ALL DIGITAL
ENHANCING DIGITAL SKILLS ACROSS EUROPE

Digital Well-Being

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Introduction

As Europe's societies are steadily continuing along the path of the digital transformation, our interactions with digital technologies are becoming more frequent and unavoidable. This exposure to new technologies has unpredictable effects on users, necessitating a fresh approach to health and well-being in a digital world alongside the efficiency, innovation and convenience it promises. We as ALL DIGITAL – as the European network of digital competence development stakeholders, and our over 100 members from 31 countries – believe that a healthy and sustainable use of digital tools is an essential digital competence in itself, and underpins the **ALL DIGITAL Manifesto for Enhancing Digital Competences across Europe's** principles of inclusivity, accessibility, and holisticness.

In an effort to add to and promote the urgent dialogue and policy focus on digital well-being ALL DIGITAL and three of its members, maks vzw (Belgium), CARDET (Cyprus) and Punt TIC (Catalonia) have co-authored this paper. Digital well-being is relevant in all aspects of the digital world, and its multitude of facets deserves consideration far beyond the scope of this paper, In which we restrict ourselves to selected topics.

The European Digital Competence Framework for Citizens (DigComp) lists digital health and well-being as one of its 21 core competences and we begin with an analysis of DigComp's understanding of digital well-being and which elements of the concept this state-of-the-art framework for describing digital competences considers to be relevant.

After looking at well-being for educators through the example of the European Teacher Wellbeing and Career Observatory, the paper discusses perspectives on well-being and health in the context of increasingly digitised workplaces and their impact on the mental and physical health of workers. With 90% of jobs requiring digital skills, addressing the specific considerations of digital tools and changing work environments becomes imperative to uphold EU work standards.

Finally, this paper looks at the use of digital devices by children and young people, and how parents may be unequipped to safeguard their well-being in a context where the parents lack basic digital competences themselves. The concept of digital freedom is illuminated and further guidance for parents is collected in the last part of this paper.
This report aims to raise awareness and seeks to underly further work on the topic of digital well-being which must play a central role for all considerations on the use and development of digital technologies.

Digital Well-Being: A competence perspective:

Offline and online worlds

A recurring theme in our analysis of digital well-being is what we call the dual-sphere paradox. In many cases, the discourse on the digital world treats it as an entirely separate entity or sphere to the real or offline world, and certainly there are distinguishing factors between the two. Initially, the digital world may well have developed as a niche in our everyday lives, and its primary function as a source of escapism, the concept of online personas alternate realities (e.g. “Second Life”) are a testament to this, as is the continued perception of professions in the IT sector as a career for nerds and the socially excluded, which massively contributes to the significant It professional shortage.

With continued technological and cultural developments, the digital world integrates and transforms more and more aspects of our activities, and this thinking of online and offline as separate spheres holds up less and less. The worlds have merged and actions in one have direct consequences in the other. Nevertheless, we often still perceive of them as more separated than they actually are, and while we are also making distinctions between the two worlds throughout this paper, we acknowledge the deconstruction of this thinking as a central task for digital competence development, especially as an element of future governance and policy setting initiatives.

Well-Being in DigComp

The Digital Competence Framework for Citizens (DigComp) looks at the concept of Digital Well-Being under the fourth major competence area, Safety. It approaches the topic from three distinct, yet interconnected, angles. Firstly, there is the understanding of avoiding risks and threats to physical and psychological well-being during the use of digital tools, in a, notionally, passive approach. Secondly, it considers the idea of proactive protection of not only the individual themselves, but of others. Cyber bullying is specifically referred to in this context as an example for dangers users face in digital interactions. Thirdly, it takes into account the potential of digital technologies in advancing social well-being and social inclusion.

The importance of the latter point as an additional aspect to the negatively connotated risk- and threat-based view cannot be overstated, as the discourse on digital well-being can very often lack this positive element. Without it, however, the conversation all too readily demonises digital technologies as solely harmful, thereby creating and reinforcing fears, prejudices and barriers to the development of digital competences and the engagement with digital solutions, preventing them to fulfil their full potential towards improving the welfare for all.

Nevertheless, the opportunities afforded by digital technologies include risks and threats to users not equipped with the appropriate competences, and the unreflected implementation and adoption of digital tools can have harmful effects. As with every aspect of safety, there needs to be a balance found between security concerns and the feasibility and applicability of the activity in question.

Learnings from the proficiency levels

As a consequence, the definitions set out by DigComp for the lower levels of proficiency, namely in the basic range, restrict themselves to the differentiation, selection, and

identification of simple ways to avoid risks and threats, to protect the user themselves from potential dangers, and the protection of others does not yet factor in at basic levels of proficiency, but also towards the use of digital tools for social well-being and social inclusion. The understanding of digital technologies as furthering well-being and not just a potential source of harm starts at the lowest level of digital competence.

At intermediary competence levels, the DigComp framework expects users to turn these simple strategies into routine behaviours, while also gradually incorporating the scope to include others aside the user themself, while the advanced and highly specialised levels widen the scope further towards advocating, demonstrating, and eventually teaching and creation of digital well-being strategies, tools and methods.

The example use cases first introduced in DigComp version 2.1, consisting of two examples per each of the 21 individual competences on varying proficiency levels - illustrate the significance of raising awareness and informing others, something which users with advanced digital competence in the area of digital health and wellbeing should be able to provide. The example use cases also underline the two main topics featured in our analysis here, as they include one from the area of work, and one in an educational setting of a school's digital learning platform.

Aspects of Well-Being in DigComp 2.2

While the descriptions of the key competence and the expected abilities and activities under the eight proficiency levels under it are left relatively general, the additional examples of Knowledge, Skill and Attitude of update 2.2 of the framework gives a more detailed view on what DigComp understands under digital well-being.

A first point considered the option of non-use as an often-neglected factor. Just as the pure demonisation of digital technologies as being potentially harmful to users' well-being is unhelpful, an entirely positive perspective of digital tools as the best and only appropriate solution in any given situation underlies the same pitfalls of such black and white thinking. The benefits and costs of any solution to a given problem have to be considered, and the use of digital tools for the sake of using a digital solution can easily detract from achieving the goal of improving the situation.

An understanding of how digital tools impact health, well-being and life satisfaction is an important factor in determining the costs of implementing a digital solution, and may lead to a non-digital solution to be preferrable. There is no best practice that can be universally applied to any context, and the adequate approach will depend on the specific circumstances of the situation.

A second point addressed by the examples of DigComp 2.2 is the concept of digital addictions presenting in the form of loss of control, dysfunctional mood regulation and withdrawal symptoms. The root causes for addictions to form are rarely limited to the properties of the object of the addiction, and a broad scope must be adopted in tackling the psychological and physical harm caused by the addictive behaviour. Nevertheless, the elements favouring digital technologies becoming the object of addictive behaviour, such as the offer of instant gratification, the ease of access, and constant supply of novel stimulation, among a lot of others, are to be acknowledged and taken into account when treating a person with digital addiction.

Adjacent to the aspect of digital addiction, is the understanding of digital platforms' use of embedded user experience techniques. Competition pressures and profit-motivated economic success metrics drive providers of digital offers to employ methodologies to gain and retain users' attention, and can be manipulative, harmful and negatively impact well-being. In addition to regulators creating and enforcing policies to prevent the use of these manipulative and harmful digital business practices, the development of competences to recognise and safeguard against them is essential for everyone engaging with the digital world. This includes combatting disinformation and the awareness to be vigilant of the reliability of information, guidance and recommendations received online.

Two further examples illuminate opposite sides of the same issue. On the one hand, applications and digital tools exist that promise to and can support the adoption of healthy behaviours. The availability to measure, register and analyse various metrics related to heath and well-being can aid in promoting awareness, ease adopting and maintaining routines, and increase motivation.

However, on the other hand, these tools may also further negative impacts on health and well-being by giving inappropriate advice or promoting harmful, idealised body images. Furthermore, requirements for licensing, oversight and governance of these applications and tools are not in all cases as strict as they are for other medical services.

DigComp 2.2's examples also highlight the concept of cyberbullying, which is, put simply, bullying with the aid of digital tools and technologies. The use of digital tools for this type of abusive behaviour is taking advantage, among others, of the possibility to reach the intended victim at all times and locations, and the promise of protection from retaliation afforded by perceived anonymity.

A general lack of awareness of mental and psychological harm caused being at least as – and in some cases more – severe as physical harm is, is carried into virtual spaces, and is often cited as an explanation for the lack of awareness of any wrong-doing by perpetrators of cyberbullying. The problem of targeted and intentional cyberbullying and online abuse is an important topic all in itself and one which needs urgent addressing, our considerations here will focus more on the phenomenon of cyberbullying as an unintended result of people interacting in virtual spaces.

The knowledge examples in DigComp 2.2 speak of an "online disinhibition effect" in this context, meaning that a combination of factors cause users to behave online in ways they would not in face-to-face or physical settings. In terms of the dual-sphere paradox, users may interact online as if they are in a separate world, rather than in an interconnected extension of the world they live in offline.

Asynchronous, virtual communication, for all its advantages in terms of easing communication, counterintuitively disconnects interlocutors from the immediate reactions caused by their words, allowing them, often quite unconsciously, to disassociate from the potential hurt caused to others by their actions.

At the same time, the absence of additional, nonverbal, elements of communication, such as facial expression, tone of voice, emphasis, or accompanying gestures, heighten the potential for miscommunication, and an escalation of increasingly offensive language as a retaliation to an initially only perceived aggression.

The effect of online disinhibition has particular implications for vulnerable groups, which can be at a higher risk of victimisation and discrimination in digital settings. Resentments and prejudices prevalent outside of online spaces can get emphasised and more extreme in digital environments. A sense of being able to express viewpoints which are, rightfully, socially unacceptable, enabled by anonymity and a sense of being secure from immediate repercussions, increases the frequency of hate-speech and cyberbullying. As this is an amplification effect it hits those who face discrimination in their offline lives as well, these groups face an even larger exposure in digital spaces, absent any active measures to combat these tendencies.

It is important to understand that the digital tools enabling these harmful types of behaviour are in most cases not themselves the cause for them. In fact, the amplifying effect they have on real world tendencies works in the other direction as well. Well moderated and controlled online spaces can correct and discourage harmful behaviour, and the possibility to interact with representatives from alienated groups can have positive learning outcomes and deconstruct these existing prejudices and resentments. Safe online spaces can allow marginalised and disadvantaged individuals to connect, interact and socialise with peers, give access to resources.

Digital technologies can support – or even make possible at all – the accessibility of social participation for otherwise excluded parts of society, such as the elderly, persons with disabilities, or geographically remote, rural communities. However, a lack of access to these digital technologies can further increase the exclusion and isolation of these groups when non-digital offers are discontinued in favour of digital-only solutions.

The Digcomp Framework outlines a thorough perspective on digital well-being, and which competences users should develop in order to safeguard their health and well-being when interacting with digital technologies, but is by no means conclusive in its scope of examples and descriptions. Equipping citizens with these competences, at the very least to basic proficiency levels is of utmost importance for a successful digital transformation.

Approaching well-being under the lens of Digital Rights

The Catalan Charter of Digital Rights and Responsibilities, presented here by Punt TIC, the Catalan telecentre network, an ALL DIGITAL member and under governance of the Government of Catalunya, is a dynamic and ongoing tool aimed towards establishing regulations and contributing to global debate. This Charter considers citizens to be all the people that form part of society as a whole and is based on the premise that citizens play an active role and are not only there to be managed.

We must participate in the decisions that affect us and the digital age facilitates this citizen empowerment. The Charter also understands that enabling citizens to exercise their right to be co-responsible and co-participants comes with communal and individual responsibilities. Capable and empowered citizens do not exercise this co-responsibility with a set of individual choices but they use everybody's contributions so they can work together and build a common space of shared rights and freedoms, which implies an acknowledgement and awareness of these co-participants' health and well-being.

The digital rights and responsibilities proposed in the Catalan Charter are addressed to society as a whole, to natural and legal persons, including businesses, non-profit organisations and public institutions. Moreover, it is especially necessary to protect the

rights of potentially vulnerable people and groups that face discrimination, as well as give priority to tasks addressed to reducing the digital gap.

Digital Well-Being in Education – The European Teacher Wellbeing and Career Observatory

Most of the considerations on digital well-being on competences, and further below on the workplace and on socialising online are directly transferable and applicable to education settings. While we will look with more detail at digital well-being from a youth perspective as one side in the conflicts arising from intergenerational digital competence gaps in the last part of this paper, the following section focuses on the teachers, trainers and educators, and their well-being as an important factor for their retention and efforts to fill the existing staff and skills gaps. We are doing so by showcasing a newly launched initiative coordinated by ALL DIGITAL member organisation CARDET, Cyprus.

Overview

The European Teacher Wellbeing and Career Observatory[1] is an initiative that is coordinated by CARDET and the Institute for Development, and is a result of the KA3 project ProW coordinated by the International Hellenic University and supported by the European Commission. The vision of the observatory is to support high quality education systems across Europe, within which teachers are respected and flourish. The mission is to conduct ongoing research and provide policy and practice recommendations for the empowerment of the teaching profession, engaging all key stakeholders in education.

The **main objectives** of the Observatory are:

- **Promoting Teacher Wellbeing: to raise awareness about the importance of teacher wellbeing and emphasize its impact on the overall quality of education.**
- **Advancing Teacher Professional Learning and Career Progression: to empower teachers in their professional growth and career advancement.**
- **Teacher Career and Wellbeing Index: to establish an index that documents teacher career progression and wellbeing at a pan-European level.**
- **Research & Data Collection: to collect biennial data (every two years) from teachers at all levels, including pre-primary, primary, and secondary education, across Europe.**
- **Policy Recommendations and Advocacy: to provide biennial monitoring reports and policy recommendations.**
- **Collaboration and Networking: fosters collaboration among public authorities, research organizations, and teacher organizations across Europe.**

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- Long-Term Systemic Impact: to make a long-lasting, systemic impact on the teaching profession.

This initiative will contribute to its aims and objectives in line with the Vision, Mission, and Objectives, by engaging in the following activities:

- Hold Annual General Meeting with key stakeholders.
- Conduct research and policy analysis using the European Teacher Wellbeing Index and other sources.
- Share and disseminate the results from the findings of the research. Hold a biennial hybrid conference to present findings, host discussions, and present good practices.
- Update on an annual basis education authorities, European agencies, and relevant stakeholders and policymakers about the findings of the Wellbeing Index and index comparisons.
- Recruit more key stakeholders and partners to contribute and participate in activities.
- Consider engagement and collaborations with stakeholders outside of the EU.
- Present actions of the observatory at relevant conferences nationally and internationally.
- Prepare reports and policy briefs with policy and practice recommendations based on field and desk research the observatory team will conduct.

Research Agenda

Our research agenda draws from four main areas:

- Teacher wellbeing
- Teacher professional learning
- Career progression
- Systemic factors

Teacher wellbeing: Prioritizing teacher wellbeing is crucial because when educators are emotionally and physically supported, they can better foster a positive learning environment, inspire students, and enhance their overall educational experience.

Professional Learning: Developing teachers' knowledge, skills, and abilities empowers them to improve their practice, stay updated with the latest teaching methodologies,

and continuously build expertise, leading to more effective and impactful teaching.

Career progression: Teachers' career progression not only enriches their professional growth but also enhances their ability to deliver higher-quality education and positively influences the lives of their students.

Systemic Factors: Examining all systemic factors that impact directly and/or indirectly teacher wellbeing and career, including curricula, assessment, policies, technology integration, support, school leadership, parent-school relationships, and all other factors that impact the quality of education.

Open Invitation

This is an **open call** for all organizations and individuals who share the same vision with us to contact us to discuss the ways we can collaborate. The following membership categories are now open:

- Country Focal Points
- Organizations active in teacher education and research (e.g. universities, schools, teacher education centers)
- Individual teachers and researchers

Why should you join?

As the Observatory network grows, we are constantly looking for new countries and members to join. There are many **benefits** for organizations and individuals for joining this initiative:

- Networking opportunities will be abundant, allowing you to connect with research institutions across Europe and foster collaborations.
- Collaboration on upcoming funding opportunities will enable your organization to access additional resources for research and implementation.
- Engage in collaborative research and capacity building programs with several training opportunities for researchers, schools, teachers, and school staff.
- There will be ample opportunities for publications and conference presentations, helping to showcase your organization's work and expertise.
- Through consultation and participation in national policy reforms, your organization can actively contribute to shaping the educational landscape.
- By joining, you will contribute to the improvement of the teaching profession and the overall quality of education, making a meaningful impact.
- If you meet the criteria for Country focal point (see later section) you can serve as a focal national point for teacher wellbeing in Europe, playing a crucial role in shaping discussions and initiatives.

Digital Well-Being in the Workplace

1. Digital workplaces

The digital transformation has led to rapid technological advancements in how we interact and perform activities in the workplace, and continues to do so further and in more and more sectors. Digital technologies have revolutionised the way we work, communicate, and collaborate. However, this digital revolution brings with it a set of challenges, notably concerning the well-being of employees. As organisations strive for productivity and efficiency, it is essential to prioritise the digital well-being of employees to ensure a healthy and sustainable work environment. The significance of digital well-being practices in the workplace reflects only one facet of many and is to be understood as an example analysis in the context of this paper.

Digital well-being encompasses mental, physical, and emotional health in the digital realm. Excessive screen time, constant connectivity, and information overload can lead to stress, burnout, and decreased productivity. Recognising these challenges is the first step in implementing effective digital well-being practices.

In the digital age, constant connectivity is often considered a benefit. However, it is vital to strike a balance between staying connected and allowing employees time to disconnect. We explore the right to disconnect further on. Encouraging breaks, establishing clear boundaries for after-hours communication, and promoting a culture of respect for personal time are essential elements of fostering a healthy work-life balance.

The digital landscape can be overwhelming, leading to stress and anxiety, caused not only by a lack of disconnection, but also by increased expectations on productivity with the aid of digital tools, handling additional risks associated with the use of these tools, and often rapid and repeated changes of practices, methodologies and applications used to keep up to date with available technologies and good practices. The required adaptation and training can be a large detractor to well-being, especially if it is not acknowledged and taken into account by an employer's IT strategy. Accordingly, empowering employees with digital literacy and skills is crucial for their well-being in the digital workplace. Training programs that enhance digital competencies not only boost confidence and job satisfaction but also contribute to a more efficient and adaptable workforce. Moreover, providing ongoing learning opportunities can help employees keep pace with technological advancements, reducing the fear of obsolescence.

The dual-sphere paradox manifests itself in this context. There is a habit to conceive of digital methods of working as contrasting replacements of previously analogue procedures. This can sometimes be accompanied by a shift of overall tone or formality in digital interactions and communications. While this is neither a positive nor a negative effect in itself, it can lead to confusion and miscommunication which in turn have a potentially harmful impact on well-being when not handled appropriately. Contrastingly, a lack of keeping track of various communication channels, especially when there are items communicated for example exclusively in a physical workplace location, which can leave remote co-workers feel excluded.

The impact of increasingly digitalised workplaces is not restricted to psychological impacts and impacts on employees' mental health. Prolonged screen-time can be a

cause for eye strain, workers' posture can be adversely affected by their desk setups, and the use of input equipment can favour the development of conditions such as carpal tunnel syndrome. These and other physiological effects and implications on employees' physical health are just a important factors to consider when working with digital tools.

Besides, the increasing digital governance can affect workers. According to the Catalan Charter of Digital Rights and Responsibilities, all workers must be able to be aware of the algorithms of AI-based systems that have an impact on their work, and must be able to inspect them and respond to any algorithm-based decisions that affect them. Therefore, any algorithm-based system used in the workplace must be transparent and auditable, reasonably predictable, re-evaluated regularly and permanently, and its information must be accessible, comprehensible and free from any coercion for its acceptance.

Article 14 of the European General Data Protection Regulation (GDPR) already provides for this right of information for people subject to automated decisions, including profile processing. Thus, workers must be able to know the data used by the entity with which they have an employment relationship, as well as the relative importance of these data in the automated decision and the consequences that may arise from it. Likewise, workers, either individually or collectively, must be included in decision-making processes around algorithm-based systems and in the process of their design.

In addition, workers subject to automated decisions in the workplace must be able to obtain human intervention in these decisions and challenge them, as set out in Article 22 of the GDPR. Everyone must protect themselves from gender, race, culture, ethnicity, or sexual preference bias, among others, and from undesirable consequences of using AI-based systems. In this regard, policy makers and regulators should be able to design standards, with technical specifications, that set the conditions for the proper functioning of the AI-based systems.

Platforms, trade unions and collective bargaining:

The digitisation of work can fracture space and working time. Independent workers must be able to enjoy greater organisational capacity, either from the trade union level and collective bargaining, either by being able to access the labour market together, or by pooling tools of work and knowledge, or by sharing insurance and management, among others. Here, the reference to collective bargaining in Article 88 of the GDPR as a mechanism to provide appropriate and specific standards in the context of data collection and processing to safeguard human dignity and the fundamental rights of working people confirms the importance of collective rights to combat abuses of the practices of automated systems in the workplace. In this regard, collective agreements should be regularly updated to address all the aforementioned issues.

Digital competence:

Automation affects the employability of workers and destroys jobs, but it also creates new ones. In this regard, governments must address solutions such as the promotion of technological vocations, especially among girls and teenagers, as well as digital training and the reorientation of professional skills that focus on competences that are more difficult to automate. Public administrations must facilitate the fit between demand and talent supply. This should be improved by designing standards that make public employment services' and private sector's data interoperable. Moreover, workers,

either individually or collectively, must be able to participate in the incorporation and implementation of new technologies in their jobs. Furthermore, public administrations should promote the debate on structural changes such as the reduction of working hours, the possibility of taxing machines or the design of income systems for people who cannot adapt to the new reality.

One of the most positive aspects of the digital transformation of work is the enabling of flexible work arrangements, in the form of asynchronous and remote work. These accommodations can certainly improve employee well-being in addition to boosting productiveness. However, they can also be a source of additional frustrations in the management and coordination of work processes, and can have an significantly harmful impact when the ability to work at all hours and at all places is turned into an expectation to do so. Additionally, the use of digital tools can aid in a healthier and motivated work environment, for example through the use of activity tracking, task management, well-being reminders, such as break timers.

By understanding the challenges posed by the digital age and implementing a holistic approach that addresses mental, physical, and emotional well-being, employers can create a workplace where employees thrive both personally and professionally. Organisations that invest in digital well-being practices foster a more engaged, productive, and resilient workforce. As in most aspects of digitalisation, a positive or negative impact on well-being is as such down to the digital technologies used in the organisation and delivery of work, but a question of the appropriate knowledge, skills and attitude, in short competences, applied in the implementation and use. Benefits afforded by the use of digital tools can be offset by negative impacts on the users well-being, and require considered and careful decisions and management.

2. Right to disconnect

The “right to disconnect” refers to the fundamental right of employees to disengage from work-related communications and tasks outside of their designated working hours. In a digitally connected world where the boundaries between work and personal life can blur, recognising and respecting the right to disconnect has become increasingly important.

The right to disconnect is pivotal in maintaining a healthy work-life balance. Allowing employees to detach from work-related communications during non-working hours helps prevent burnout and exhaustion. It contributes to a more sustainable and fulfilling lifestyle, enhancing overall well-being. More concretely, constant connectivity can have detrimental effects on mental health. The right to disconnect acknowledges the importance of downtime for relaxation, leisure, and spending quality time with family and friends.

In a hyper-connected world, the risk of burnout is significant. Employees who are constantly tethered to work-related emails and messages may find it challenging to recharge and recover. The right to disconnect acts as a safeguard against burnout, enabling individuals to step away from work-related stressors and maintain their professional resilience. Its

importance is underlined by the fact that, paradoxically, being constantly connected does not necessarily translate to increased productivity. Employees need time away from work to rest and recharge, fostering creativity and innovation. Providing the right to disconnect acknowledges that individuals can bring fresh perspectives and ideas to the table when they have had the opportunity to disconnect and rejuvenate. Organisations that prioritise the right to disconnect are likely to attract talent and retain their staff, as employees increasingly value workplaces that prioritise their well-being and understand the importance of a balanced lifestyle.

The right to disconnect is a crucial component of a healthy and sustainable work environment, and although it is not a direct digital competence in itself, as it reflects on principles not restricted to digitalised places of work, its importance increases with the rate of digitalisation of the work environment.

3. Digital Health Strategies

Implementing effective digital health strategies in work environments is crucial for fostering a culture of well-being. The following list of recommendations should not be considered conclusive, but is intended to give an overview of considerations which are also applicable beyond the world of work.

- **Define and communicate clear policies regarding digital device usage, screen time, and after-hours communication:**
  Ensure that employees understand the expectations for responsible and balanced technology use both during and outside regular working hours.

- **Encourage employees to take regular breaks to reduce prolonged periods of screen time:**
  Short breaks, away from digital devices, can help prevent eye strain, fatigue, and musculoskeletal issues. Implementing techniques such as the Pomodoro Technique, which involves short breaks between focused work intervals, can enhance productivity and well-being.

- **Support employees by providing ergonomic workstations that promote physical health:**
  Comfortable chairs, adjustable desks, and proper lighting can contribute to a more comfortable and healthy work environment, reducing the risk of musculoskeletal disorders associated with prolonged computer use.

- **Introduce digital detox initiatives, such as designated periods where employees are encouraged to disconnect from work-related digital communications:**
  This could be a daily “unplugged” hour or a team-wide agreement to limit non-urgent messages during certain times, promoting a healthier work-life balance

- **Provide resources and support for mental health:**
  Acknowledging the potential impact of digital stressors on employees’ psychological well-being. Employee assistance programs, counseling services, and workshops on stress management and mindfulness can contribute to a mentally healthy workplace.

- **Embrace flexible work arrangements:**
  Remote work options or flexible hours, allowing employees to tailor their work schedules to their individual needs can contribute to better work-life integration, reducing stress associated with commuting and rigid work hours.

- **Offer training programs to enhance employees' digital literacy skills:**
  This includes educating them on effective use of digital tools, time management, and strategies for maintaining a healthy relationship with technology. Digital literacy training can empower employees to navigate the digital landscape more efficiently.

- **Promote physical activity by incorporating wellness programs into the workplace:**
  Activities such as fitness challenges, walking meetings, or access to onsite exercise facilities can contribute to the overall well-being of employees, countering the sedentary nature of many desk jobs.

- **Equip employees with tools and resources for effective time management:**
  This can include project management software, task organizers, and other digital tools that help employees prioritize tasks, set boundaries, and manage their workloads efficiently.

- **Cultivate a positive digital culture within the organisation:**
  This involves promoting open communication, collaboration, and mutual respect. Encourage team members to support one another in maintaining a healthy work-life balance and respecting each other's digital well-being.

- **Implement regular assessments to gauge the effectiveness of digital health strategies:**
  Solicit feedback from employees to understand their needs and concerns, and use this information to refine and improve existing practices.

A comprehensive approach to digital health strategies involves a combination of policies, education, and a supportive work environment. By prioritising the well-being of employees in the digital realm, organisations can create a culture that fosters productivity, creativity, and overall job satisfaction. Furthermore, these principles are valid and applicable not only in a work setting but apply in all aspects of life that involve an interaction with digital technologies. A comprehensive understanding of these aspects, and the adequate competences to implement them bot hon a personal as well as an organisational and societal level is essential, and further underlines the need for broad, inclusive digital competence development.

Socialising online and intergenerational competence gaps

As younger generations grow up accustomed to a world in which the use of digital technologies is the most normal thing, their parents, guardians and minders, including their educators, can struggle to relate to the reality of merged online and offline worlds. Furthermore, they can lack the competences to understand, and subsequently support and safeguard their children when they encounter harmful aspects of their digital

interactions.

This brings us to the question: is digital inequality an important aspect when we talk about vulnerable youth with parents with a low socio-economic status? Low skilled parents struggle with the acquisition of devices, the price of internet provision but also with the needed skills to safeguard themselves but also their children.

Currently, there are several approaches to address digital inequality. A three-level model for the digital divide has been presented by van Deursen & Helsper , with the first digital divide level being associated with lack of access to digital tools and the means to access the internet, the second level with usage patterns, and the last level being associated with the ability to use digital technologies effectively and efficiently to achieve improved outcomes. Nevertheless, digital divide – and each of these levels present on the three-level model - is influenced by factors such as socioeconomic status, age, sex, region, and health status, with the first being one of the main predictors of internet access and associated skills, directly influencing competent internet use.

We can also presume even if scientific research is very scarce that there is a link between digital well-being and low economic status. We will not talk about have and have-nots but we want to highlight the fact that not having the digital skills to protect yourself against all kinds of danger is not enhancing your digital wellbeing. Educational programs about cyberbullying, data security, or even screentime are entering the educational systems. A key motivation is that it affects the social cohesion between the students and has an influence on the way children relate to their peers but also on their academic success.

But what to do about individual addiction like game or porno-addiction detected in youngsters or children. One element is that vulnerable youth often have low levels of resilience and self-confidence. They feel second class citizens in the real world so it is predictable that integrating themselves in a virtual world will be easier than living daily exclusion offline. In their daily world, dopamine moments, moments that create dopamine which is associated with happiness, are not common: poverty and lack of basic food products, negative experiences at school, discrimination, and housing problems all have detrimental effects. The search for dopamine moments can become even more urgent and desperate under these circumstances.

Additionally, they are not surrounded by parents who can protect them against these threats because of the latter's lack of digital skills. Adult educational programs should be developed around furthering digital well-being of vulnerable families together with the development of smart youth work that offers alternatives in the real and virtual world for those children and youngsters.

[2]van Deursen, A.J.A.M. and Helsper, E.J. (2015), "The Third-Level Digital Divide: Who Benefits Most from Being Online?", Communication and Information Technologies Annual (Studies in Media and Communications, Vol. 10), Emerald Group Publishing Limited, Leeds, pp. 29-52. https://doi.org/10.1108/S2050-206020150000010002

[3]Estrela, M.; Semedo, G.; Roque, F.; Ferreira, P.L.; Herdeiro, M.T. Sociodemographic Determinants of Digital Health Literacy: A Systematic Review and Meta-Analysis. Int. J. Med. Inform. 2023, 177, 105124. https://www.sciencedirect.com/science/article/pii/S1386505623001429#b0015

A Belgian neuropsychiatrist, Theo Compernolle[4] introduces in his book "Ontketen je brein van je kind" a new, interesting concept that he defines in the followed way: Digital freedom as the opposite of digital addiction. By digital freedom, the neuropsychiatrist means that a child is able to disconnect from screens, physically and psychologically, for long periods at a time. The child decides when, for what, where and for how long to use them and is thus "master of their attention".

> *"My contention is that it is impossible to make full use of all those beautiful technologies if you are not digital-free. In that case, it will not be possible to get the best out of your brain as well as the synergy between the two. If you are not digital-free, chances are that your beautiful brain will become distorted into a crumbly brain." (Compernolle 2022)*

Such a chunky brain has difficulty focusing on one task for a long time, is less creative and productive and therefore less happy. To teach digital skills to a child who is not digital-free is like letting a child who cannot swim play water polo, Compernolle believes.

> *"If you use screens as a 'virtual dummy' (and thus just quickly provide a screen when a child demands attention, ed.), you are actually a kind of 'drug dealer' giving a potentially addictive item to your child" (Compernolle 2022)*

The following passage was translated and adapted from an article originally published in Dutch by Veronique De Leener, Director of maks vzw, Belgium, and ALL DIGITAL board member in February 2023, with further insights provided by Punt TIC.

Digital well-being: who's sounding the alarm?

Psychologists and IT professionals do everything they can to draw you to your screen as much as possible. They also work enormously on the teenage brain. This brings in money.

Parents complain that children and young people are glued to their smartphones. 23% of young people say they have a problematic relationship with their smartphone (UK-King's College survey, 2018). Children say parents hang on to their smartphones too much under the guise of "it's for my work".

> *The MIT Tech Review launched a contest in 2019, asking teenagers what adults are missing about technology. In the winning essay, Taylor Fang (16, Utah) explained how social media led her to discover creative writing. In addition, she wrote, "Our search for creative self isn't so different from previous generations'. To grow up with technology, as my generation has, is to constantly question the self, to split into multiplicities, to try to contain our own contradictions."*[5]

Mini moment of happiness

When your son or daughter publishes on Tik-tok, Instagram or Discord, they go looking for dopamine spikes, little blissful mini-moments: a like from a stranger, a new follower. This is what makes it interesting: step by step, you become 'someone'. If you intervene at that very moment with a ban, you break that moment and that brings disappointment or anger. So never just intervene, sit next to your adolescent or child, and ask what he is doing. While they are talking to you, the dopamine spike drops, and they will not get angry.

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[4]Compernolle, T. (2022). Ontketen het brein van je kind. Lannoo Meulenhoff - Belgium.
[5]Lessons From Teen Digital Life In Times Of Lockdown. (2020). Forbes. https://www.forbes.com/sites/esade/2020/04/10/lessons-from-teen-digital-life-in-times-of-lockdown/

Mini or maxi-dopamine?

Moments of dopamine spikes are small sparks of happiness but do not outweigh a long-lasting sense of happiness. Together with your child, try to see what alternatives you can find to create long-lasting moments of happiness. A family-friends karaoke night, a horror storytelling session around a firepit in the garden, a board game. Arrange appointments for these activities and your children will choose these long-lasting moments of happiness instead.

Invest in a watch and an alarm clock

Make sure your child doesn't need the smartphone to wake up or know what time it is. Put the smartphones in a box at a certain hour and don't open the box again until the next day.

Which digital parent do you want to be?

Agree together and make decisions together. Think about screen time. Calculate together with your child how much time they have left in addition to all other priority activities: sleeping (8h), school and homework, eating, time with friends, sports. The time left over could possibly be screen time. Is the screen time much more? Then there is a problem with the other blocks, and they get too little, do not do homework or there is no contact with friends. Educating towards digital autonomy is learning to decide for oneself whether the digital device adds value at that moment. That is a learning aban without discussion, your child's mind will stick with the device even if it is put away.

> *According to the latest report from the EU Kids Online network, headed by Sonia Livingstone, almost 70% of European children between the ages of 9 and 17 help their parents when they feel lost online. This means parents feel the urgency of developing digital parenting strategies amid their own efforts to understand the complexity of the online world. This is another side effect of disruption, resulting in frustrated and overwhelmed families. Teaching your kid how to cross the street is easy: you can explain how to do it and usually lead by example. In the midst of the digital revolution, experiencing first and teaching later is no longer the norm. But we can still lead by example and cooperate with our kids to discover together. They will learn what to look for and how to communicate with others if they can observe us.*

Slave to your screen or tamer of your device

Go for challenges and play along with your children. What creative product can your child, your family, you and your child make together? Brainstorm and nurture the process. This is how you help your teen to be active on the internet. Anything is better than internet hopping because that creates addiction. Research says that only 3% of children are active and creative on the internet, yet this is how you learn the most.

Nonviolent communication also online

Bullying behavior, racist comments, ridiculing another person in public. These are daily occurrences on social media. Social media administrators have a responsibility, you cannot call for hatred, there are laws for that. Many rules are still non-existent or there is little enforcement. But it is important to observe at least one general principle: do not say or do anything on the internet that you would not do in real life. Online, you also talk

[6]Lessons From Teen Digital Life In Times Of Lockdown. (2020). Forbes. https://www.forbes.com/sites/esade/2020/04/10/lessons-from-teen-digital-life-in-times-of-lockdown/

to other people, even if you don't see them. Before you write something, think about it. Would I say the same thing face to face? Same rule for non-verbal activities: you don't go out in the middle of the street in your pants, so you don't do this on the internet either. One person clicks on you and the image goes around the world. This is a rule you should apply to yourself, and it is also useful for your children.

Being bored is a moment's rest for your brain

You're sitting in the waiting room or on the metro. You have a long car ride ahead of you. Don't give yourself or your children a screen. Let them look around, enjoy, and use their senses. What do you hear? What do you see? What do you smell? We all have memories of places where we saw or heard something special. Our brain registered a nice moment. You can recall this feeling. If you use this moment to take a picture, then you have a different kind of memory. The choice is yours. Teach your children to look, feel, listen, and tell. Without a screen. They will thank you.

Is screen time important?

Sometimes yes, sometimes no. If too much screen time causes sleep disorders and sleep deprivation, it is an issue. If screen time causes you to have fewer real live contacts, it is an issue, too. Research does tell us that it does matter to limit screen time at a young age. But they also say that banning screens can also have the opposite effect. Everything requires explanation and dialogue. After all, a child is curious and wants to see, feel, and hear as much as possible. And that certainly includes that little device with pictures, lights and sounds that mum and dad use all the time.

Some guideline figures:

Up to 2 years	no screen time or a maximum of 5 minutes /day
2-4 years	30 minutes (preferably 2 times 15 minutes)
4-8 years	1 hour (preferably 4 times 15 minutes)
8-10 years	1.30 hours
10-12 years	2 hours
+12 years	3 hours

A digital balance is more important than screen time. Let your child move, play, connect with others. And after that, have a moment of screen time. Make sure screen time is as active as possible. Play a game together. Make a movie. Everything is about balance. You can also learn a lot through that screen.

The fear of missing something?

As a teenager, you are terrified of not fitting in. If you miss an event, a joke, a news item or just a chat, this is what you are doing. Others cannot have fun if you are not there. Social media plays into this. At any moment, you can get a news item or message. So you will check your smartphone regularly. FOMO is the term used to describe this. The fear of missing out: the fear of missing something. 68% of young adults in the Netherlands say they suffer from FOMO. In psychology, FOMO is linked to the basic needs: connectedness, competence, and autonomy. Do you feel insecure or inferior? Then you will be more prone to FOMO. Do we want to do something about this? Then parents, schools and youth workers should join hands to work on these needs. Being

proud of what you can and have, developing resilience and defensibility, making autonomous choices. This means growing also in the digital world.

Choosing me-time and we-time

Parents think children are too busy with screens. But if you question the children, they say the same thing about their parents. Who is right? Probably both. Be a role model for your child. Choose digital-free moments and enjoy them. Be sure your time online is worth it.

FamilyTime, a tool?

FamilyTime, a parental control app, allows you to limit your children's screen time, know where they are and what they are doing. Some parents find this convenient. But the older the youngsters, the more they seek autonomy. It's exciting to do something your parents know nothing about. But this is between you and your child. Parenting towards digital freedom is also letting go of control at some point.

The importance of having a family plan:

Parenting strategies may encompass different approaches. According to the EU Kids Online network, the most successful parenting strategies include control, conversation and shared digital time as a way of accompaniment. The American Academy of Pediatrics has created an assistant to create the media family plan based on evidence and offering recommendations in different domains (such as "using media together", "media balance" or "Digital Privacy & safety"). The tool allows to personalise the media plan for each member of the family (or the community).

Giving a voice to children and adolescents

Taking into account the multi-party governance model of the Catalan Charter for Digital Rights and Responsibilities, which affirms that everyone should always have the possibility to participate in the decision-making that affects us, it is proposed to extend this participatory principle also to children and adolescents.

Following this principle and based on collaborative work with reference actors in this area in Catalonia, the General Directorate of Digital Society of the Government of Catalonia promoted during in the 2020-2021 academic year, the development of a pilot participation experience with children and adolescents, a first approach to digital rights and responsibilities from their perspective. At the time, there were a hundred girls, boys, boys and girls, divided into 10 groups, all located in the metropolitan area of Barcelona. The outbreak of the Covid-19 pandemic was recent and all participation was virtual. The results of that work are available at this link .

This first exercise provided learning, reflections and reasons to expand the sample in order to obtain representative results that can be extrapolated to the reality of children and adolescents in Catalonia. Thus, the pilot experience was the starting point of a new participatory process carried out during the 2021-2022 school year, the results of which are collected in the report Digital rights of children and adolescents in Catalonia (Letter of Digital Rights of Children and Adolescents).

The study collects the perceptions, experiences and opinions in relation to the digital fact of students from 18 public educational centers in all the Catalan provinces (747 children and adolescents between 7 and 17 years old), who were interviewed by the focus on their digital uses, their experiences regarding the construction of their own identity, personal relationships and the support they receive, and extracts a proposal of rights that can guide public policies and educational agents in this area.

Conclusion

Digital well-being is an important element of our interactions in an increasingly digital world. It is recognised as one of the 21 key competences of DigComp, and DigComp 2.2 gives key insights into aspects of digital well-being throughout its five dimensions. Well-being should be a consideration throughout all digital interactions, and cannot, therefore, be restricted to the aspects covered in this paper. The topics included here are intended to serve as examples to give a general idea, and spark conversation on concrete applications in individual use cases and sectors.

With regard to the impact on well-being, it is the application and use of digital technologies that defines it, and not, with very few exceptions, the digital technology itself. Digital tools are not inherently bad or good for an individual's health and well-being. The responsible selection, implementation and use of digital tools should take into account the effect this decision will have on the users' well-being and health as a primary consideration. We also want to stress the importance of moving away from the understanding of the online and offline worlds as separate entities and acknowledge their strongly intertwined and merged character.

Our analysis of digital well-being underlines the imperative for broad, inclusive and accessible digital competence development. It is only by everyone having at least basic digital competences that the health and well-being in digital settings can be adequately safeguarded and improved. Likewise, providers of digital solutions, managers and employers, educators, and policy makers should be equipped with at least intermediary proficiency in terms of digital health and well-being to take into account the associated responsibility in their activities of developing digital solutions, setting digital work procedures, teaching, and setting the appropriate policy and regulatory framework to foster well-being for all in this and future digital worlds.

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