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Transnational Report on e-Learning in Europe

S&P

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

This project has been funded with support from the European Commission.

Project Nº: 2020-1-UK01-KA226-SCH-094506

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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
2.0	27/07/2021	S&P	Creation of Transnational Report	C	21

(*) 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]

1 Table of Contents

2 Introduction

The outbreak of COVID-9 and the necessary national measures taken to tackle the spread of the virus caused significant disruption to the provision of education, training and mobility opportunities for learners and teachers across the EU. Helping ensure continuity in education, there is a wide range of online learning material and tools that were made available online (EC, 2020). The EU has already prepared a holistic approach over this issue, taking into consideration the outbreak of COVID-19, the “Shaping Europe’s digital future” (DG Connect 2020) and the EU Digital Education Action Plan (EC, 2020).

Despite the fact that this procedure is a long-term priority for EU, the emerged digitalisation of education due to the pandemic, has raised big concerns over privacy issues and the danger of sharing large amounts of personal data online, and so the national data protection authorities examined issues related to several e-learning platforms and the protection of personal data (HDPA, 2020).

One of the main aspects to be considered in order to achieve a high level of student’s personal data protection is the human factor and particularly the training of teachers and educators, and the awareness of the educational community over the privacy issues.

Most educational institutions passed into the digital era in a sudden and short period of time. Restrictive measures to contain the pandemic affected almost 1.6 billion children in 195 countries worldwide who, suddenly, could no use their classrooms. Initially, educational organisations were using online learning platforms just as an auxiliary tool in the educational process. After the outbreak of COVID-19, these organisations were forced to digitalise every aspect of their operation, without proper examination of the effects in the protection of students’ fundamental rights, such as the protection of their personal data. Schools, universities and educational organisations in general have replaced the traditional way of teaching with the use of existing or new e-learning platform. In some cases, teachers have even used Social Media platforms to deliver online courses throughout the pandemic. Zoom’s security scandal (Wakefield, 2020) proved that in some cased the use of online platforms carries risk for the users (teachers and students).

In addition, the digitalisation of every operational aspect in educational institutions, as a consequence of personnel teleworking policies, created a huge amount of personal data that transmitted and stored online. Taking into consideration all the above, there is clear security gap that exists for the protections of individual’s personal data when using online tools for education and training.

Therefore, the e-Privacing project responds directly to the above issues by mapping existing e-learning platform used in Partners’ countries, by proposing best practices to be adopted by schools and educational centres in the field of data protection, by delivering a GDPR roadmap for teachers and by raising awareness in the educational community with the organisation of multiple events and workshops and by creating an online learning platform to be used as an educational tool for teachers and students over data privacy and protection.

e-Privacing encourages the use of digital means in the educational system of EU countries while suggesting a holistic approach towards the protections of personal data. By creating a roadmap for GDPR compliant technological solutions in the field of digital education and by training the users of these platforms to respect the EU privacy legislation and to avoid data breaches, the e-Privacing goal is achieved.

3 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.

3.1 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

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

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 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].

3.2 Methods and tools for distance learning – Focus on EU Best Practices

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

[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%20situation%20deteriorate.

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 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 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

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

- 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.
- 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.
- 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. 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

- 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.
- 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.

3.3 Technical characteristics and data protection

There are two main types of LMS (e-learning platforms): free software and commercial or proprietary platforms. All of them usually focus on these two premises, regardless of the number of resources or added tools offered by each individual platform.

Free software platforms are used to provide open training at no cost. Generally, they are developed by educational institutions that want to offer a series of courses or training to those who want to. Some of these platforms, not all, are open source, which establishes free access, and that the user is autonomous to manipulate the software. Some of the open access platforms are as equipped as the commercial ones, while others are very basic.

Commercial platforms are paid, it is necessary to pay a certain amount to the company, either to the one that developed the platform or to the distributor. Since they are paid, the

platforms are usually much more elaborate, and users know in advance that they will find the contents and training they are looking for[5].

The basic functionalities that an e-learning platform can offer to users could be infinite, but there are a number of features that must all be met in order for it to function optimally and for the user experience not to be impaired.

- The platform must be capable of receiving and reproducing all types of content, regardless of who created it or the methods used. It should even be possible to incorporate content from another platform.
- It has to do with the previous feature. The contents can be reused in other courses or in other contexts, and even information can be added, making the contents always updated.
- The contents present on a platform are never stable. Every time someone accesses them, their **activity is recorded** so that, when they access a document again, they can continue reading it from the place where they left it. Also, the tutor or instructor can know if the students are accessing the contents or not. This is a way to ensure that no user misses any essential lesson or document.
- **Always available**. This is the basic feature of distance learning. Both students and tutors will be able to access the content at any time of the day, managing their schedules and the time they want to spend on their training.
- The e-learning platforms are **prepared to deal with technological advances**, preventing the contents or their accessibility from becoming obsolete.
- **The platforms keep growing**. It is always possible to increase the amount of content, courses and the number of students who can access it.
- **Optimization**. All the above-mentioned features make the teaching-learning process beneficial, since it involves cost savings, reduces learning time, allows users to organize themselves better and makes the quality of learning also increase.

The compliance of e- learning online platforms with GDPR is a complex issue. The main problem is the existence of platforms and online services that have been shaped before their obligation to implement the General Data Protection Regulation. For example, cloud services are considered the most vulnerable regarding the security they offer. The way that many countries have chosen to face this issue is to ban users for using them. For instance, 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[6].

On the other hand, the French data protection authority published pre-emptively, on 28 January 2020, a guide to help website developers comply with the General Data Protection Regulation (Regulation (EU) 2016/679) ('GDPR'). Specifically, the Guide offers

[5] https://www.evolmind.com/en/blog/E-learning-the-definitive-guide
[6] https://www.cois.org/about-cis/news/post/~board/perspectives-blog/post/data-protection-and-privacy-implications-of-online-and-remote-learning

practical guidance for web developers to ensure compliance with the GDPR, with 17 sections dedicated to, among other things, website security, source code management, software development kits, transparency, data minimisation, and data retention. The Guide follows CNIL's[7] good practices guide for developers processing personal data from May 2019.3. emphasis has been given on data protection due to the existence of a separate sector which refers exclusively to the clarification of what is considered as personal data. To enable developers to identify personal data, the Guide provides examples of personal data, which include photos, voice recordings, fingerprints, IP addresses and cookie identifiers, and specifies that an individual can be identified either through one type of data or through combining different pieces of data.

In addition, the Guide distinguishes between:

- anonymisation of personal data, which renders impossible the identification of individuals; and
- pseudonymisation, which involves replacing the data which directly identifies an individual with data indirectly identifying the individual, such as an alias or classification number.

In relation to the anonymisation of personal data, the Guide recommends that developers never regard raw data sets as anonymous, but instead ensure that any possibility of re-identifying an individual has been eliminated. However, the Guide points out that there is no universal solution for anonymising data, and that the choice of a particular anonymisation technique depends on, among others, the nature of the personal data, and the risks to individuals.

With respect to pseudonymisation, the Guide notes that:

- the additional information which can enable the identification of the individual should be kept separately; and
- the additional information should be subjected to technical and organisational measures to prevent re-identification of the individuals[8].

4 National Data Protection Laws in Europe

This section will describe the most important aspects of National Data Protection (NDP) Laws in the chosen countries in regard to the education of underage students via distance learning. This section will try to answer the following sub-sections:

4.1 Specific data protection laws

Since 25 May 2018, the EU General Data Protection Regulation (GDPR) applies directly in all EU Member States. The GDPR contains 50+ so-called opening clauses allowing EU Member States to put national data protection laws in place to supplement the GDPR.

[7] https://www.cnil.fr/

[8] (https://www.cnil.fr/fr/la-cnil-publie-un-guide-rgpd-pour-les-developpeurs), (French data protection authority, 2020)

In order to help businesses to analyse and understand those national data protection laws, Baker McKenzie's GDPR National Legislation Survey[9], provides an overview of the current legislative activities in terms of national data protection laws in the 28 EU Member States and highlights the variations amongst the EU Member States.

As of January 2019, 23 out of 28 European Member States have adopted national data protection laws supplementing the GDPR. This update focuses on the following opening clauses:

1. Article 8 GDPR (age for minor consent)
2. Article 10 GDPR (processing of data relating to criminal convictions and offences especially in the employment relationship, e.g., background checks, whistleblowing hotlines, internal investigations)
3. Article 23 GDPR (relevant restrictions on data subject rights)
4. Article 37(4) GDPR (additional thresholds requiring the appointment of a DPO)
5. Article 49 (5) GDPR (restrictions on the transfer of sensitive data to third countries without adequacy decision)
6. Article 87 GDPR (specific rules for the processing of national ID)
7. Any requirements for notifications with /authorizations by the national data protection authority.

From the clauses above, the most interesting is the age for minor consent, in other words the age when a child can give its consent for the process of its personal data legally. The national laws state different ages in each EU country and particularly:[10]

- 13 years of age in Belgium, Denmark, Estonia, Finland, Iceland, Latvia, Norway, Portugal, Sweden and the UK;
- 14 years of age in Austria, Bulgaria, Cyprus, Italy, Lithuania and Spain;
- 15 years of age in the Czech Republic, France, Greece and Slovenia;
- 16 years of age in Croatia, Germany, Hungary, Liechtenstein, Luxembourg, the Netherlands, Poland, Romania and Slovakia;
- in Ireland, consent can generally be given at 16 years of age, but this may vary up to 18 years of age in some circumstances; and
- in Malta, consent can generally be given at 13 years of age, but can only be given at 16 years of age for students.

Taking into account the other thematic areas that the national laws regulate, we should underline the issues of:

- Processing of personal data in compliance with a legal obligation, where most EEA Member States impose no specific rules in this regard. However:

[9] https://tmt.bakermckenzie.com/en/thought-leadership/gdpr-national-legislation-survey
[10] https://www.whitecase.com/publications/article/gdpr-guide-national-implementation

- Austria, Estonia, Slovakia, Slovenia and Sweden impose specific rules regarding certain types of data (e.g., criminal data) or in relation to processing by businesses in certain sectors (e.g., healthcare);

- the Czech Republic, Hungary, Italy and Portugal impose additional general conditions on controllers that wish to process personal data on the basis of a legal obligation; and

- Finland exempts controllers from the application of certain rights of data subjects when processing personal data on the basis of a legal obligation.

- In addition, in the field of processing of personal data for the performance of tasks carried out in the public interest, EEA Member States have adopted different positions on this issue. For example:

  - Belgium, Cyprus, Denmark, Latvia, Liechtenstein, Lithuania and Luxembourg have not imposed any specific rules on this issue; and

  - Austria, Bulgaria, Croatia, the Czech Republic, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Malta, the Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden and the UK have imposed specific rules that must be satisfied in order to process personal data on a public interest basis. The nature of these rules varies substantially from one EEA Member State to the next.

- And finally, in the issue of processing for a new purpose is compatible with the purpose for which the personal data were initially collected, EEA Member States have adopted different positions on this issue, and particularly:

  - Belgium, Bulgaria, Cyprus, the Czech Republic, Estonia, Finland, France, Hungary, Iceland, Italy, Latvia, Liechtenstein, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Sweden and the UK have not imposed any additional criteria; and

  - Austria, Croatia, Denmark, Germany, Greece, Ireland and Spain have imposed additional criteria that must be satisfied in order to process personal data for new purposes. The nature of these criteria varies from one EEA Member State to the next.

4.2 Legal implications for online tools for education

The European General Data Protection Regulation (GDPR) and other equivalent privacy laws should not stop the educational organisations from delivering education. These laws do, however, require the educational organisations to be mindful about how they collect and store personal and sensitive information about their staff, faculty, students, and their families. Taking steps to ensure that the online learning platforms comply with the privacy

laws in each country will help the educational organizations to keep this information secure and mitigate any legal and financial exposure. [11]

Most online learning models require the assistance of a technology or software platform such as Microsoft Teams, Zoom and Google Meet.

Most of these platforms require, as a minimum, the name and email addresses of students, teachers and faculty members using the facility. This is necessary for the platform to manage identification, accounts, and log-ins. Where possible individuals should only use institutional email addresses, not personal ones. Additionally, these platforms might use images, audio and/or free-text messaging. Platforms may also collect data via cookies or other online identifiers.

Online platform providers are considered 'third-party processors' under data protection law because they will be processing personal and possibly special category data on the institution's behalf, and so on a Data Protection Agreement need to be signed.

Apart from the GDPR and the National Privacy Laws, the E-privacy Directive may be applicable in some cases as well. The e-Privacy Directive builds on EU telecoms and data protection frameworks to ensure that all communications over public networks maintain respect for fundamental rights. There should be a high level of data protection and of privacy regardless of the technology used. The European Commission adopted a proposal for a Regulation on Privacy and Electronic Communications to replace the Directive in 2017.[12]

The ePrivacy Directive requires EU countries to ensure that users grant their consent before cookies (small text files stored in the user's web browser) are stored and accessed in computers, smartphones or other device connected to the Internet. Telecom operators and Internet Service Providers possess a huge number of customers' data, which must be kept confidential and secure. However, sometimes sensitive information can be stolen, lost, or illegally accessed. The ePrivacy Directive ensures that the provider reports any personal data breaches to the national authority and informs the subscriber or individual directly of any risk related to personal data or privacy.

The content of e-privacy regulation act supplementary to GDPR provisions and focus on special aspects of privacy in the field of digital communications and so on the operation of digital platforms.

4.3 Components of GDPR

Online educational learning platforms invariably collect a variety of personal data to connect the platform users. Online counselling sessions may also involve sensitive or 'special category' being shared.

[11] https://www.cois.org/about-cis/news/post/~board/perspectives-blog/post/data-protection-and-privacy-implications-of-online-and-remote-learning
[12] https://digital-strategy.ec.europa.eu/en/policies/digital-privacy

The GDPR requires institutions to have at least one lawful purpose for processing personal data and an additional lawful purpose for processing special category data.

While consent may be appropriate to use for some institutions, care should be taken if consent is being relied upon as a 'catch-all' for processing personal data. This is because individuals have the right to withdraw consent to processing at any time, and the withdrawal of consent might prevent institutions from delivering their education services. This could, in turn, cause institutions to breach their contractual obligations to students or their parents.

Institutions should consider whether there is an alternative lawful purpose before relying on consent. For example, it might be appropriate to consider whether the institution has a legitimate interest in maintaining the continuity of education remotely.

For fee-paying schools, the lawful purpose of processing personal data for online educational classes and counselling sessions could be, for example, the performance of a contract (i.e. your parent contract). Where special category data is being processed, the additional lawful purpose might be the provision of health care, reasons of substantial public interest or, for more serious cases, vital interests.

All the components described above are being implemented in the chosen countries. These requirements are the minimum requirements in order to achieve a lawful process of students' personal data.

4.4 Common ground between GDPR and NDP Laws

Considering the requirements of GDPR and NDPs described above, we should underline the following steps in order the educational organisation to be compliant with privacy legal framework.

a) Institutions should have at least one lawful purpose for processing personal data.

b) Institutions should have as well an additional lawful purpose for processing special category data.

c) Institutions should take the appropriate technical and organizational measures such encryption of data, password policy, two step authentications, etc.

d) Institutions should implement a Data Protection Impact Assessment (Dpia) for the operation of e- learning platforms.

e) Institutions should inform the subjects (students and teachers) about the process of their personal data and their rights.

f) Institutions should take into consideration the special provisions of each national data protection law for the age of minor consent.

5 Conclusion

In order to contain the contagion, many countries have implemented restrictive measures to reduce gathering and formations of crowds. Schools are also affected and had to reduce their classes or close entirely. One can only imagine the impact when, at the peak of the crisis, almost 1.6 billion children in 195 countries worldwide could not use their classrooms. If school closures are extended for too long, there is a significant potential for loss of educational opportunities, but also a potential loss of human capital and diminished economic opportunities in the long-term. Fortunately, the closing of schools did not entirely stop education, although it changed it. To reduce the impact of closures, schools have been looking for alternative ways to provide access to education. On the side of home schooling, students and children are currently, wherever possible, remotely educated all over the world, using technology such as online courses, video classes, and electronic textbooks.[13]

The abovementioned increasement of the e-learning methods has raised various concerns over privacy and data protection issues. The General Data Protection Regulation, 679/2016, as well as the E- Privacy Directive create a common legal framework in EU. The obligations and the requirements coming from the abovementioned legal texts are applicable to all EU countries and set a minimum of standards for the educational organizations. In Addition, the national data protection laws specialize the EU provisions and regulate complementary some issues (open clauses).

Despite the fact, that a lot of unofficial methods used into the pandemic crisis in order to deliver the schools courses to the students, most online learning models require the assistance of a technology or software platform such as Microsoft Teams, Zoom and Google Meet. Despite the fact that these software platforms have already taken security measures for the protection of personal data, such as encryption, privacy and information security policies and protocols as well as technical and organizational measures, we underline the lack of information given to the teachers and the students regarding to their rights and the dangers coming from the use of e-learning platforms in the field of privacy. During the life cycle of the project, one of the main goals it will be the familiarization of all the components of the educational community, with the data protection legislation and the obligations coming from it.

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