etc. The digital asynchronous platforms "e-class" (https://www.openeclass.org/en/) and "e-me" (https://auth.eme.edu.gr/?eme=https://eme.edu.gr/&cause=ntoken&eat=d9b0e37aa7f1ef9710ca9152ee64082b&lang=en_US) were also offered and used for e-learning courses, while students had the opportunity to follow "Open Classes" posted in the platforms by their teachers without prior registration. Public TV also supported distance learning by broadcasting educational programs for primary school students.

As far as synchronous e-learning is concerned during the first lockdown teachers of public schools mainly used Webex and in case technical problems occurred they used Skype, Zoom, Blackboard and Microsoft Teams instead. Some private schools paid for the use of non-free platforms like the blackboard to ensure that students don't miss online courses. The second year of the pandemic as it was already mentioned above all schools used the Webex platform.

3.19 Technical characteristics and data protection in Greece

The Ministry of Education in order to respond to the needs of distance education has chosen the Webex platform. As far as the data protection is concerned the Greek Ministry of Education ensured that the use of this platform will protect teachers and students' private issues. According to signed agreement any information from a user participating in the Webex service is used, collected and stored in accordance with EU data protection laws and International Cyber Security Standards (ISO 27001, ISO27017, ISO27018, ISO27701 including SOC 2 Type II, SOC 3 and C5) and are certainly not used to profile or share user data with any third party.

However, there was no teacher training regarding data protection. It is also true that in the Greek parliament there was a political controversy regarding the personal data protection by the Cisco company.

3.20 Needs Analysis in Greece

The Greek report makes evident the need for further, more comprehensive, and more accessible training on e-privacy in education there. It notes that there have been issues with data protection in Greece before, that significant technical issues were experienced in the early days of the pandemic in particular, and it suggests that the disadvantages suffered by public schools as compared to their private counterparts in the area of digital education were considerable. As such, this constitutes a clear endorsement of the need for a set of tools like those that the e-privacing project promises.

PUBLIC/DRAFT

CIVIC	Deliverable: O1A3	
e-Privacing	Version: 1.0	27
Consolidated Current Status & Needs Analysis Report	Issue Date: 22/09/2021	

4 Comparative analysis of Transnational and national reports.

The main conclusion that can be drawn from the section of the transnational report included above in this report is that in Germany when it comes to data, less is more. This is quite possibly a good rule of thumb to apply to the countries within the partnership, given the density of rules surrounding the collection and treatment of personal data. Furthermore, the switch to distance learning was initially a rapid one, and not entirely smooth, so the less data about students, the better, in situations where data might accidentally be put at risk or more exposed than it perhaps should be.

One of the other draws from the transnational report was in terms of choice of applications used to teach distance learning. Again citing the German example, the transnational report notes that efforts were made to secure student and staff data by using only applications that were compliant with GDPR and other EU data laws. This is again something that might have been of use to other countries when setting up their distanced education systems, and given extra piece of mind when it comes to data security and privacy.

Thirdly, the transnational report notes that in Sweden, time and training had already been set aside by the beginning of the pandemic to improve expertise in digital learning. This is a very clear thing that project countries could do better: all of the reports noted that the transition to distanced learning was haphazard, beset by technical problems and insufficient training or preparation. Notwithstanding that this would have been almost possible to avoid to some degree, given the rapidity of COVID's onset and the sudden nature of the ensuing lockdown and school closures, it could certainly have been improved through the targeted application of trainings and provision of digital materials.

On a related note, the transnational report states that blended learning, done well, has worked and can continue to work into the future. This mixed application of remote digital learning and more traditional in-person methods is something that countries within the partnership should consider, especially now that the levels of digital expertise and provision of devices makes it more realistic to achieve.

5 Conclusion

The reports referenced in this document provide overall a broad and comprehensive background on digital privacy and learning in education across Europe. It is certainly clear that there have been numerous challenges in the rapid transition to online learning that was necessitated by the onset of the COVID pandemic in terms of the quality and fashion of the learning itself, but also in terms of adapting to digital platforms. In many cases, even where teachers had had some training before the pandemic, there were still difficulties in adapting to new platforms and a new means of teaching altogether, and this includes issues around data privacy.

PUBLIC/DRAFT

CIVIC	**Deliverable:** O1A3	
e-Privacing	**Version:** 1.0	28
Consolidated Current Status & Needs Analysis Report	**Issue Date:** 22/09/2021	

Indeed, although there is plenty of literature around the broader switch to digital learning (despite the pandemic being not just extremely recent but also still ongoing) and its challenges, there seems to have been relatively little on the observance and knowledge (or lack thereof) about digital privacy rights and obligations. This seems to have applied as much to students, who for a variety of reasons may be particularly vulnerable in this respect, as it does to teachers. As such, it can be reasonably concluded that this report shows a need for tools covering subjects such as digital privacy and data protection rights specific to education that are free, accessible, and informative. This falls well in line with the aims and goals of the e-Privacing project and indicates clear value that it could add to discussions and practice around these topics.

6 References

This document was based entirely on the synthesis of the national reports completed by e-Privacing partners and the conclusions that can be drawn from study and comparison of them.

PUBLIC/DRAFT

CIVIC	**Deliverable: O1A3**	
e-Privacing	**Version: 1.0**	**29**
Consolidated Current Status & Needs Analysis Report	**Issue Date: 22/09/2021**	