SEAFARERS' GUIDE

TO NAVIGATING THE DIGITAL WORLD

WITH YOUR STUDENTS

SAILS PROFESSIONAL EDUCATOR RESOURCE

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TABLE OF CONTENTS

BEFORE YOU START READING

Think of the last 24 hours, and list

- The digital devices you have used
- The digital platforms you have visited
- The digitally supported services you have used

If possible, ask a colleague or a friend to do the same, and compare your lists.

Once you have the list, cross out all of those list items that a child would surely not use. Your students might be too young for some, try to think about children of all ages in general.

The remaining list is quite long, isn't it? You are very comfortable using some of them while uncertain with others.

When reading this resource, remember that

- your students will watch you and see your example, you will be one of their role models when sailing digital waters,
- you don't have to know everything, and it is OK to ask for help.

To be a great SEAFARER, build a **trust**ful relationship with your students so that they always turn to you or their parents with their problems, encourage **open discussions** about any topic they are interested in and be a **role model** worth following.

TEACHERS AS SEAFARERS - THE RISK MITIGATION APPROACH

As a result of recent school closures, nearly all school children had used digital technology, e.g. for learning, for keeping contact with their friends, for playing and other free time activities. School as a social learning place and meeting friends cannot and must not be replaced by digital technology, but one of the outcomes of the closure periods is that there are lasting changes that need to be considered and tackled strategically.

COVID-19 school closures also highlighted how necessary it is for schools and families to work together, parents and teachers often learning to navigate digital realities together. While experiences made more teachers and parents appreciate the potential and benefits of using digital technologies for learning, there are several areas in which both groups need support and in which teachers often need to negotiate with parents and families. Overconfidence is just as problematic as overprotective approaches, and this resource is aiming at addressing both. Research conducted since March 2020 by Parents International clearly shows that parents wish digital technology to become an integral part of schooling and education in a broader sense, and many teachers support this not wishing to return to old practices, but there is also a demand for finding a healthy balance between online and offline activities, finding the role of digital technology in traditional educational activities, negotiating passive and active screen time, and understanding and observing privacy and data protection.

In many countries, there have already been digital technologies in use for home-school communication, for supporting learning, for playing and for building social networks. In the first years of using them, both school professionals and parents were so-called digital immigrants, people who lived most of their life without these tools. This meant that both groups were undergoing a learning process, unfortunately most often not together. However, digital natives, children who were already born into the digital age are becoming parents nowadays. With an ageing teacher force that is the reality of Europe, it is time for teachers and parents to collaborate in this field, the digital natives supporting the learning of teachers and school leaders. However, research by Parents International, shows that there is a need for cataloguing the various ways digital technology is present in the lives of children, families and home-school relations in order to have a conscious approach to dealing with them.

The SAILS consortium has decided to implement a risk mitigation approach to online safety. This chapter explains what is meant by this and why it is important. On the one hand it is a major child rights issue, on the other hand they will meet risk and harm, but if you have a risk prevention approach you may not know about it. Parents as the main guardians of their children's rights need to consider this as part of their parental duties.

Let's start with the child rights challenge. There is no question about a certain hierarchy of child rights: **we need to do everything we can to prevent any risk to life**. Still, accidents and incidents happen, and children – sadly – die. However, you teach children certain skills, for example to prevent them from being hit by a car and allow them to leave the house every day.
The media is full of stories about children being harmed, mostly mentally by online activities. The answer for many is to prevent children from going online (in their presence) or using certain online tools, such as social media. But is it the right approach? Our answer is a definite no. Similarly to navigating the roads, **we need to teach our children how to recognise and deal with online risk and harm** – and thus starting to provide for another basic right, the right to education. We also need to ensure a family and school environment where children feel safe to seek adult (primarily parental) advice if they feel uncomfortable, sad or at risk – thus providing for the basic right to be brought up in a loving and caring environment. Schools often limit digital access or attempt to do so in order to avoid any incidents happening during school hours, however, this approach is no more than turning a blind eye to the inevitable online interaction between students (and possibly school staff).

Research has confirmed that for the children of today online and offline presence means a continuum, not two separate fields of life. Online tools, and especially social media provide the platform for getting together, for organising social life, for expressing views and debating them, for widening their horizon and learning about the world around them. Therefore, child rights organisations have highlighted the importance of online access – thus providing for a number of basic child rights, such as the right to the freedom of speech, the right to peaceful assembly, and again the right to education. When legislation, family, or school attempts to prevent access, they violate all these rights while their actions are definitely not justifiable by the prevention from harm as a proportionate element. It is important to mention that adult access to mailboxes, social media handles and other personal online spaces as well as most so-called parental control tools are also violating the basic right to privacy.

The basic principle of child rights is that it is closely linked to the evolving capacities of the child. The last 20-30 years has been a period when children in Europe – largely as a result of American

influence – have been considered less and less capable of exercising their rights. Let's go back to the road crossing example. At the end of the 19th century, cars had been considered so dangerous that in cities the driver was obliged to hire a runner to run in front of the car with a flag indicating danger (and by that also to drive ridiculously slowly). Cars have become much faster and much more numerous, and still people have decided not to lock their children in the house but to teach them how to cross the road safely. First you cross together, holding hands and being a role model for your child. Then you ask the child to tell you when you can cross the street after they look around or check the traffic lights. And at the age of 6 or 7 (yes, that is the right age, not later, children are capable), you let them go on their own knowing that you have taught them all. Similarly, the first online experiences should be joint ones and important adults (both parents and teachers) need to be role models for their children. At the same time, it is important to **create an environment and practices that enables the child to share anything, even being naughty, cheeky or outright bad, without having to be afraid of punishment**. Free discussions around the table at dinner has proven to be the best. Teachers should encourage this open communication and promote it to parents. That way, parents will know if something bad is happening to them online or offline, and build trust rather than violate their rights.

Most people are afraid of their children or students being bullied online, but they don't consider two things. Online bullying is (nearly) always an extension of offline bullying behaviour, and often a sign of the bully being bullied. And sadly, we also need to understand that child-to-child bullying is not the most prevalent. Children are most often bullied by teachers and trusted adults from the family and the circle of friends are the second in line. Another major concern is about pornographic content, but that has been on the table for decades, probably centuries. **Children always found ways to access such content, without adult presence, if forbidden**. A third area of concern is being exposed to violence. In this field research is not conclusive, but the balance is dipped towards research results showing that **violent content is rarely a trigger for violent behaviour**. At the same time, violent games often play the role of a punchbag.

CLARIFYING NOTIONS

There are several phrases used in connection with digital tools used in education. Sometimes they are used as synonyms while they are not. Some are suitable for school-aged children, even the youngest ones, some are for more mature learners. Thus, it is important to start with understanding what is what.

DISTANCE LEARNING

According to the Oxford Languages distance learning is a method of studying in which lectures are broadcast or lessons are conducted by correspondence, without the student needing to attend a school or college.

ONLINE LEARNING

Online learning is a more modern form of distance learning where the study material is provided online, on a web platform.

Asynchronous online learning means that the study material is provided in a format that student can access at their own pace and at the best suitable time. The most common form is a massive online open course (MOOC). While this is not ideal for young learners, many of the courses are short, and they are a good tool for students to pursue special or personal interests not usually include in the school curriculum. It is also an ideal form for teachers to train themselves as there is a plethora of teacher training MOOCs available, and most European ones are free. Some platforms offer their courses for free, but ask for a fee if you want to obtain a certificate.

Synchronous online learning happens when the students and teachers need to be online at the same, pre-defined time. Conducting ZOOM lessons is one for of it and it has proven to be unsuitable for younger learners. It is also not very popular with more mature or adult learners, but it can be a useful addition to Asynchronous learning in the form of tutorials or Q&A sessions.

ICT ASSISTED LEARNING

Information and Communication Technology (ICT) in education is the mode of education that use information and communications technology (including radio, TV, computer and internet) to support, enhance, and optimise the delivery of information. Worldwide research has shown that ICT can lead to an improved student learning and better teaching methods.

BLENDED LEARNING

According to the European Commission (2021)[1], blended learning in formal education and training involves a diversity of approaches and is to be understood as a school (in primary and secondary education, including vocational education and training), teacher and trainer or learner taking more than one approach to the learning process:

- blending school site and other physical environments away from the school site (either with the presence of a teacher/trainer, or separated by space and/or time in distance learning);

- blending different learning tools that can be digital (including online learning) and non-digital.

This is an approach that is desirable in everyday school activities.

HYBRID LEARNING

Hybrid learning is synchronous learning that teaches both in-person and online learners simultaneously. Happening on-site and remotely at the same time, hybrid learning is aiming at bridging the physical classroom and virtual learning spaces and bringing them closer together. This form of learning has very high technical demand both in hardware (including cameras, speakers and microphones as well as a strong and stable internet connection that enable students to see and hear the teacher and each other) and in teaching. It is usual to assign learning buddies or special assistance to students participating remotely, but experiences show that even with the best assistance remote students are not having a full experience, and it is reflected in lower learning outcomes and worse exam results.

This form of learning is very beneficial in some extreme cases helping students who are unable to join the class physically, e.g. due to an illness or accident, to not lose contact. However, in the overwhelming majority of cases even online learning is a better option – even for adult learners - than hybrid, and it shouldn't be offered as a regular part of schoolwork. Important or interesting presentations or lectures can be recorded and shared with those not attending in person. It also makes it possible to check for technical problems before sharing.

[1] https://education.ec.europa.eu/document/council-recommendation-on-blended-learning-approaches-for-high-quality-and-inclusive-primary-and-secondary-education

LEGAL JARGON EXPLAINED

GENERAL DATA PROTECTION REGULATION ("GDPR")

The GDPR, adopted in 2016, is an instrument directly applicable and binding in each Member State of the European Union ("EU"). There are several parts of this legislation that are relevant for everyday teaching practice and student-teacher-parent relations.

One of the most important regulations is Article 8, titled Conditions applicable to **child's consent** in relation to information society services. This defines the default age of consent in online environments at 16, although gives the right to Member States to reduce this to 13, but not below. This is considered by child rights experts to be an extreme risk prevention approach, resulting in harming child rights other than the right to protection. It also includes an obligation that **child-friendly language** should be used in any communication aimed at children in data processing contexts.

The GDPR also **limits data collection and processing** to those absolutely necessary. While this is a general approach to be used, people can give specific consent for handling most of their data. However, even with specific consent, it is **forbidden to collect and handle sensitive data** except for a limited number of valid and proven reasons. This include data on race or ethnic origin, political opinions, religious or philosophical beliefs, trade union membership and personal data concerning a person's health and sex life. This is something to consider when teachers or schools collect data on students and their families, but also when teachers are asked to provide data to their employer (such as vaccination status information).

The GDPR also gives children under 18 a broad **right to be forgotten**. At any given time, even when they are adults, they can ask for their data, pictures or content to be removed.

THE UN CONVENTION ON THE RIGHTS OF THE CHILD

The UNCRC is the most important and the single broadest international legal instrument concerning children's rights and it is also legislation defining the responsibilities of parents as well as the limited duties of schools and teachers. As such, it also has major relevance for the digital context. In no particular order of importance, the following rights are, or should be, most impactful in the online environment:

- The right to free expression (Article 13).
- The right to freedom of thought, conscience and religion (Article 14).
- The right to freedom of association and peaceful assembly (Article 15).

- The right to privacy (Article 16).
- The right to access to information (Article 17).
- The right to education (Article 28).
- The right to leisure, play, and culture (Article 31).
- The right to protection from economic, sexual, and other types of exploitation (Articles 32, 34, and 36, respectively).

In 2021, the United Nations Committee on the Rights of the Child adopted a General Comment concerning children's rights in digital environments. It aims at the balancing of children's rights including

- guaranteeing equitable[2] access and treatment online,
- giving all children's rights due weight, not only the right to be protected from harm,
- offering fora for children to voice their views through digital technologies and these views are to be respected.

As is clear from the brief summary above, the Committee considers it (rightly) critical that States recognize the relevance of all children's rights in the digital world. Comprehensive and broad risk-prevention approaches are strikingly contrary to this required respect for rights such as that to access information and voice one's opinion. If, in the name of risk-prevention, a parent, a teacher or authority may prevent a child from using digital platforms, this is a clear to a frontal assault on these rights for no discernible reason.

The internet can be an unparalleled tool in fulfilling children's rights. Through the web, the rights of free expression, freedom of thought, freedom of association, access to information, freedom of leisure, play, and culture, and the right to education can also be promoted in a manner not possible in the offline world.

Through public fora, children may voice their views in forms, and to audiences, which they would not be able to do offline. Through digital education, the diversity and quality of materials used in teaching, as well as that of methods of teaching, can be greatly enhanced. Games provide new forms of play as well as playful learning, while often also allowing novel ways of association with peers and accessing information.

[2] As compared to equal access, it means that those who need more support than others, receive it.

Other rights may, contrarily, be threatened in digital environments. Particularly the right to privacy and protection from exploitation must be borne in mind. However, the main takeaway should not be that these rights must be protected at the expense of all others listed before. The risks thereto should be mitigated to the greatest extent possible, guaranteeing the respect for all other rights unless impossible in the circumstances. No right other than that to life and survival may trump others without careful balancing and, if possible, case-by-case assessment.

THEIR IMPLICATIONS FOR EVERYDAY TEACHER-STUDENT-PARENT RELATIONS

Data protection regulations and child rights have several implications for everyday relations between students and the responsible adults around them. For the purposes of this resource, only the ones related to digital and online presence are considered, but it is advisable to review everyday practices on light of these regulations.

The list below is limited to everyday occurrences at time of compiling this resource, so it is wise to review any new practice that is not listed below, but involves children's data or children being online to be reviewed in light of the regulations and not done instinctively.

PHOTO AND VIDEO CONSENT

One of the most wide-spread practices violating child rights and data protection is the common practice of obtaining a blanket consent from parents for photos and videos, often for a whole schoolyear. While children's right to give consent is limited, they have the right to express their opinion and it is to be listened to. This means that

- children of all ages need to give consent to photo and video making and use, parental consent only authorises this already given consent under the GDPR defined age (is is between 13 and 16, depending on the country,
- over the age of consent, asking for parental consent is illegal.

It is also necessary for the child to fully understand what they consent for. Thus, banket consent is not suitable, but it is necessary to ask for consent for each use of each picture. The common practice of schools and also some teachers to share pictures on websites and social media is usually unauthorised and thus illegal.

The right to be forgotten is to be guaranteed by the person or institution handling the pictures or video, but in reality it is very difficult to ensure it as pictures and videos are regularly copied to

other websites. Thus, in general, it is advisable to not share videos of children publicly, and limit photos to ones that have no recognisable child in them.

FAMILY-SCHOOL COMMUNICATION

The first principle to be implemented it the “nothing about them without them” principle. This means that the child should be present when teachers and parents discuss issues around them. In the digital/online environment it means that the child should be offered to participate at any online parent-teacher meeting and they must have full access to any information shared between parents and schools.

With home-school communication and e-learning platforms becoming more and more widely used, there are two considerations for teachers in relation to the legal environment. One is that they need to provide detailed information on who may have access to any data or information related to the child. In an ideal case, teachers should provide this proactively, and it is a prerequisite that they also have this information (that is not the case very often). Another consideration that may have a major impact on teachers’ work, that both children and parents need to give explicit consent to using such platforms. Very often this is assumed automatic and consent is not asked for. In case some or many children or parents opt out, teachers need to diversify communication. It cannot happen for example that grades or exam results are only available online.

CHOOSING TOOLS USED IN TEACHING

Since it is relatively complicated to create an environment that is based on full consent, teachers are advised to use services that do not need registration or where registration is optional, but it is possible to use the services in full without.

It is also a good idea to allow students the freedom to choose between similar services if collaborative use is not absolutely necessary. For example, I students are asked to have a learning journal, you should offer them to use a blogging or micro-blogging site, social media or an offline document.

INTELLECTUAL PROPERTY RIGHTS

Another major child rights concern is about **intellectual property rights**. Although, in case of minors, parents act as guardians, children are still the rights holders. Thus, a drawing, painting, poem, text, etc. created by a child cannot be freely used, **the consent of the child (that may be withdrawn) and the consent of the parent must be obtained** for example for sharing it in a public picture gallery on the school’s website.

TOOLS AND HARDWARE

The digital world is central to our everyday lives; from watching movies through learning to arranging official business, being able to navigate it is a widely required skill. Technological progress has made it possible to enter this world through a range of tools. While new tools and hardware are continuously being developed, the most important ones are personal computers, laptops, tablets, and smartphones. For children growing up in the digital era, these tools become a core part of educational and social day-to-day activities.

For most services you need to be connected to the internet via a **cable connection** (that is becoming less and less frequent), **wifi** or **data** connection. Starting from the last, one important thing to consider is that data connections are usually limited, and you have to pay according to the amount of data that your device is downloading or uploading. It usually operates via a SIM card that you put in your phone or tablet. You have to decide if you want to pay for data for your child. It is safe, but sometimes expensive. The alternative is wifi connections that might be secure or open. What you need to teach your children is that open wifi and public networks that have a password shared with

a larger number of people (like school networks) are usually free, but some other people you did not want to share your work with may see what you do online.

BYOD

For educational purposes, schools can require children to bring their own device(s) (usually referred to as ***bring your own device*** systems, "BYOD") to class. In such cases, **it is important not to only ensure that children have a tool with which they can work, but that said tool is fit for purpose**. Generally, the more powerful and sophisticated a device is, the more expensive it will be. While high-end tools are unlikely to be necessary in a general educational setting, providing children with a tool well-equipped to allow focusing on learning without interruption is vital. A number of online guides can provide help in choosing an apt device. It should not be underestimated how important a good tool is to enable a child to achieve the best they can in digital learning.

While it is natural that children bring their own pens and exercise books, there is a lot of debate around the BYOD policy, especially inclusion concerns as compared to the personal nature of digital devices. We wouldn't use shared smartphones as adults, and most people have similar feelings about tablet or laptop computers. **BYOD policies have a lot of merit**, a clear positive effect on learning, and these outweigh the concern arising (e.g. playing games or going on social media instead of working), especially if it is accompanied by interesting tasks. It also makes it possible for students to continue whatever they have been working on outside of the classroom. For an **inclusive BYOD policy, schools must understand who needs support by providing a device**, and if digital devices are used, there must be a lending library or similar solutions for those unable to buy a device. Parents can play a pivotal role in establishing such a library, e.g. by providing used devices from their workplace. For the school, it is equally important to understand who may not have access to the internet outside of school, and design their digital policies accordingly. Parents will surely voice concerns about internet access if the school fails to take it into consideration.

There are 4 main **elements to consider when recommending** your students a device or deciding to buy it for the school library. It's near-impossible to tick all four boxes, so pick which are most important for your students depending on their age, the work they'll be doing, and how well-developed their fine motoric skills are.

DURABILITY

Generally, the younger the child, the more you need to think about how resilient their device is. Even if a child is an angel, young classmates are more likely to get rough. Knocks are inevitable. A

sturdy device is made of quality materials, has a bit of weight to it, and for bonus points will be splash resistant. For a laptop, check that the hinge looks like it'll survive repeated opening and closing.

PORTABILITY

If your students need to carry their devices a lot, whether it's to or from school or between classrooms, something small and light is a plus. A 2kg laptop is a real burden to add to a backpack. Of course, a small device means a small display. For example, a tablet with an 8-inch diagonal screen risks being too tiny for some educational apps.

AFFORDABILITY

Not to be underestimated, the biggest worry on a parent's or school librarian's/head's mind is usually cost. The older a child, the more you should consider spending. For primary school, your upper limit should be around €600, while a 16-year-old would make better use of a €1500 laptop, for example.

PERFORMANCE

At a minimum, any device needs to be able to browse the internet and use basic apps. Older teens might have more resource-intensive computing needs. They can start to struggle if their devices are old, cheap and lightweight. Unless you spend big bucks, increased processing power tends to come with shorter battery life, so make sure you recommend one that can last a six-hour day (it can be a hassle to have to plug all laptops in at school at the same time).

Screen time considerations: sedentary vs. active

Providing children with their own device bears the risk of them spending more time on such devices than what would be a healthy amount. **Unlimited screen time can have a significant impact on**

children's immediate and future health. Especially for children under 5, screen time should be consciously regulated to prevent undue harm.[3]

Parents should thus consider what is and is not necessary screen time: is the child spending 4 hours a day on the screen only to prepare their homework, or is 3 hours of this recreational free use? If the latter, is this a reasonable length of time? For example, does the child still have sufficient time and energy for sports, sleeping, and eating? **Honest, open, and two-sided communication between parents and their children is key** to ensuring this balance is struck (just as it is crucial in any other area of family life).

It is important to understand the **difference between sedentary screen time, when the child sits in front of a screen and watches passively, and active screen time, when the screen is used for communication, searching for information, interacting, etc**. The WHO recommendations do take this difference into consideration with advising a strict limit on sedentary screen time and offering a much wider advised screen time when it is active use. It is also crucial that parents are together with their children when the children are using a screen. Even watching a cartoon can become active screen time by discussion, by acting out what happens on screen, singing along, and so forth.

In addition, the manner of use should be considered in all cases of screentime: the screen should not be too bright, the child should not stare at the screen for extended periods of time without pause, and the physical position in front of the screen should be ideal (proper lumbar support, sufficient distance, etc). Adopting healthy habits related to the child's "work" environment can help prevent health and mobility issues later on. For school children it is crucial to have a suitable learning environment at school as well as at home. Parents should consider that digital technology has changed the requirements for this, and demand schools to also transform accordingly.

[3] https://apps.who.int/iris/bitstream/handle/10665/325147/WHO-NMH-PND-2019.4-eng.pdf

PLATFORMS FOR LEARNING

There are a large number of digital tools used in education. In some cases, the same, complex platform is used for different purposes (e.g. internal communication within the class, sharing tasks and their solutions, evaluation). Using a very complex platform has the benefit of a single access point, but also the potential danger of too much information collected by one data handler. At the same time, using a number of tools simultaneously means that there are multiple access points (with potentially different login credentials) and a potential lack of data portability may lead to a larger workload or missed information.

There are two main types of platforms, both widely used:

- **Tools that have specifically been developed for education**
- **General tools that are suitable for education purposes, but not specifically designed for that.**

Sometimes general providers have specialised platforms for education, but data handling is often still linked to the main platforms (eg. Google Classroom).

The vast majority of tools operate on some kind of an online platform, meaning that **data is uploaded on a third-party server and handled by that party**, namely the company operating the service. For parents, it is **crucial to understand what happens to data shared** by their children, be it sensitive, personal data such as names, photos or e-mail addresses, or data generally not considered "sensitive", for example written school tasks. However, it is often very **difficult to obtain this information**. When it comes to platforms that the school wishes to use, parents can and should demand this information provided by the school. When it comes to platforms that children want to use for their own purposes or the ones parents want to use with their children, this information should be consciously seeked after.

It is difficult to be fully aware of all platforms available. In the school context there are some **important elements that need to be taken into consideration**. School needs to provide answers to the relevant questions. Some considerations[4]:

[4] A more detailed checklist is provided under Checklist for choosing ICT tools

- Is the chosen platform fully functional without having to pay **a fee**? If there is an option for free use, are there advertisements or other commercial elements to know about? If not free, who is paying taking inclusiveness into account?

- Is the platform approved for **school-wide use**? If not, is it really necessary to use it?

- If there is a **switch from one platform to another**, is there enough information that proves the necessity of this change? How will data collected prior to the change (e.g. children's previous work) transferred to the new platform?

- What are the **potential benefits and dangers of using a certain platform**?

Experts of digitalisation in education have collected a relatively comprehensive list of various platforms available for the COVIDEA[5] initiative and Digital with Purpose[3]. The list can be found at the end of this document as an annex. It was compiled in 2021, so recently opened platforms may not be included.

[5] https://www.foggs.org/covidea/
https://digitalwithpurpose.org/

SOCIAL MEDIA

In the digital world, there is little room to manoeuvre around social media platforms. They are **an integral part of personal communication, marketing, and most other things** one could think of.

Social media platforms are online platforms that provide a space to **share and view content**. The form, manner, and the publicity of shared content is widely different between platforms. However, their core unifying feature is that all users are able to share the same type of content with each other that other users can see.

The age at which children start engaging with such platforms is rapidly decreasing. While some years ago (pre)teens were the youngest audience of social media, and little content was aimed towards them, today entire platforms rely on children as young as primary school age to make their business successful. Teachers are also increasingly present on social platforms, very often using them extensively for both personal and professional communication. Because of this, teachers need to be aware of what social media is, and of the benefits and risks it holds.

Many platforms implement the regulations of a US law called COPPA (that is not valid in Europe), and subsequently do not allow children under 13 to register. However, recent research shows that **60% of the 8–11-year-old cohort is already present** in these sites. While social media sites usually implement stricter rules for users under 18, so no harm is done at time of registration, this raises some **concerns for later use**. As most platforms do not allow a change of date of birth, children will have access to adult content, such as paid services or unlimited invitations to events, earlier than their real 18th birthday.

A very important aspect is the **teacher-child or teacher-parent interaction in social media**. There are some important rules of thumb for teachers to follow:

- Make sure you don’t demand or encourage early registration, so don’t give assignments to or communicate with your under-13 students on social media sites they are not officially allowed to use.
- You should remember that even seemingly innocent pictures of videos of children shared on the internet very often immediately show up on the dark web distorted, and often used by paedophiles.
- Choose what you post or comment on very carefully as your students and their families might be able to see your activity. Don’t share what you wouldn’t share with a general

public offline. Privacy settings can be adjusted to limit visibility, but it is better to be safe than sorry.

- If you interact with your students, remember that social media is not the classroom, so avoid correcting grammar or spelling.

Some platforms, like Facebook and Twitter, allow sharing many different **types of content**. From text posts through images to videos, users can create and share any content they want to, as long as the terms and conditions of the platform at hand allow. Other platforms, such as YouTube and TikTok, are specialised instead on video content: users can share and view videos, and communicate with others under these videos in the comment section.

There are **two major aspects** of social media a teacher has to be conscious of: **what the child could see, and what the child could share**. As for the first aspect, unfortunately, potentially harmful or disturbing content is not unheard of on social media. For instance, graphic violence and sexual imagery is often posted on these platforms. At different ages, it may be more or less appropriate for a child to be faced with the choice of engaging with such content. A 13-year-old may well know not to click on a video which is clearly violent, but a small child could inadvertently come across content that may upset them. There should be **room and trust for children to share about such bad experiences** if they wish to, but this must not be forced by teachers as it is the families' realm.

The second aspect is what the child shares. As a general rule, anything that has been **shared online is "out there" forever**. Sharing a video of doing cartwheels may be perfectly harmless. Sharing the same video with personal information, such as address or credit card information in the background, is a lot more dangerous.

As such, teachers need to make sure that children **understand the potential ramifications of what they share**, but for that they have to have a full understanding of it themselves.

Furthermore, the phenomenon of **grooming** must be noted: children could be approached online by adults who attempt to establish emotional relations with them, often with the purpose of sexual abuse or other criminal activity. It is important for teachers to understand this phenomenon, and use available, open and non-judgemental discussion space to raise students' awareness about it and the need to choose new friends carefully

For extreme cases, such as preventing engagement with strictly adult content, many platforms allow parental controls to be installed, but as a teachers you should remind parents that some of these parental controls are not in line with the child rights regulations, so you have to be careful

when using them[6]. Some platforms also have built-in systems for the protection of minors: Snapchat, for example, allows only adult's profiles to be publicly visible to everyone. The setting is not available to children. The platform also introduced an enhanced parental control centre, where parents can review who children communicate with, but not about what.[7] Regardless, the best and safest way to mitigate risks that children could face online is to keep communication open and honest.

When discussing adult content, we need to mention **pornographic content** – although it is not only present on social media. For many parents one of the main concerns about their children being online is that they may come across porn. While research is not definitive about harm that might be caused by such content, children are very likely to come across it anyway – with or without the parent or teacher being aware of it. It is important to create a safe space in the classroom to speak about the sensitive topics about sex if students feel the need for it and also discuss the issues with porn. This approach is more likely to prevent damage than bans.

DIGITALISATION AND BASIC SKILLS – CONSIDERATIONS FOR TEACHING

Reading, writing and arithmetics are considered the very basic for most other skills, be them academic or everyday ones. Thus, it is an important concern for all educators, that digitalisation is not hindering skills development. This is a major area of parental concerns, so you have to be prepared to partner with parents around this topic. These concerns are often fuelled by mass media articles. It is understandable, especially in a reality when there are more and more children who actually attend school and finish their basic schooling, leaving without an appropriate level of these basic skills.[8]

However, it is rarely mentioned that digital technology, if used well, can support the acquisition of these skills. There are adaptive programmes that make it possible for the child to practise areas they have made mistakes in. Also, many programmes offer skills development and practice in a playful way that is more attractive for children. Gamified solutions (that can have game-like

[6] These platforms are mainly USA-based where child rights are not protected by UN Convention, while they are protected in every other country.
[7] https://snap.com/en-US/safety-and-impact/post/family-center
[8] This is the outcome of research published by the World Bank under the theme "the Global Learning Crisis"

features, but it is not necessarily the case) have proven to be effective as they are more engaging and interesting for many, and the majority of gamified learning solutions are digital ones.

READING DIGITAL

There is a lot of controversy around reading on digital devices, and the **impact of using screens and the internet on reading**. The two main and seemingly opposing messages are not contradicting each other. On the one hand, it seems to be clear that children read fewer books since they started using digital tools. On the other hand, they read far more text, mostly shorter ones, if they spend time on the internet. There is **more "utilitarian" reading, and less reading for artistic appreciation**. Children are becoming less interested in reading long texts, often in a language that is not very easy for them to comprehend. At the same time, doing everyday reading tasks online often includes additional information, alternative presentations such as reading out aloud or simplified text. **Teachers should pay attention to introducing literary texts,** but also utilising the extra features digital technology offers for understanding more archaic language or reading in different languages in classrooms where the language children speak at home is not the language of instruction.

Reading on a digital device has a lot of advantages, especially if you are aware of and use certain built-in support tools. First of all, you can adjust the font type and size. This does not only help those who have problems with their eyes, but it can also be helpful for those with dyslexia. It has been proven that so-called sans-serif fonts (e.g. Arial, Calibri or Open Sans), where the letters do not have a "foot" are easier to read for them. Many devices have a read-aloud function, helping the reader to hear the correct pronunciation of a more complex word that can be especially beneficial for students whose level of the language is lower. Similarly, there are built-in thesaurus or dictionary functions supporting the reading of complex texts or texts in foreign languages.

At the same time, there seems to be enough evidence showing that reading a book on a screen leads to less deeper understanding and immersion into the text. However, it is not clear if this is also true for reading on an e-reader, whether the results are linked to reading by the computer with the keyboard in front of the reader, often many tabs, including social media and/or e-mails open, not settled in a reading nook position, or if it really is linked to not reading a paper-based book. **It is best if children are offered both opportunities: reading on paper and on a device.**

WRITING

Another area of confusion is in the area of writing. **Do we still need to teach handwriting? Is it necessary to teach children the correct way of using a keyboard like a typist?** The answer for the second question is a no, although many schools provide such training already for smaller children. Most children learn to type very fast by themselves, and **a self-invented system is not worse than the 'typist' version.**

The answer for the first question is twofold. There are approaches to the teaching of reading and writing that only teach children to write block capital letters at first. **You need skills to jot down your thoughts or information**, there are several occasions when there is no touchscreen or keyboard available, so this is absolutely necessary. At the same time, there is **no consensus on whether it is necessary to also teach handwriting to everybody**. It is an important element of fine motoric skills development, but that can be supported by drawing, painting or collaging, even embroidery knitting or crocheting. At the same time, there seems to be a link between writing things down by hand and better, more lasting learning, and handwriting is generally faster than writing block capitals. Less and less people share their handwriting, so we are yet to see if it is enough if we can read our own "handwriting". This gradual shift away from handwriting is not new, and was not born in the digital age. The **importance of handwriting has been decreasing since the printing press** was invented, and it was accelerated by the introduction of typewriters.

Writing digitally can support **correct spelling** if a good spell-checker is included. At the same time, predictive input methods and autocorrect have made it less important to learn correct spelling. However, most probably everybody has some hilarious experiences with autocorrect, so it is still useful to learn correct spelling – be it in a typed or a hand-written text.

ARITHMETIC

Although the digital age has brought tools that often do calculations for you, **it is still necessary to learn basic arithmetic skills and practise their use**. We have all met the cashier who relies on the machine when returning 50 cents on your 5 Euro note when you pay for a 4,50 piece. But we have also experienced too much reliance, combined with a mistake in input (indicating a 50 Euro note instead of a 5 Euro one) leading to loss for either the customer or the cashier. We also see more and more often that somebody does not have enough cash on them to pay for all their groceries. To avoid this, it is important to teach estimation. With more and more financial products becoming

available online, **understanding percentage, exchange rates and similar notions is of utmost importance**. The list can be much longer.

Digital tools, age-appropriate programmes can make the learning of arithmetic enjoyable, making it possible to break away from the wide-spread view of mathematics as a difficult school subject. There are several tools that **support learners in areas that they need support in**, creating playful or not so playful practice exercises for weaker areas while saving time on not practising that much whatever the learner is already good at. The use of digital technology also makes it possible to acquire skills in a very non-schoollike way, often not naming the area of skills development, but for example teaching fractions in a playful way.

CODING

Programmes on digital devices are based on code. The code running in the background is written by developers. The code, in essence, is read by the tool at hand which then acts according to the instructions that the code contains. From the start-up of a browser or a video game through interacting with it to how it is closed or terminated, the code defines what a programme does and how it does so.

Learning to code can be of great benefit. Not only it is a **sought-after skill in the labour market**, but it requires **practically applying logical thinking and it incentivizes adopting a problem-solving mindset**. As such, it can be a great skill to start learning at an early age. Ingenious solutions often flow from coding even at an early stage, such as the automation of minor menial tasks.

At the same time, **many coding programmes for children are not explicitly linked to computer programming** or programming languages, but it is a way of teaching logical thinking and design processes. It can come **handy in a lot of everyday situations**, for example planning a weekly menu may be done in the form of coding. A lot of young children are first introduced to coding in a playful way, often using digital devices that do not have a screen, the most popular ones currently being Bee-Bots and Lego Robotics. Many schools implement such programmes. The systematic thinking necessary for coding is especially beneficial for children with learning difficulties. However, learning with a Bee-Bot **does not necessarily lead to one becoming a computer programmer**.

GAMING AND TEACHING

In addition to educational and social uses, interactive entertainment is yet another (though not necessarily separate) possible use of the digital world. Countless games are available for tablets, laptops, and smartphones. Some of these games are online, and some are offline.

Online games are played together with other players in most cases: for example, two football teams play against each other, each controlled by a real person, at home, behind a screen. Often, players are able to communicate with each other via text messages and "voice chat" (essentially, phone calls integrated into the game) even if they do not know each other. This can be a great enabler of language learning as well as social skills, as children get the chance to cooperate with others who may think differently, or speak an entirely different language.

In **offline (and some solitary online) games**, the only real person active in the game is the user, though there may well be pre-programmed characters that can be interacted with. In an increasing number of games, artificial intelligence ("AI") allows the pre-programmed characters to react to how the user behaves and thus dynamically shape the world.

Both online and offline games have **vast potential for learning**. From **problem-solving through creative thinking to working in a team or learning a foreign language**, different games can help **make learning fun**, and even allow honing skills which schools are generally ill-equipped to provide. Some games especially support the widening of knowledge in history or geography. If you know that students like using games, you should encourage them to share what they are learning while using them and celebrate this learning.

Perhaps the most well-known example currently is **Minecraft** in this regard, a game which allows both offline and online play, and used by many teachers around the world. The user can collect resources, build houses, and explore a vast world with its own story. Working together, users can build anything from a lake house to a floating castle. To achieve this, however, they must plan their course of action, distribute tasks, and cooperate to progress and prevent any problems. These are all invaluable skills – and they are for life. They are also skills which are much easier to learn in a voluntary, entertaining way than behind a school desk.

While **games pose some of the same risks as social media** discussed above (sharing information and interacting with strangers), they can be **invaluable to children's development**. **Healthy gaming habits** can be beneficial to the child's education and may also spark interest in areas they have not heard of before (such as, for example, archaeology).

In addition, akin to social media, gaming may cause **addiction** in individuals prone to such tendencies. Teachers should pay attention to signs of potential addiction, such as students being always sleepy or irritable, and should consult the parents if they assume something wrong.You should also talk to parents about gaming habits and propose them to ensure that children have a variety of different activities in their life, gaming (as well as any other, such as social media) addiction is difficult to overcome. Gaming should be recognized for its potential benefits, but it should be treated in its proper place: a form of entertainment that must not come before, or be detrimental to, one's health and real-life obligations. However, it is also important to mention that playing computer games for a whole day occasionally (e.g. on an especially stormy day) does not lead to addiction.

Naturally, **some games are not appropriate for all age groups**. Graphic games may be upsetting to children, and some puzzle-based games may simply be too complex. Through microtransactions (which are purchases for small amounts of money for in-game rewards), children can inadvertently cause financial issues for their family, so parents must be made vigilant concerning their children's access to online stores. In addition, some games contain loot boxes, which contain random virtual items. Some countries consider this akin to gambling and have accordingly regulated it.

At the same time, some games contain elements that help **financial literacy development**, and this is an important competence often not developed by simply implementing school curricula. Many games make it possible to learn dealing with budgets, understanding earning and spending, e.g. you can improve your outfit or tools if you earn enough virtual money by doing jobs.

The emerging trend of **virtual reality**-based entertainment should also be borne in mind. Through virtual reality ("VR") glasses (accessories to computers or gaming consoles, usually) an increasing number of interactive and non-interactive entertainment content is available. Children may be tempted to enter these virtual worlds, and accordingly demand that parents provide them with the necessary hardware. VR generally has a high cost of entry (both the devices and digital content are expensive), and is often more difficult to navigate than "traditional" accessories such as printers, which may make parental control more difficult. In general, the use of VR glasses is not considered until the last intensive physical developmental period of a child has ended, so it is not advisable to include VR in your teaching for students under 12, but rather 14.

At the same time, they also provide a different level of immersion to any other digital device, as the actual space around the user appears to be the virtual world while wearing the glasses. Children should be reminded that no matter the immersivity, VR is separate from *reality*. In addition, as users do not see their surroundings during use, the use of VR glasses is prone to accidents.

Considering the foregoing, it is beneficial if **teachers become familiar on a basic level with what their students are playing**. Building on personal interests, including enthusiasm for games, can help engage students who are less interested in the academic side of teaching.

CRITICAL THINKING AND MASS MEDIA

Information is published and shared in the digital world at a previously inconceivable pace. If something notable happens essentially anywhere in the world, mass media covering this may be available within minutes on the other half of the globe. Through TV, radio, and especially the internet (and notably through social media), **news can spread extremely fast**. In addition, the uncontrolled and decentralised nature of the **internet allows virtually anyone to share their thoughts and views – incorrect, or even dangerous**, as these may be.

Because of the huge amount of information available online, **critical thinking, the ability to evaluate the reliability and truthfulness of any source of information is vital**. This is a skill that not only children, but also adults must learn and use regularly. The absence of critical thinking can lead, for instance, to radical views being adopted or to dangerous trends being joined.

The veracity of news and other sources of information can be hard to discern. Facebook, for example, is notorious for its lack of steps taken against fake news and also for their recently introduced "independent fact checking" to be very much biased and labelling factual information as fake.[9] Teachers must be particularly vigilant concerning trends aimed at young audiences. TikTok, for example, has faced criticism of not sufficiently policing trending videos which promoted life-threatening content to children.[10] **Critical thinking must be incentivized and practised from an early age to raise conscious – and safe – citizens**.

In order to ensure this, **teachers need to develop their critical thinking skills**, too. Recent research[11] shows that **teachers are weaker** in the ability to differentiate between fact and opinion **than the general population**, meaning the parents of their students and the students themselves, and also teenage (including young teenage) **students are better at detecting fake information** than adults.

[9] https://www.forbes.com/sites/traversmark/2020/03/21/facebook-spreads-fake-news-faster-than-any-other-social-website-accordingto-new-research/

[10] https://www.nytimes.com/2022/07/06/technology/tiktok-blackout-challenge-deaths.html

[11] Janssen, H., Salamon, E. (2020) Communication, literacies, multilingual and critical thinking skills and competences for teaching and learning in the digital age. EEPN

It is also very important to provide space for students to **voice doubts, concerns, or a lack of understanding** of certain information to help them develop said skill -and for teachers to develop with them.

There are numerous **online initiatives** in many languages that help you test your ability to judge the correctness of mass media content. At the same time, you can also introduce **offline activities** such as debates or planning activities/trips together letting students gather information for it.

BULLYING AND CYBERBULLYING

People have a tendency to judge each other and act unfriendly. Neither teachers, nor students are an exception. In its most commonly known form, children bully each other: they harass, insult, threaten or coerce one another for some believed status or simply for enjoyment.

At the same time, **bullying by teachers** is a phenomenon the existence of which is even denied. The main reason for this is that children don't often report such behaviour, they will only react on it by becoming depressed, leaving school early or bullying others in turn. Often, it is considered by other adults as a way of disciplining, or – even worse – benign teasing. You have to be conscious that teacher bullying can have many forms such as introducing and constantly using nicknames, calling a student dumb, reflecting on their family or origin in front of other students or your colleagues.

Digital worlds make this problem more complex and widespread. This is partly due to the interconnectedness of the internet allowing strangers to interact virtually. In large part, however, it is because of the potential for anonymity and pseudonymity in online discussions. Users often have the possibility – sometimes against the terms and conditions of the platform at hand – to disguise their real identity. From behind such a mask, cyberbullying can become much more ruthless and hurtful than if a perpetrator realistically had to fear potential backlash. There are more and more instances of students choosing this form to bully their teachers (who are often their former or current bullies offline).

Cyberbullying can take a range of forms; the possibilities are virtually – and unfortunately – endless. Classmates or football teammates can spread nasty rumours, or humiliating pictures may be circulated. Threats may be made in private messages or shared with a wider audience.

Naturally, the extent to which cyberbullying is done publicly will affect how easily adults around a child can learn of it. A child may keep what they consider embarrassing private messages to themselves, but if threats are made in a school group, teachers could notify the parent.

Cyberbullying can occur in virtually any digital environment: from online classrooms through video games to, notably, social media. There is a very real possibility that at one point any child or teacher will be faced with cyberbullying during their time spent online. In such cases, children should be comfortable coming to their parent or a teacher they trust for comfort and/or help. Teachers should also have a possibility to disclose such experiences to release stress, but also to receive support if legal action is necessary.

Parents may also be made to face the situation where they are informed out about **their own child cyberbullying someone**. Teachers should be prepared for communicating with parents about such cases in a non-judgemental, but straightforward way to stop the activity, but also to jointly find the reasons behind, and tackle not only the surface . the actual bullying – but also the causes and underlying reasons. The child's engagement in such behaviour may result from peer pressure,, from previous bullying or something else, which does not excuse but often does explain bullying behaviour. In such cases, the harm that cyberbullying causes must be discussed with the child to avoid it happening again.

What is important for teachers to remember is that **bullying is a learned behaviour** in nearly all cases, most often learned from an adult the children trust: a teacher, family member or friend of the family – in that order of occurance. Cyberbullying is **usually preceded by offline bullying**, most often of the future bully and often by a teacher.

WHAT TO DO WHEN THERE ARE NEW DEVELOPMENTS

The current resource for professional educators was finalised in the Spring of 2023. By the time you are reading this, there might have been new tools, new devices that "everybody" is using, new areas that have been digitised. **Some tips** on finding out more about these things:

- **Collaborate with your colleagues**, share and discuss if you find something that seems interesting and relevant for your work.
- Follow **EdTech and digital education pages** on social media as well as the social media handles and blogs of **tech savvy professionals**, subscribe to relevant **newsletters, podcasts**.
- Participate at **webinars, teacher trainings, conferences**.
- Dedicate a session to digital developments at your **team meetings**.
- Be **up to date on potential changes** to the services you already use, inform colleagues, students and parents as necessary.
- **Consult parents and the school's external partners** about new developments, but use your critical thinking skills – as well as the checklist provided in this resource to decide if you introduce new technology and for what. Schools can partner with companies on this, you should not be afraid of that.
- **Explore together with your students** – they might be better at using it, and asking them to explain also makes them stop and think.
- If you **read** about something on mass media sites, ensure that the sources are reliable and the elements presented in an article are not taken out of context by the journalist. Be aware that article titles are more often misleading to be attractive than not.

CHECKLIST FOR CHOOSING ICT TOOLS

If we would like to use digital (ICT) tools in the process of learning and teaching, it always requires careful planning in advance. Questions like **"Do we need to? For whom? When? What?"** are potentially crucial in this planning work. Making a checklist in a table form can make this planning process more successful. Obviously, talking about ICT tools, we always need to have a plan B – especially for classroom use -, anticipating the loss of connection, electricity or a malfunction. Under digital tools, we don't only mean hardware, PC, laptop, notebook, tablet, smartphone, but also software that may make your and the students' job easier.

You can use a simple question & answer table to do the preliminary planning, but we can make the checklist more detailed by assigning emojis additionally to the written answer. (The table below illustrates this in a combined format)

☺ - I am proficient in this

😐 - still need to research a couple aspects of this

☹ – this might not work

QUESTION/SUBQUESTIONS	Answer	☺	😐	☹
For which subject at which point of the curriculum am I using ICT tools?				
• Is it necessary to use ICT tools? Are they adequate to the activity?				
• What other possibilities are there to enrich the classroom activity?				
• Are the tools available at the given time (e.g. no other colleague is using it)				
What hardware do I want to use?				
• Are there enough devices for 1:1 use, or are the students using a device in pairs or groups?				
• In case of BYOD, does every student have a device and have it on them?				
• Is there public and stable internet available at the location (school)?				

• If the students are using their own mobile data, does everyone have a subscription on their device?				
• Is there enough power for the devices? (Are the batteries charged?)				
• In case of a school owned device, are the students allowed to download software to the hardware?				
• Are the students able to download software or do I have to do it in advance?				
• Is there virus protection installed?				
Does the school have a digital learning system?				
• Are the students adequately familiar with it?				
• Is it available for synchronous usage?				
• Does it have cloud services?				
• Does it handle third party applications?				
What kind of software do I want to use?				
• Will the software I want to use at my class be available on/for the hardware (school network settings, etc.)?				
• Are the students able to download software or do I have to do it in advance?				
• Is it a paid or a free app?				
• Do they need to save their work? If yes in what format, where?				
• If it isn't saved, how long is necessary to remove it from the device?				
• Is it age appropriate for the class I intend to use it with?				

• Is it in a language the students speak?				
In case troubleshooting is needed//				
• Is there a Plan B to proceed with, in case there are unsolvable technical issues?				
• In case of smaller issues ... o Can I troubleshoot by myself? o Are there technical personnel that can help me out? o Are students available to help?				
At the end of the class/activity				
• Whose responsibility is it to turn off and put the devices in storage?				
• How much time needs to be dedicated to storing the devices?				
• Where and whose responsibility is it to store and charge the devices?				

EVALUATING YOUR DIGITAL PRACTICES

Evaluation is perhaps the most important element of 21st century education. This should not only mean diagnostic and summative assessment, not only test-papers measuring the mastery of the curriculum, but continuous formative assessment of the whole learning-teaching process. There is therefore a great need for teachers and schools to reflect regularly on their own work and to carry out self-evaluation. This is also very important in relation to the use of digital tools.

Why, how, with what tools, at what intervals should this be done?

During the school closures, schools moved quickly to digital education, but the sudden need for change did not allow them to assess how and what tools they would use in daily practice in advance.

A wide range of digital tools and platforms were/are available for teachers and students, from online school learning systems to virtual reality, and now the use of artificial intelligence in education is in the news. This rapid change also calls for measuring the effectiveness of these digital practices to ensure that they make learning a better experience for teachers and students.

Some learning systems come with built-in data analysis software. Their use allows both school leadership and teachers to analyse and evaluate data. The applications allow for analysis of different aspects, such as the activity and usage patterns of the students using the interface. At the school level, teachers' assessment habits can be analysed, as well as their following with the pedagogical programme. These analyses are very useful for evaluating the work of teachers.

Teachers should increasingly focus on how to develop their skills in using technology for teaching. They also need to keep up to date with the latest trends in digital education and be open to exploring new tools and strategies. Continuous reflection is necessary to ensure that effectiveness is ensured for the benefit of the learner.

Many educational institutions produce their own self-assessment tools, checklists, but SELFIE – developed by the European Commission and available for free - can also be an excellent tool for self-assessment of the institution and the individual.
https://education.ec.europa.eu/hu/selfie/about-selfie

SELFIE is fully compliant with the DigCompEdu[12], the digital education framework established by the European Commission. It is designed to evaluate the digital practices of the school as an institution.

The SELFIE tool, designed for school communities but can be customised. The questions are grouped according to the school groups provided. At the end of the assessment, you can view both comprehensive information and detailed data. The interface also provides a separate assessment for vocational schools, under the heading work-based learning. Since December 2022, new tools are available for teacher users and the applications also support teacher groups in carrying out their self-assessment.

The Selfie for Teachers self-reflection tool is available from the DigCompEdu site and has been translated into 24 languages by the European Commission. It is for teachers to evaluate their personal practices.

On the Selfie for Teacher site, after logging in, the user is taken to the home page, where they have two options: start a new self-reflection or continue the previous one under the "continuous self-evaluation" link. After selecting the type of school, a detailed description of the areas covered and the ratings used by the app is provided. This interface allows teachers to measure their own digital competences according to 6 criteria:

- Professional commitment
- Digital resources
- Teaching - learning
- Assessment
- Supporting learners
- Promoting learners' digital competences

At the end of the assessment, participants receive a visualised evaluation that they can use in their work or when writing a development plan.

It is good if the evaluation of teachers' or schools' digital practices includes an overview of existing digital strategies and tactics, an analysis of how well they meet the school's or teacher's objectives, and an assessment of their ability to use the latest technologies and best practices. In addition, it is important to identify areas for improvement and monitor performance indicators to track progress.

[12] https://joint-research-centre.ec.europa.eu/digcompedu_en

With this data, the school or teacher can make informed decisions about which digital practices are most successful and there is scope for further optimisation.

This assessment should be done regularly, at least once a year, but preferably at least once per semester. It is also beneficial to have an evaluation cycle implemented if there is a major change, a crisis or substantial change at the school (e.g. change to the curriculum, a large number of new students, new teachers joining or key colleagues retiring, changes to the physical environment). Resilience to change and crisis also depends on evidence-based planning.

MAIN RESOURCES FOR CLASSROOM USE AND SCHOOL-FACILITATED PERSONAL LEARNING

Personalised learning is an educational approach that tailors education to the individual learning needs and interests of each learner. It often uses technology to facilitate this, allowing students to move at their own pace and access a variety of school materials as needed. Unlike most traditional teaching methods, personalised learning is more engaging and interactive, giving students the opportunity to understand the material in greater depth, and also creates room for pursuing personal interests. Of course, strong self-regulation on the part of the student is also necessary for personalised learning to work. As technology continues to evolve, personalised learning is becoming increasingly popular in classrooms and also for use outside of the classroom around the world, as it can help teachers to better meet the needs of their students and provide a more engaging learning experience.

This form of learning may also need the collaboration of parents, but schools must not rely on parents being able to support their children to ensure inclusion and equity for those whose parents are unable to use technology, or do not have any or high levels of education.

The best digital learning applications that can be used in both the classroom and for individual learning at home or elsewhere outside of the classroom. These resources can help learning in different ways, for example:

- They can provide additional interactivity and a more playful learning experience offering more motivation.
- They can make learning more flexible, allowing learners to learn at their own pace, anytime, anywhere.
- The use of multimedia content and visual aids helps learners to understand and absorb the learning material better.
- They facilitate communication, collaboration and feedback between parents, teachers and students.

Learning management systems

Learning management systems are software tools and platforms that support learners and teachers (as well as sometimes parents) in online learning and teaching activities as well as offering online support to offline activities. These systems enable teachers and students to communicate, create and manage online content, and share assignments and tests. In a learning management system, virtually any application is available either because it is built into the system or through a link. The school closures proved that schools that had already had them could manage the forced remote learning-teaching process more effectively.

The two most widely used frameworks are **Microsoft Office 365**, including the Teams application, and **Google Classroom**.

O365 is free for schools, and after appropriate configuration, the institution can make both office and online meeting apps available to students, teachers and parents. The system is closed, and participants' data is relatively secure, although Microsoft itself is collecting data the extent of which is not disclosed. Users receive a school email address and set their own password. The office applications include Word, Excel and PowerPoint, the three most basic programs for facilitating learning, but they can also use a range of other apps for 21st century education. These include OneNote notebooks and Teams for collaboration.

OneNote. OneNote can be used to create notebooks and attach pages to them. A teacher can share an entire course's material with his/her students within the application, and both students and the teacher can place notes on the pages. A homework assignment, for example, can be submitted and corrected here in an environmentally friendly way. The notebook can be shared with several participants and can even be used for synchronous communication. The most basic functions are: organising, labelling, using freehand elements, and pasting and saving, and a wide range of multimedia elements can be inserted on each page.

Microsoft Teams is also extremely useful for face-to-face learning. It is excellent for differentiation using the Assignments feature, and online meetings are really enjoyable when used. However, the system has been experiencing more and more glitches recently, making it difficult for some users to join.

Google Classroom has similar elements and the Google's video conferencing app, Google Meet is also constantly evolving. Google's Office apps are similar to and all compatible with Microsoft Office. It also offers the possibility for users to exchange experiences and learn from each other. It offers possibilities for interacting with a whole class or individual students, and makes switching between individual and group use easy.

A very stable and flexible alternative to Teams used by many for meetings is **Zoom.** It also offers conferencing services in paid accounts.

Moodle: open-source course management system that allows instructors to create, administer and assess online courses. It is currently one of the most popular platforms in higher education. You can create separate courses for various student groups, and students can be enrolled in a number of different courses at the same time.

Canvas: a cloud-based learning management system that supports online courses, learning materials and other tools, and communication between instructors and students. A number of other, linked apps also provide the possibility for teachers to create classrooms on the Canvas platform, to which they can invite their students and parents to. Students can learn collaboratively in shared documents, but for individually

created classrooms, there can be a problem with registering students under 13 or really protecting individuals' privacy.

Test creators:

Test creator digital apps are software that allow teachers to create tests and exams for their students easily and efficiently. These applications help you to create, format and evaluate tests and exams, as well as monitor and evaluate student results. They are specifically designed as paper and "red pen" free applications. In the flipped classroom method, even a student can create and then take their own test, reflecting on their own learning by that. It is also possible for parents create a similar one for their children to practice curricular material, but this should be discouraged by teachers for a number of reasons (equity issues, the potential lack of parents understanding why things are taught as they are taught, etc.). It is good practice to make it possible to take these tests more than once, so that students can deepen their knowledge by completing them more than repeatedly.

Examples:

Google/Microsoft Forms - The free Google/Microsoft Forms allows teachers to create simple tests and monitor student responses.

Quizlet - A service that allows teachers to create flashcards and quizzes for their students. These flashcards are an excellent tool for language learning.

Kahoot - Allows teachers to create interactive games to help learners learn and memorise information. A very popular app, but not for everything.

Redmenta - A Hungarian development, its biggest advantage is that you don't need to register for the platform, but can share the test for completion via a so-called direct address.

Video sharing and creation applications

Youtube is one of the most popular of these, as you can perform thematic searches on its platform, and many videos can be found here to complement the course material. Its disadvantage is that there is a lot of information, which must be filtered even when using thematic searches.

Flipgrid: This is a video sharing application that allows you to create interactive video playlists and gives students the opportunity to reflect on their own learning in videos. It is an excellent application that also provides feedback. It can be good for presenting a poem learned, for example.

Edpuzzle: the app allows teachers to add their own questions and explanations to an existing video, providing an interactive learning experience for their students.

Screencastify: for recording lectures and making screencasts.

Camtasia: allows educators to create professional videos that can include screen recordings, animations and interactive elements.

PowToon: animated explainer videos can be created with the app. A great option in a flipped classroom, the short videos allow students to learn the material at home, leaving more time in the classroom for clarification and reinforcement.

"**Social media" platforms**

The use of so-called social media in education can be very attractive, as many professional groups are being set up on Facebook and Twitter, for example, and adults can make good use of these platforms in a conscious way. However, it is important to note that using social media has its challenges. They may not be suitable for educational purposes or for setting up study groups. There is too much information and it is easy to get distracted, even when private study groups are formed. A safe online environment for students is important and schools need to be adequately prepared to deal with cyberbullying and cyber-security issues related to social media used in teaching. Their data protection, while strict, is not a closed system, so do not use these platforms to create learning communities if at all possible. These platforms also collect an data in undisclosed, although mostly anonymised ways.

Tik-Tok is an interesting and currently very divisive platform as many young people are using it, whether we like it or not. Recognising and taking advantage of this fact, famous companies that are also involved in education have appeared on Tik-Tok. This has led to a situation where there is an increasing amount of material on this platform that can be used in education and personalised learning. Another interesting and increasingly popular feature is book recommendations.

Task creators

Task creators are applications that do not simply generate tests, but have other extra features. They are excellent for enriching lessons, motivating, creating exercises for homework. They are the most likely to be overused. The main thing for teachers to remember here is to use digital tools only where and when they are really appropriate and necessary. It is also important to reinforce, that for equity, support by parents in solving tasks should not be taken into account when developing the tasks, they should be suitable for individual students or groups without external help.

Their advantage lies in the fact that they allow teachers to personalise teaching material. They can tailor exercises and activities to the levels and needs of students. The types of exercises included in these platforms are usually interactive and can make learning more engaging and interesting for

students. Online exercises can be accessed anytime and anywhere, allowing students more time for independent learning.

The following ones are currently very popular:

Genially: a big advantage is its visuality, which attracts attention, ensures deep participation and allows interactive learning. You have to register for the platform, then you can reach your students and assign them the tasks. The solutions can also be checked here. A number of templates are available, which shorten the time needed to prepare the assignment, making it easier for the user. Work can be shared so that teachers can help each other.

Wordwall: based on a large number of templates, you can create your assignments and print them out as a worksheet. The database of completed work is very large, as many teachers share their work on the platform. The advantage is that students can access the platform without registering and can search for exercises individually.

Wakelet: an app for thematising the curriculum, collecting learning sites/information from the internet. It can be shared, edited collaboratively and thus also used for collaboration.

The tools and opportunities in digital education are constantly evolving and many more innovative solutions are expected in the future. This chapter has also left out many of the apps we can/do use in our current practices (think of the 200 apps available withing Canvas alone). It is not always possible nor recommended to integrate the latest apps into the teaching-learning process however appealing they may look. If a tool is already well established in daily practice, it may be more useful than trying a new one. The use of apps and the various resources available should be preceded by careful planning. Where and when it is not necessary, ICT tools should not be used. Let us be moderate!

DIGITAL RELATIONS BETWEEN SCHOOLS AND PARENTS

The availability of **digital tools made two-way communication easier** between schools and parents. Many schools have introduced communication policies that ensure a **balance between online and offline as well as real-time and asynchronous communication**. (The resource available for school leaders under the SAILS project helps schools in this. You can direct school leaders towards reading it.)

Digital technology can **solve challenges** such as the shortage of time or teachers not speaking the language used and understood by parents. However, a healthy balance is necessary as digital communication has **not** reached a level yet that makes it possible to **replace meeting in person**. Even the best teleconferencing tools fall short in providing for broadcasting body language for example.

Communication also became instant, leading to a lot of uncomfortable moments and situations. First and foremost, it is **difficult to wait and cool off**. When you have to physically go to a meeting, even a couple of minutes of walking may offer time for reflection, and you might be much calmer than reacting immediately online. Of course, you may increase your stress level in the course of such a walk, too, but generally it is better to not act upon impulse.

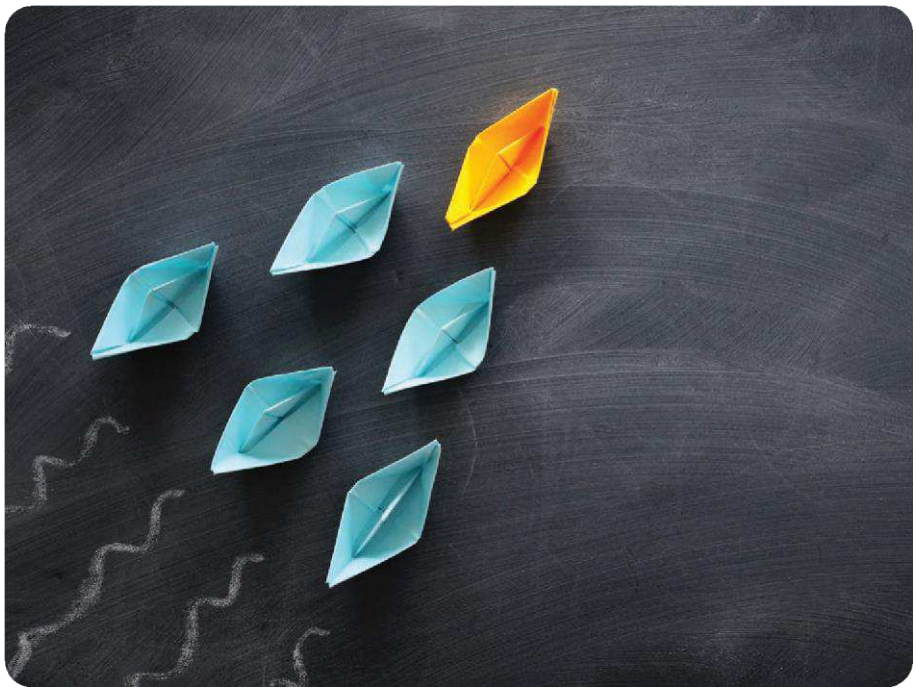
Being professional in the relationship

Teachers and parents alike often find it **difficult to regulate themselves** and not expect the other to be available 24/7. Thus, it is advisable to **collaboratively create a code of conduct**, regulating when both parents and teachers should be available on the phone, how fast each party should react to a text message or e-mail, and what needs to be communicated immediately. Once such a code is available, both parties must stick to it and ensure that they keep to these mutual agreements.

Digital technologies make real participation and two-way communication possible. Often, schools believe that they communicate when they merely **send information** e.g. in the form of a newsletter. This **is not communication**, and teachers should be aware of it as well as encourage parents to ask questions, react to such news items and thus creating a proper two-way exchange.

It should also be encouraged that families share their concerns with the school openly to avoid misinformation (based on missing or misunderstood facts) or even disinformation (that is intended to be harmful) to spread. In many countries, discussion groups of parents on WhatsApp or Facebook, **omitting the teacher is becoming a serious challenge for schools** as they often not only discuss the teacher behind their back, but also base discussion on partial information or lack information totally.

Another **important element of parent-school communication is the child**. As this resource promotes a child rights approach, we strongly recommend to implement a **"nothing about them without them"** policy, thus always having the child present in our in-person or virtual communication. As much as you as a teacher feel uncomfortable about parents discussing you behind your back, it is also not a good feeling and also not beneficial for the child to be left out. At the same time, the presence of a child in all parent-teacher interactions also often serves as a lightning rod as the adults formulate their messages more carefully.



SCHOOL–FAMILY RELATION PLATFORMS

Many schools have introduced communication platforms to **inform parents about grades, taking stock of absence, informing parents about topics covered at school, and sending each other messages**. In some cases, there are national initiatives to use a certain platform. There are legal and educational considerations when using such a tool.

First of all, when a **school** wants to introduce such a platform, they **need to obtain parental consent and the consent of the child** for providing any personal data for the platform provider. For this, they need to offer a **clear picture about the handling of data**: who operates the platform, what server is used to store data, who might have access to the data of parents and the child. It has happened that parents could prevent the introduction of such a platform that caused data protection concerns (namely that the government may have access to sensitive data) by explicitly denying consent to data handling. Such conflicts can be prevented if **parents are engaged in the choice of the platform, and detailed information is available** about the above-mentioned topics.

What is important to know, is that it is **not allowed for the school to store any data about the child or the parents that is not absolutely necessary**. It is a main principle of European data protection regulations enshrined in the GDPR. Handling data and information "just in case it may come handy" is strictly forbidden. And this principle must be considered whenever you upload any information, file or data on such a platform.

The **educational considerations are more complex**. Old-style report cards or school to home booklets offered a very important room for negotiating parent-child communication. The child brought things back from school, they had to take the **courage** to share it with parents if it was bad news, but just as importantly, they had a major moment of celebration when it was good. If platforms allow the parent to learn such news before they meet their child, these moments are lost. Also, **out of context**, without giving the opportunity to discuss and explain, such news may lead to sudden and unnecessary action on the parent's side, e.g. calling the teacher. It is good practice that **many schools do not make such information available to the parent within 24 hours** of sharing it with the child, so that the child has the opportunity to share in person. If this is not the case, it is advisable to **encourage parents to only access the platform in the presence of their child.**

If the platform is used for asking parents for sending things in the school, for assigning tasks, for requesting payments, it must be part of the previously mentioned code of conduct how much time

should be available for the family and for the school. At the same time, such platforms are sometimes used for **emergency messages** (e.g. no school due to a major water leak). As families cannot be obliged to access the platform every morning, other means of communication should be used for that, and delivery of the message needs to be somehow proven. For example, if a WhatsApp group is used for such emergencies, and the sender can see that a number of families have not been reached, the school still needs to provide shelter for children who turn up regardless.

PARTICIPATORY DECISION MAKING

Parents and students alike have long demanded to be part of school decision making schemes. Digital technology makes it seemingly easier as it is very simple to create polls, surveys and similar tools. There are three main considerations for teachers in this field.

1. Real participation in decision making requires **adequate information**. For this reason, it is important that the facts are available for all participants in an **accessible language**. For parents and students who don't speak the language of instruction well enough, digital technology offers easy solutions in artificial translation. At the same time, it is more an issue of linguistic register than language, thus teachers, school leaders and parents' leaders must ensure that **jargon is not used or is well-explained**.

2. Participatory decision making requires **discussion and debate**, voting should come after that. Real discussion requires in-person meetings, as communication is mostly non-verbal. Thus, while it is tempting to **replace meetings with online surveys, it takes the participatory element out**.

3. The **participation of children in decision making** should be facilitated in an age-appropriate way. You have to consider that using the same tools for children and adults may result in tokenism only. The participation of young children, even those who cannot yet read and write is possible, but it requires an appropriate, often more time-consuming process.

4. However time-consuming, participatory decision making creates ownership, and also there is no other way to adjust education to individual needs.

5. Only use digital tools when they are appropriate and really make participation easier.

E-PORTFOLIOS

E-portfolios are used more and more widely to **show families what is happening at school and also to remind students of their own development**. If implemented well, they are a very important means of **formative assessment,** showing your students their skills development over the course of a few months, a school year or a longer period. As a starting point, the contents of the e-portfolio are **for the eyes of the child and the teacher only**. Sharing them with the parent does not raise any concerns, but sharing them with anybody else, e.g. classmates, other teachers or even the public is a totally different consideration. This means that parents, as the guardians of the rights of the child, as well as teachers must **keep a very close tab on who can access e-portfolios**. If they are shared online, the data protection scrutiny mentioned earlier is applicable.

E-portfolios usually contain products the child created as practice or during the school year. It means that most of them show stages of skills development. Even if the child creates something "perfect" by the end of the school year or learning unit, the road to that product, all parts of the portfolio are surely not for the eyes of others. In an ideal case, a child should be able to only share such products in a temporary manner with teachers and parents. However, having them available for a full teaching cycle can also show the child how much they have developed. So, sharing the contents of an e-portfolio is delicate. It is best to tackle it as if it was a physical one.

MUTUAL LEARNING

Teaching has traditionally been considered a solitary job, but in recent years the **need for working collaboratively** became an imperative for many reasons. Schools cannot ignore the **complex and changing reality** outside of school that is the life of their students – and the teachers themselves – that cannot be addressed by teaching compartmentalised content in the framework of subjects. The demand to develop **21st century skills** – of both teachers and students – requires a cross-cutting approach that makes the collaboration of teachers necessary.

The introduction of various digital technologies made this need even more pressing. Fast changing technologies make it **impossible** for the individual teacher **to know about all new developments**, and the flexibility of these tools also require **methodological consultation and co-creation** activities for their full capacity to be exploited. Thus, **sharing experiences and teachers learning from each other** is of utmost importance. It is also important to acknowledge that some teachers don't feel comfortable using (too much) technology in their work, and they need to be supported to have the minimum access required e.g. for sharing test results if obliged to do so electronically.

The reality of formal education in Europe is that there is an ageing teaching force in most countries. At the same time, children of people who were born into the digital age are reaching school age and starting to attend school. These **parents who are so-called digital natives are nearly always more proficient in using digital technologies than teachers who are in most cases digital immigrants**. Many parents work in jobs where they become even more proficient. It is the mutual interest of teachers and parents, for the best interest of children, to work together for the best possible use of technology.

When school leaders or groups of teachers design the professional development programmes they offer teachers, parents as trainers or coaches should also be considered. Parents are sometimes proactive, reaching out to the school leader or teachers and offering their expertise. organisations, for example by partners of Parents International, the author of this resource.

At the same time, you also should consider that your students might be better at using certain digital tools than you, so think about receiving training or coaching from your own students.

INSTALAB - THE MOCK SOCIAL NETWORK

Online communities have played a key role in the development of the Internet from its very beginning. Nowadays, not only have they surpassed email as the dominant form of online communication, but also try to cover all kinds of communication needs, from micro-interactions (i.e., presence or ratings in the form of “Like”, “+1”, or votes) to real-time videoconferencing. However, many of the communication scenarios that arise around social media are so novel that sometimes the consequences of their use are neglected. There is much work to do in terms of privacy, security, and trust in this field. Developing digital literacy skills robust enough to deal with these new scenarios that arise from the use of social networking apps requires not only solid technical knowledge but also a lot of practical experience.

Designing insightful workshops on online privacy is not an easy task for several reasons. First, online privacy is often perceived as the opposite of being social and therefore undermines the user experience in social media. All measures aimed at preserving user privacy represent a usability loss in these social networks and are usually experienced by users as boring or annoying. Second, privacy learning materials designed from a playful perspective are often intended to be used by children or teenagers. However, not only these age cohorts are lacking in knowledge on privacy, older users – for example teachers – face similar problems and they may feel uncomfortable learning with children-oriented materials.

For these reasons, schools participating at the SAILS programme are offered an interactive social game where players can develop their online social skills from a first-person perspective. InstaLab is an Instagram-like workshop on online privacy developed earlier on. Its main novelty is that it goes beyond the standard set of interactive lessons and multiple-choice questions about best practices in the use of social networks: InstaLab offers a social engineering wargame in a fake social network that works like a sandbox.

Social engineering – in the context of computer security – is a set of techniques designed to manipulate people into performing actions or disclosing confidential information. Hackers and

crackers take advantage of social engineering techniques to gain access to technologically well-protected systems (e.g, firewalls or other perimeter security solutions). At a less technical level,

social engineering can be used by strangers or stalkers to gain access to private information of a victim. A wargame – in this context – is a security challenge in which players must use their skills to exploit vulnerabilities in a system to gain access to it. Wargames often provide fake servers to be attacked in a set of levels of increasing difficulty to facilitate the learning process about defence against hacking (e.g. Hackerslab).

Similarly, InstaLab provides social engineering wargame automated fake social profiles (also known as "social bots" in InstaLab) interact with players. All the information of the profiles related to these social bots is fictitious, so that no privacy of any real person is violated when playing InstaLab. Along the set of InstaLab challenges, players will have to refine their social engineering techniques to solve them. Thus, as it happens in training courses on ethical hacking, after playing with this privacy-related wargame, it may be easier for these players to identify situations where malicious others pretend to use the same techniques on them in real social networking apps.

User Guide

This is a step by step guide on how to use the "Instalab" portal. In addition, by following the link below you could also watch the video with detailed instructions on the use of "Instalab" https://drive.google.com/file/d/19pjapbjbL3LZ48sZgvgeMkJsvA5JeLR/view

Step 1: Follow the link: https://instalab.deusto.es/

Step 2: Create an account

The following fields must be filled in:

- Full name
- Username
- Password

(No email is necessary)

Step 3: Set up your profile

You can select a picture for your avatar and another one for the background.

After creating your profile, you can start adding or exploring posts, searching for people, reviewing your notifications and ckecking your inbox for new messages.

Step 4: The Game starts

BOTS

1st Scenario: Social Lab, a social engineering wargame

- Social Lab → if you follow it, the game starts.
- Alice Johnson → level 1
- Bob Smith → level 2
- Carol Wang → level 3
- David Danielson → level 4
- Elisabeth Benz → level 5

Specifically, If you follow “Social Lab” then “Social Lab” sends you this message:

> Welcome to Social Lab!
> Your first assignment as a social hacker will be to become a friend of Alice Johnson.
> Good luck! ;)

Level 1: If you follow “Alice Johnson” then “Alice Johnson” follows you back and sends you this message:

> Congratulations!
> Is not a good policy to accept every stranger as a friend.
> Your next assignment as a social hacker will be a little bit harder. Try to become a friend of Bob Smith.

Level 2: If you follow “Bob Smith” and you comment on a “Bob Smith”’s post then “Bob Smith” follows you back and sends you this message:

> Well done!
> Anybody can look familiar commenting posts.
> Your next assignment as a social hacker will be to become a friend of Carol Wang

Level 3: If you follow “Carol Wang” and you send a private message to “Carol Wang” then “Carol Wang” follows you back and sends you this message:

> Wow! That was a good one!

Sometimes, letting strangers write private messages to us is not a good idea.
Your next assignment as social hacker is to become a friend of David Danielson.

Level 4: If you follow “David Danielson” and you like 3 “David Danielson” posts then “David Danielson” follows you back and sends you this message:

Fantastic!
Sharing likes is another good way to look friendly.
Your next assignment as a social hacker will be to become a friend of Elisabeth Benz.

Level 5: If you follow “Elisabeth Benz” and you like 5 posts of her friends then “Elisabeth Benz” follows you back and sends you this message:

Awesome!
Another common way to generate trust is to like posts from our friends.
We hope this little game has helped you realize how certain behaviors of strangers can be mistaken as friendly on social networks.

2nd Scenario: Hate speech, Trolling, Cyberbullying

Hate Lab → if you follow it, the bots will post offensive comments in your posts.

- User4576354 → cyberbully
- User7856733 → cyberbully
- Ch40s → cyberbully
- DaBeAsT → cyberbully
- T0x1cCh4mb3r → cyberbully

If you follow “Hate Lab” then “Hate Lab” sends you this message:

Welcome to Hate Lab!
Following this bot activates the “hate mode” of some fake accounts that will post hate speech comments on your posts.
You can disable the “hate mode” unfollowing this bot.

- If you follow “Hate Lab” and you publish a post then “User4576354”:
  - Waits a random number of seconds between 5 and 30.
  - Posts any of these comments in your post:

- lame!
- loser.
- hate u
- what an idiot!
- overrated
- you suck
- please, kill yourself
- I couldn’t care less
- u moron
- ugly
- yuk!
- Boring

The rest of the cyberbullies act the same way as User4576354:

3rd Scenario: Fake news

- Sports News → 50% Fake news about sports
- Gaming Network → 50% Fake news about videogames
- Science Direct → 50 % Fake news about science
- Real Politik → 50 % Fake news about politics

This bot has posted 5 fake news and 5 true news about sports.

If your first comment in any post from “Sport News” contains the word “fake” or “true” then “Sport news” sends you a private message explaining why that news is fake/true.

The rest of the fake news bots work the same way as Sports News:

- 10 posts: 5 fake / 5 true.
- If a user comment “fake” or “true” in a fake news, the bot sends a private message explaining why it’s fake news.
- If a user comment “fake” or “true” in a true news, the bot sends a private message explaining why it’s true news.

ABOUT THE SAILS PROJECT

One of the greatest crises experienced by the world in this century so far, the restrictions introduced over 2020 and 2021 has radically changed the way we relate to each other. Faceto-face interaction has been forcefully reduced to a minimum and it became increasingly common to communicate through a screen. The same has happened to millions of students, teachers and families, who have seen that from one day to the next they were forced to go from face-to-face education to online classes.

This change, unexpected and hardly planned, has caused numerous problems in education:

1) students lost their learning group and their mentors due to connection problems, lack of appropriate and sufficient devices or technological inability to keep up with the pace of online classes,

2) teachers had to abandon their face-to-face dynamics and adapt in a few days to huge video conference rooms full of people who do not know the codes of conduct and communication of remote classes,

3) families were overwhelmed by a situation that disrupted their work and home plans, and experienced many difficulties in supporting and facilitating the online learning of their children, basically replacing teachers,

4) school leaders were under pressure to make centre-level decisions to address the pandemic and are often unaware of best educational practices in these cases and are going in blind.

While we believe online communication should not replace face-to-face education, and all efforts must be made to make in-person schooling possible while digital provisions should remain available as a complementary means used in some cases, in this rough sea we aim to provide clear guidelines for sailors to deploy or retract their sails when necessary. The aim of this project is to provide students, teachers, schools leaders and families with tools to make appropriate decisions facing the conflicts that COVID-19 has brought to the surface in the processes of learning, communication and socialisation of the school community as part of a digital childhood.

The methodology proposed in this project aims to be radically different from previous attempts to raise awareness among students about good behaviour on the net, the management of their autonomy and appropriate and safe social relations. With this objective, we will develop a fictitious social network in which we will reliably represent the potentially dangerous scenarios that can occur in this context (IO1). This network will be used as a social sandbox where different automated profiles (social bots) will behave inappropriately and interact with the fictitious profiles created by the students. From the interaction with these social bots, students will be able to understand which behaviours are not appropriate or safe in a practical way.

Although the fictional social network can also be used by teachers and families for their digital literacy, we believe that it is necessary to develop specific work materials for these groups. In the case of teachers, a guide to all the new methodological possibilities that online platforms offer can be very useful (IO3). In addition, we believe that it is necessary that they have sufficient keys to analyse and solve common problems that occur in online learning contexts (cyber-bullying, difficulties in maintaining respect in video conferences, abuse of anonymity on the network, plagiarism and problem-solving apps, etc.).

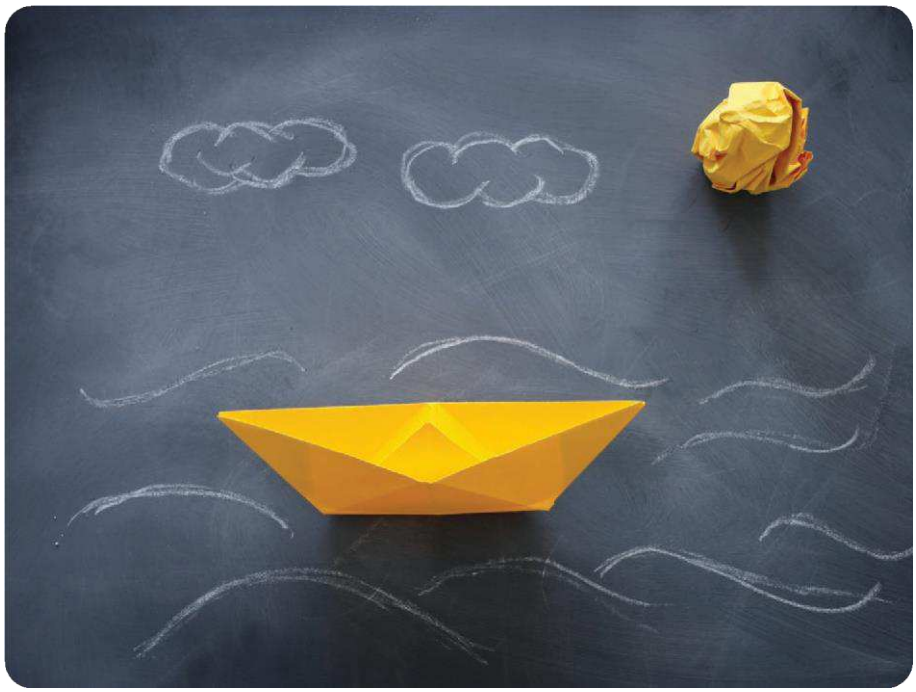
Families also need clear guidance in this new scenario. The potential lack of digital literacy, digital competence or even other soft skills has turned some family members otherwise able to support schooling – together with the majority of teachers – into people unable to help the students they live with or to communicate properly around schooling. For these reasons, this project aims to provide families with practical guidance (IO2) that explain in accessible language how to do most things that are needed in a virtual context that may also include virtual learning and what the use of each tool, social network or platform implies.

Finally, schools as a whole need to adopt strategies to coordinate all this effort and lead education in the post-Covid era to a safe port. With this purpose in mind, SAILS will provide an adaptable and flexible resource for schools where the integration of safe and proper use of digital resources will be defined as a strategy engaging all actors (IO4).

In short, the SAILS project intends to serve as a navigation chart in this immense ocean of possibilities that the Internet offers us in the educational context to avoid, above all, the storms that had already existed and the new ones that COVID-19 has brought.

The transnational consortium that has been created to carry out this project is the key to ensuring its success. The experience in the coordination of projects and the research that the team of UDEUSTO has been carrying out in the development of games and in the development of key

competences is going to suppose a key piece to guarantee the success of SAILS. In addition, the experience of entities like EA and ESHA in their work with leaders in schools is going to allow that the changes and innovations are established at school level and that they transfer the barriers to society. Besides, the experience of IPA and PPAA and their connection with several networks of families and other agents is going to allow them to obtain an impact, not only in school environments, but at a higher impact level.



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ANNEX - DIGITAL TOOLS FOR EDUCATION

This list was created by the COVIDEA expert team for Digital with Purpose

E-content and knowledge

General tools widely used in education

Feed Readers These are applications that allow readers to subscribe to multiple web feeds in a single interface. Examples include Feedly and TheOldReader.

Blogging Tools Used for class journals and writing projects. Examples include Blogger, WordPress, Tumblr.

Websites Home for online course or conference, essential information, and contact. Examples include Wix, Google Sites, GitHub pages.

E-Reading E-Readers collect e-books and publications into a library for easy reading, and include tools like Kindle and Kobo.

E-Book Publishing Used by content providers to publish e-books to support courses and programs. Examples include PressBooks, Rebus and LeanPub.

Drawing and Design Create flyers, posters, diagrams flowcharts or infographics. Tools include Canva, Moro and LucidChart.

Photos and Stock Video Libraries of stock content for resource and lesson production. Examples include Usplash, Pixabay, as well as many museum and archive collections including the British Museum and Smithsonian Open Access.

Search Search for error messages, uncommon terms, background information, images, and multimedia. Examples include Google, Bing, and DuckDuckGo as well as more specialized search tools such as Creative Commons image search.

Tools specifically designed with education in mind

Curriculum Resources Lists of resources sorted according to grade and subject, ranging from primary school through to university. Examples include the Government of Ontario's Learn at Home High School Courses and Ireland's NCAA online curriculum.

Learning Object Repositories Store of learning resources identified using learning object metadata or similar cataloguing format designed for education, providing access to resources that can be used for classes or personal study.

Online Library Store of books and other learning resources used for reference, reading and general learning, accessible either as a web site or using an e-Reader. Examples include BookShare, Skybrary and LibreText books and maps.

Messaging and Communication

General tools widely used in education

Email Used for mailing lists and to register for services. Examples include Gmail, Outlook.

Mailing Lists Service that sends class newsletters, updates, parent notes. Examples include MailChimp, Google Groups.

Microcontent Short content posts such as Twitter tweets, Facebook posts, used for social interaction and class conversation.

Social Media Publishing Tools that set up and manage social media publishing and include scheduling and analytics. For example, Buffer and Hootsuite.

Private Messaging Used for one-to-one communication, especially between teacher and student. Examples include Signal and Telegram.

Tools specifically designed with education in mind

Paging Tools These are used by the teacher to send messages specifically to students or to parents directly. Examples include ClassPager and Remind 101.

School and Class Networks These are social media and personal publishing tools designed specifically for use in a class setting. They are typically less public and may support moderation functions. Examples include Twiducate, Edublogs, Edmodo, and Youth Voices.

Collaboration and Sharing

General tools widely used in education

Teams Team environments support messaging, calendars, task lists, collaborative editing. Examples include Slack and Microsoft Teams.

Collaborative Writing Tools Develop class projects, research documents, etc. Tools include Google Docs, Media Wiki.

Online Bookmarking Share favorite websites, webpages, docs, images, videos, etc. Examples include Diigo, Pinboard, Zotero.

Note Keeping Tools Collect research information for writing assignments and papers. Tools include Evernote, MS OneNote.

Photo and Image Sharing Illustrate articles, blog posts, slide shows, and other sharable resources, illustrate and explain concepts. Tools include Flickr and Imgur.

Tools specifically designed with education in mind

Class Teams Environment Teams environments designed specifically for in-school use, such as Microsoft teams for Classrooms and Google Classrooms, enable students to communicate and work together on collaborative projects.

Annotation Tools allow students to add and share notes on documents and resources. Examples include hypothes.is and Hubub.

Class and Event Management

General tools widely used in education

Calendar and Scheduling Set up a course or conference schedule to be imported into personal calendars. Examples include Outlook, Google Calendar.

Scheduling Assistants Collect information about availability for meetings and events. Tools include Doodle, Calendy.

Event Management Tools Manage entire events for you, taking care of details like scheduling speakers and registering attendees. Examples include Socio and Converve.

Slides and Presentations Create slide presentations using tools like PowerPoint, Google Slides or Prezi, and host and show them using services like OneDrive and SlideShare.

Group Discussion Used for class discussion, project planning, socialization. Examples include Discord, RocketChat and Slack.

Video Conferencing For person-to-person or small group conversations. Share audio and video or chare screens with each other. Examples include Zoom, MS Teams, Google Meet, Jitsi, Webex.

Tools specifically designed with education in mind

Class Scheduling Schedule classes, enroll students and allocate rooms, online or offline, using products like Learning Stream or Booksteam, ASAP or ACTIVE Educate.

Education Event Management Set up educational events, including online classes or conferences, lectures and panel discussions. Tools include Planning Pod or Ungerboeck.

eBoards These are digital whiteboard and free-form drawing tool used with screen recorders (see below) to make lesson videos, or used as a group activity for brainstorming. Examples include Jamboard and Stormboard.

Engagement Tools These are applications used with conferencing systems to ask questions, conduct polls, or otherwise engage participants. Examples of polls include Toasty, Polley and Mentimeter, examples of engagement include Popplet, Miro and Mural.

E-delivery tools, platforms, software

General tools widely used in education

Content Management Systems Make larger resources (like documents, photos, videos, etc) available to course or event participants. Examples include Drupal, Django.

Online Communities Converse, interact and share resources with people interested in the same subject. Examples for educators include the Europeana Education community and Global Educator Collective.

Cloud Storage Save documents, assignments and other resources for storage and access. Examples include DropBox, Box, Google Drive, OneDrive.

Video Hosting Store libraries of instructional video content for user access. Examples include Kaltura, IBM Video Cloud.

Tools specifically designed with education in mind

Video Conferencing Plus Combine the basic functionality of videoconferencing within a wider environment to create breakouts, collaborative authoring, informal meetings, etc. Examples include Class for Zoom, InSpace, Gather.Town, Rambly, and Spatial.Chat.

Learning Management Systems and Learning Experience Platforms Combine content management with class management and grading. Examples include Moodle or Canvas.

MOOC Massive Open Online Course (MOOC) tools manage and host open online courses. Examples include Coursera and Udacity.

Multimedia

General tools widely used in education

Audio Recording Tools used to create podcasts or record class sessions or meetings and perform sound editing. Examples include Voice Recorder, Audacity.

Podcasting Record audio or create it using other tools and then upload it. Podcasting tools also distribute to networks where people subscribe to audio channels. Examples include Anchor, Soundcloud and Podomatic.

VideoCasting Send videocasting to a large number of people at once for lectures or class sessions. Use digital signal processors like Open Broadcast Studio or Xsplit to create the video signal and distribution platforms like YouTube, Twitch or Facebook.

Tools specifically designed with education in mind

Lecture Capture Record class lectures and store them for later access. Kaltura is a market leader in this space.

Screen and Video Recording Record screens to show people how to do things, record lessons or conference presentations. Tools include Camtasia, Kaltura, OBS.

Learning support (VR, AI supported personalized learning, gaming etc)

General tools widely used in education

Virtual Reality Use the Unity or Unreal engine to create immersive environments, and viewing applications such as Oculus or Hololens to interact with that environment, for hands-on simulation and learning activities.

Artificial Intelligence Access AI applications through services such as IBM's cloud-based Watson to perform taks such as sentiment analysis, natural language processing, or classification.

Tools specifically designed with education in mind

Labs and Simulations Online activities and simulations that replace hands-on laboratory activities, paying attention to proper procedure and documentation. For example, oPhysics and GeoGebra.

Learning Path Recommendation Learning path recommenders, such as Brightspace's Learning Paths or Pearson Pathways, have been built into many LMSs and LXPs. Course recommendation systems are in development for MOOC platforms.

Learning Analytics Track user activities and use artificial intelligence to predict outcomes or recommend learning paths. Examples include IntelliBoard, which offers analytics for many LMSs,

Assessment and accreditation

General tools widely used in education

Self-Tracking Track personal activities. Common examples include health and fitness trackers such as Garmin or Apple's Smartwatch.

Tools specifically designed with education in mind

Badges Issue microcredentials or recognize accomplishments, completion of tasks, or special standing in the course or community. Examples include Badgr and Credly.

Automated Assessment Use AI-based natural language processing to automatically grade essays and assignments. AES (Automated Essay Scoring) tools are still in development but are being widely studied.

Managing the education system

General tools widely used in education

Forms and Surveys Web-based applications to collect and study in spreadsheet form data for course registration, opinion polls, etc. Tools include Google Forms, Survey Monkey and LimeSurvey.

Tools specifically designed with education in mind

Student Information System Specialized SIS systems such as Banner and Colleague are used by many educational institutions to manage student information.