Module 3: Support digital transformation in schools

Unit 1: Implementation of digital transformation in schools; strategies and resources

Module 3. Support digital transformation in schools

Unit 1: Implementation of digital transformation in schools; strategies and resources	Unit 2: Privacy, health and well-being in online learning
• Address the importance of adequate and reliable infrastructure to support the digital transformation in education • Describe supporting mechanisms, to assess the digital skills of educators • Identify teachers' training needs • Describe the importance of students' and parents' involvement in the digital transformation of a school • Develop good practices for promoting school actors' involvement in schools • Develop an action plan for promoting school actors' involvement to support the digital transformation in the schools	• Explain the importance of digital well-being • Describe the role of school leaders in promoting privacy, health and well-being for teachers and students • Identify methodologies, tools and practices to safeguard and support the well-being of school actors during the digital transformation strategy development and implementation

UNIT 1

Infrastructure adaptations and needs

High-Speed Connectivity to Schools

Data Privacy & Security

High-Speed Wifi Throughout Schools

High-Quality, Low-Cost Devices

Home Internet Access

Digital Citizenship & Responsible Use

Quality Digital Content & Resources

LEADERSHIP

ASSESSMENT

TEACHING

LEARNING

https://tech.ed.gov/netp/infrastructure/

No digitalization without the proper infrastructure

- *Digital school boards, fast internet and working computers/laptops* allow for an improved workflow
- *They support up-to-date software and new technological developments in future*

- *A sufficient amount of sockets in the classroom prevents students from falling behind due to an empty laptop battery*

- *An ICT team can support foreseen- and unforeseen issues*

The lack of a proper infrastructure could negate the benefits of digitalization (slow- or broken computers, slow internet connection)

Infrastructure needs and adaptations

Accessibility to school digital infrastructure - Debate

Infrastructure needs and attitudes towards the use of technology in education

Duration: 15 minutes

1. How do you pick hardware for your school?

2. How do you pick software for your school?

3. What is your current biggest challenge concerning infrastructure?

4. How does good infrastructure help your role as a leader in the school?

1. In your group, reflect on these questions.

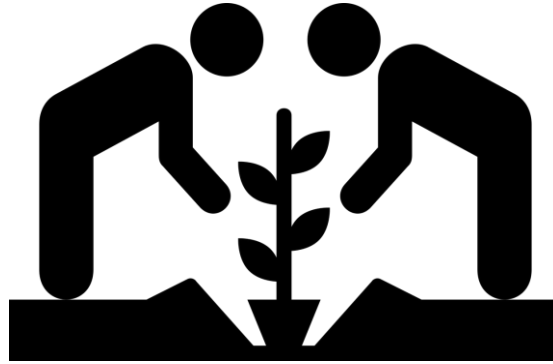2. Note your thoughts

3. Discuss in plenary.

Action plan for infrastructure and equipment

| Goal/ Objective	Action	Responsible staff	Time frame	Resources	KPIs/Validation
Review the available equipment	a) Establish a team of 5 to 7 people (2 administrative staff, 2 teaching staff, 1 parent, 2 ICT or DT experts) b) The team to make a list of all equipment available and needs (an example of what the list can include is provided in section 7.1.3.) c) The team to discuss needs identified with the school leader and other teaching staff – add more needs related to the training on the use of equipment or available space/ infrastructure to host the equipment/ technical support.			Excel School Equipment Inventory Template	Adequate equipment to support digit transformation
Create an Equipment/ Infrastructure plan	a) Clearly state all needs and prioritise b) Come up with solutions c) Make relevant contacts or collaborations to ensure funding, technical support or training. d) Establish security protocols for data protection.			Funding Data protection support experts	
Implement plan	a) Buy equipment b) Arrange available space and install it in classes. c)Ensure training for the staff (in the use of equipment) and constant technical support.			Funding IT staff Technical support staff	Equipment installed in classes Equipment used in class To be monitored and evaluated by team/ school leader.

Supporting measures

Investment, durability,
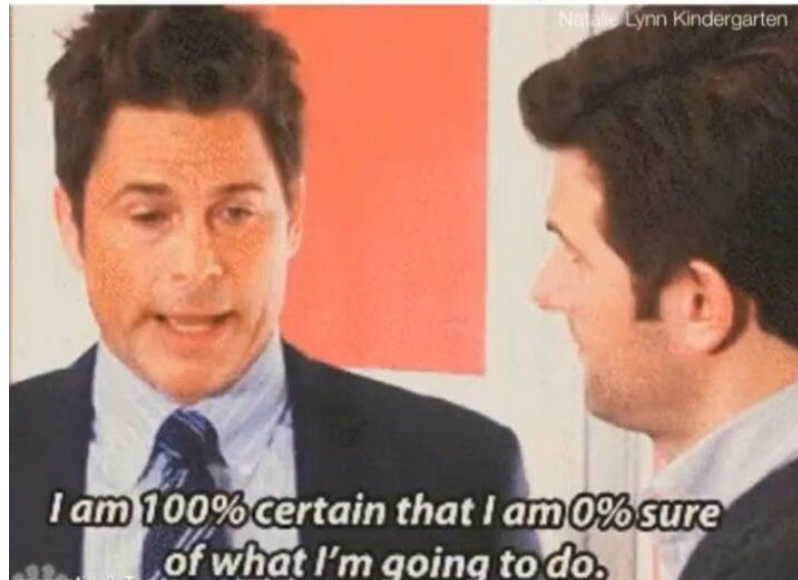future needs & ongoing funding

Policy - 'Good' material & practice
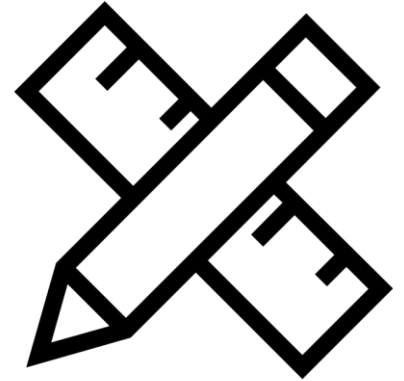
Tailored needs - of the school('s digital learning plan) & individual students

Support for teachers - What and how?

1. Communication about school vision

2. Supportive management
   Verbal stimulation
   Time (& money)
   software

3. Supportive colleagues
   Teachers help teachers
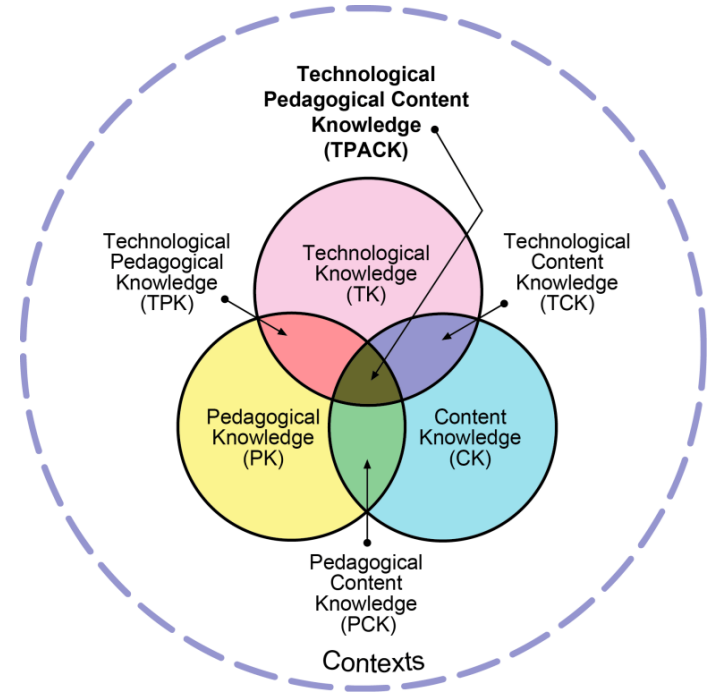
TPACK model, Reproduced by permission of the publisher, © 2012 by tpack.org

http://tpack.org

Support for teachers

- What do I communicate to teachers about the school's digitalization vision?
- What do I communicate about the role of teachers in the digitalization process?
- Do I actively ask teachers to participate in the thought process?
- Does my school make time available for teachers to <u>research</u> digital tools/learning methods?
- Does my school make time available for teachers to <u>practise</u> the use of digital tools/learning methods?

- Where can teachers go for support?

> 1. In your group, reflect on these questions.
> 2. Note your thoughts
> 3. Discuss in plenary.

Support for teachers

Teacher readiness - Technology Enhanced Teaching Self-Assessment Tool
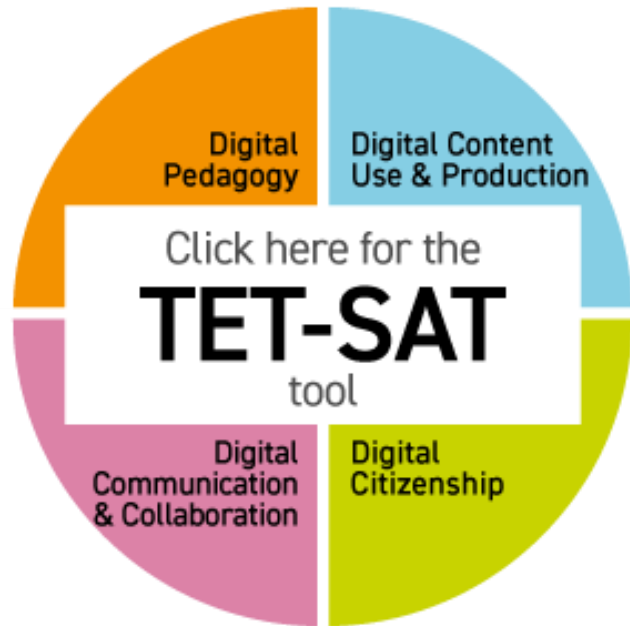
TET-SAT tool developed by Mentep http://mentep.eun.org/tet-sat

Support for teachers

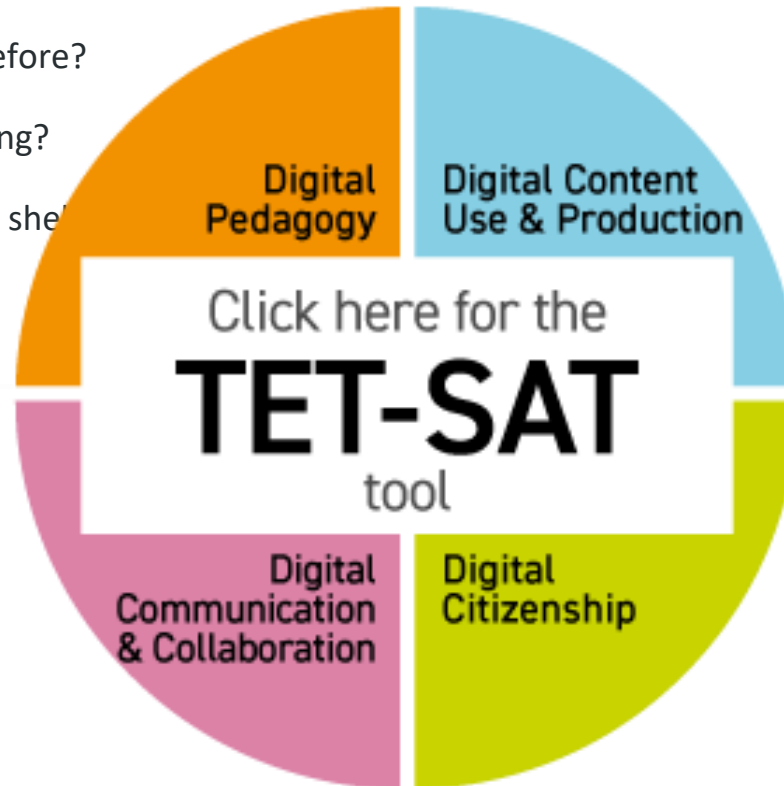*Teacher readiness - fill out and discuss!*

Are there topics you have not thought of before?

What practices are you already implementing?

      And which ones are still on the shel

Your survey

TET-SAT

▸ Introduction
▸ Guidelines

0%

--- COMPLETED ---

TET-SAT

Develop, implement, reflect and redesign ICT-supported teaching and learning strategies with ICT

I have limited or no experience of using ICT for teaching or learning purposes in the classroom.

I implement ICT as a tool to support common teaching methods and tasks, and can adapt my teaching to create new learning experiences for my students.

I use ICT to support teaching and learning. I need more competence to implement ICT to improve my teaching and my students' learning.

I develop ICT-supported teaching and learning strategies to enhance my teaching and reflect on a regular basis on the meaningful use of these strategies.

I reflect upon my ICT-based teaching through critical and systematic assessment of the teaching and learning processes and redesign my teaching strategies accordingly.

Next question

TET-SAT

Capacity to manage a digital classroom and students working with ICT

When I try to manage my classroom where students use computers or other devices, I sometimes feel that it is difficult to maintain control.	I have little or no experience in managing a classroom where students use computers or other devices. I feel most confident using traditional teaching tools (not based on ICT).	I effectively manage a classroom where students use different devices and can respond to individual students' needs (technical and learning	I can manage a classroom where students use computers or other devices mainly in terms of organising the process, less so in efficiently supporting students' learning.	I can manage students using different devices in the classroom and support them in their learning.

◄ **Previous question**   **Next question** ►

TET-SAT

Teachers' knowledge, understanding and application of copyright and licences

I apply copyrights and licences properly to information and educational content I create/find/share and I teach my students about copyrights and licences (open source and open licences such as Creative Commons.

I know that some of the content I find online may be covered by copyright, but do not know how to determine which material I can reuse and which not.

I have basic knowledge of the differences between copyright and Creative Commons, but I am not sure how to apply them in practice. I do not focus on this with my students.

I ensure that my students apply copyrights and licences (open source and open licences such as Creative Commons) properly (in accordance with their age) as I do when I create/find/share information and educational content. I disseminate and promote open licensing among the

I strive to apply copyrights and licences properly to information and educational content I create/find/share, but sometimes I am uncertain how to best comply with them in practice.

◄ **Previous question**

Next question ►

TET-SAT

Digital pedagogy | Digital content use and production | **Digital Communication and Collaboration** | Digital citizenship

Question 18 | Question 19 | Question 20 | Question 21 | Question 22 | Question 23

Considering different communication formats and channels depending on the target audience (students; teachers, parents), settings (inside and outside the classroom) and learning goals

I choose different communication formats and channels including social media depending on the target audience (teachers, students, parents).	I use some digital communication channels (i.e. e-mail, social networks, learning management systems) to communicate with teachers and/or students.	I hardly ever use digital communication channels and social networks to communicate with students, parents or teachers.	I choose communication formats and channels and social media according to audience, settings and learning goals, and know how to create communication environments for a pedagogical activity.	I analyse and evaluate the audience, settings and learning goals, and choose communication tools accordingly, or create and moderate my own communication environment.

◀ **Previous question**　　　　　　　　　　　　　　　　　　　　**Next question** ▶

Last save | You have completed 0 / 30 Questions
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TET-SAT

Taking into account the impact of ICT on the environment

I am aware how technology uses scarce resources and energy, and can be difficult to dispose of, but it does not affect my behaviour.	I help students adopt more environmentally-friendly practices with ICT.	I take basic measures to save energy when using ICT for my teaching and students' learning.	I know little about how technology affects the environment.	I am well informed about the impact of technologies on everyday life, online consumption and the environment and lead the way in adopting good practices.

◄ **Previous question**

TET-SAT

Taking into account the impact of ICT on the environment

I am aware how technology uses scarce resources and energy, and can be difficult to dispose of, but it does not affect my behaviour.	I help students adopt more environmentally-friendly practices with ICT.	I take basic measures to save energy when using ICT for my teaching and students' learning.	I know little about how technology affects the environment.	I am well informed about the impact of technologies on everyday life, online consumption and the environment and lead the way in adopting good practices.

◄ **Previous question**

Digital content use and production (Score: 40%)

* 'All': all teachers who filled in TET-SAT

Digital Communication and Collaboration (Score: 75%)

* 'All': all teachers who filled in TET-SAT

Legend: Me, My country (#0)

3.1. Communicating using technologies and social media
3.2. Sharing information and resources with students
3.3. Online participation
3.4. Collaboration through ICT
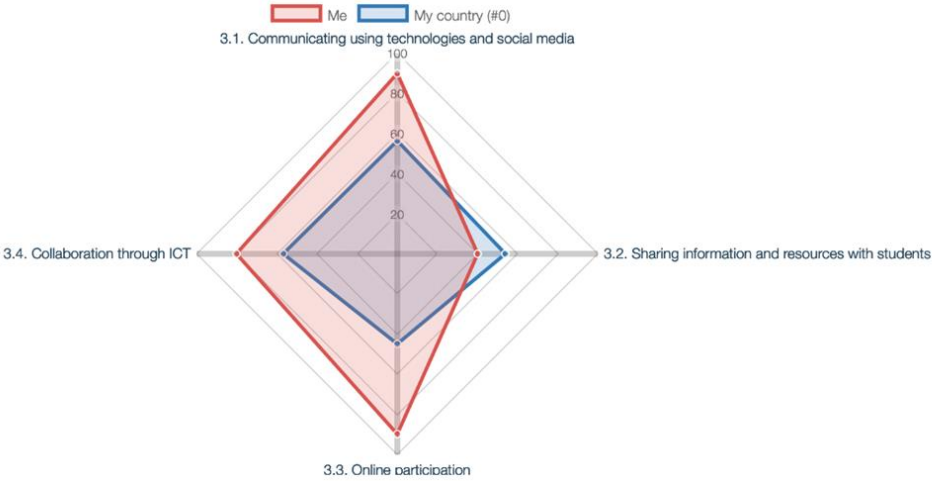
Action plan for supporting teachers

Goal/ Objective	Action	Responsible staff	Time frame	Resources	KPI's/Validation
Identify teachers' training needs	a) The coordination team to investigate teachers' training needs – making sure to take into account specific needs of all subjects taught in the school curriculum. b) The coordination team to prioritize needs in each field. c) The coordination team to identify existing or propose new training opportunities			*Survey, TET-SAT*	*Addressing teachers' needs in relation to improving digital skills*

Supporting measures

- Collaboration with teacher training providers (needs, TPACK, Technical & pedagogical dimensions

- Both pre-service and in- service compulsory training of all staff.

- Time to explore the ICT tools and try them in class.

- The recognition by Member States of the existing tools & evaluation and reward.

- The assignment of a digital coordinator per school is essential.

- Collaboration among teachers is crucial.

- Collaboration with external stakeholders (other schools, universities, research centres /teams, policymakers, businesses, NGOs, parents', and teachers' unions

Students and parents' participation

Duration: 5 minutes

Address ways in which students and parents are- and can be involved in

(the implementation of)

your school's digital transformation strategy

1. In your group, reflect on the topic.

2. Note your thoughts on paper.

3. Discuss in plenary.

Support for students and parents

Definition of student and parental involvement and participation

LADDER OF PARENT PARTICIPATION

1. MANIPULATION
Parents are interviewed about the risks of the internet and how the school should protect their children

3. TOKENISM
Showcasing the parent who has donated to the school foundation most on the website

5. CONSULTED AND INFORMED
Parents are offered a variety of potential online tools to be used for parent-teacher communication, they give their opinion and the teachers decide

7. PARENT INITIATED AND DIRECTED
Arranging a communication platform for parents (WhatsApp group, blog, Facebook page, etc.)

Non-participation

Degree of participation

1 2 3 4 5 6 7 8

A parent is invited to be a member of an internet policy board of the school with teacher members

2. DECORATION

Parents are asked to buy a certain software for their children. The school asks them in a meeting where they explain why they chose this specific one, and they can ask questions

4. ASSIGNED BUT INFORMED

Teachers offer a number of potential digital tools to be used by their children for learning, and after a discussion the parents and teachers make joint decision on the ones to buy and use

6. TEACHER INITIATED SHARED DECISION WITH PARENTS

The school's parent organisation see the need to replace the platform used for communicating between families, students and the school. They ask for an appointment with the teachers and the school head, present their preferred options, and they make a decision together.

8. PARENT INTIATED SHARED DECISION WITH TEACHERS

After Arnstein 1969

Support for students and parents

Definition of student involvement and participation

Hart´s (1992) Ladder of Participation

Students would like to have new approach to the project week of the school, building a lasting and widely disseminated digital presence. They meet the teachers and the school leader, present their plans, and they make a decision together.

8. Child-initiated, shared decisions with adults

Having a student blog or other digital platform for communication among students.

7. Child-initiated and directed

The teacher offers a list of topics students have to create a simple blog about, and each child can decide what they choose.

6. Adult-initiated, shared decisions with children

Students can give their opinion on a number of classroom IT tools, and teachers decide on which ones will be used at the end.

5. Consulted and informed

The school has a project week. All classes are asked to create a project using online research tools and also creating a digital presentation (film, website or similar). At the beginning of the week they receive all necessary information and they also have the opportunity to ask questions of clarification.

4. Assigned but informed

Degrees of participation

3. Tokenism

Showcasing the winners of national student contests on the website.

Non-participation

2. Decoration

A child is invited to be a member of an internet policy board of the school with 5 teacher members.

1. Manipulation

Children are asked to talk about friends who became addicted to video games.

Support for students and parents

Duration: 10 minutes

How could you improve your current opportunities?
-       inclusion (ethnicity, language, religion, age)
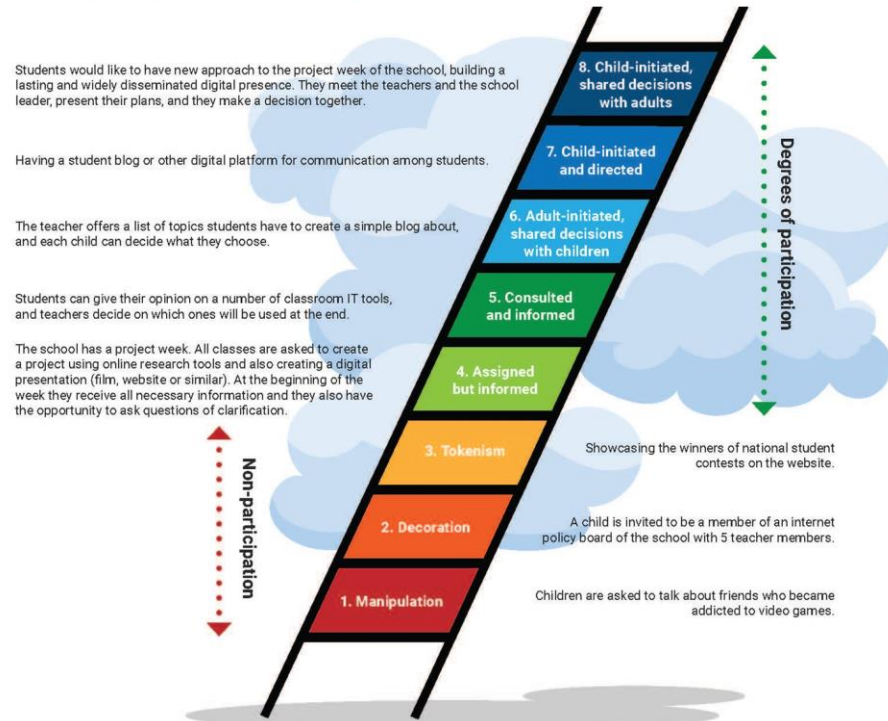-   true partnership
-       open mind

1. In your group, reflect on these questions.

2. Note your thoughts down on a notebook.

3. Discuss in plenary.

Support for students and parents

Good practices

- Asset-based Thinking!

- What can parents and students bring to the table?
  - High level of digital skills in certain areas

- Students - extensive knowledge on trends, peer advocacy

UNIT 2

Main Challenges – The Notion of Digital Well-being and associated concepts

Have you ever thought about how the internet and technology make you feel?

Digital well-being is about how the internet and technology can make us feel.

Being online impacts on our emotions as well as our mental and physical health and well-being.
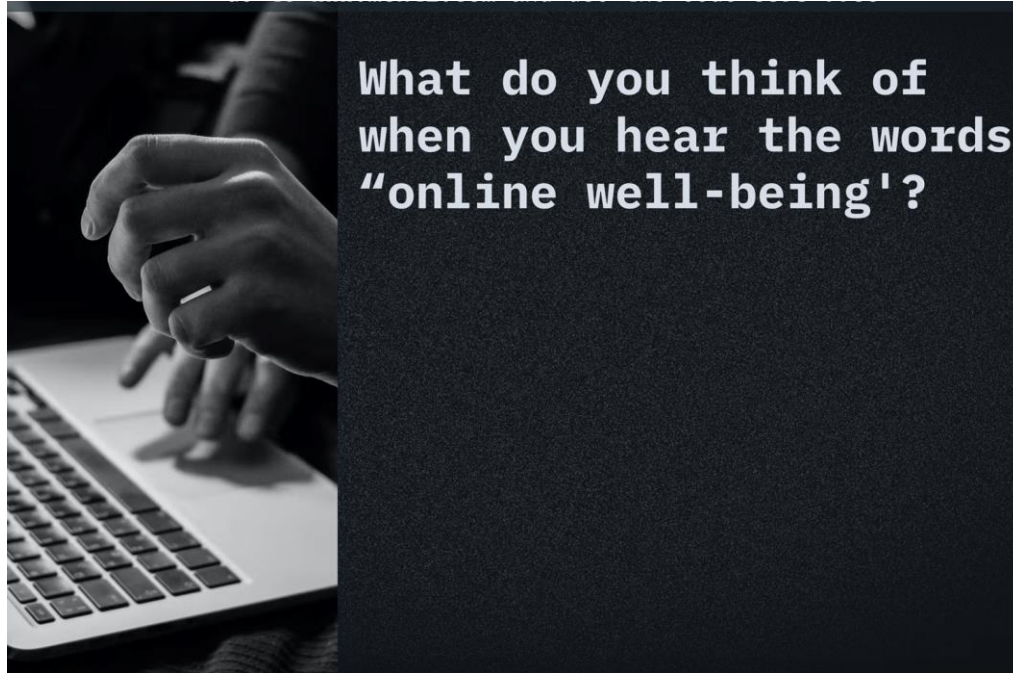
The **digital citizenship education framework** developed by the Council of Europe considers Digital Well-being as one of the main pillars of digital citizenship education.

Source: https://www.coe.int/en/web/digital-citizenship-education/-/2022-edition-of-the-digital-citizenship-education-handbook
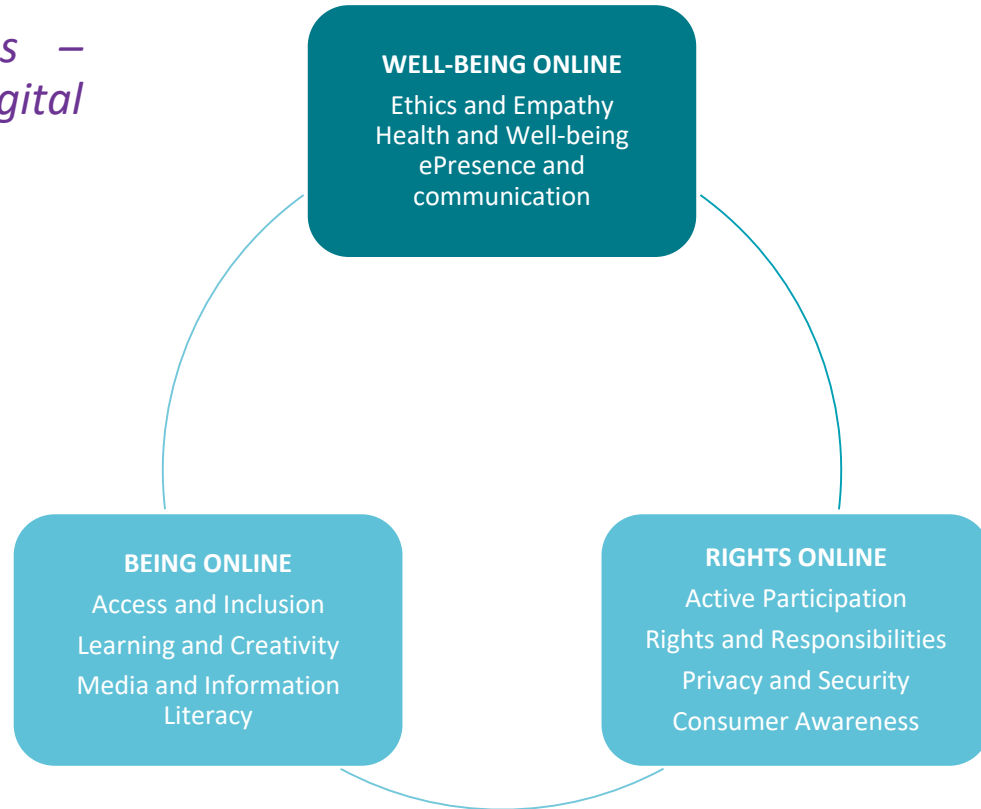
Main Challenges – The Notion of Digital Well-being and associated concepts
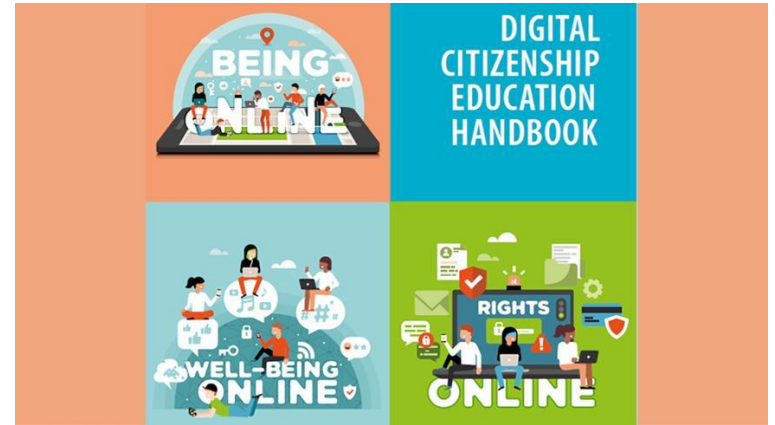
Introduction

Main Challenges – The Notion of Digital Well-being

WELL-BEING ONLINE
Ethics and Empathy
Health and Well-being
ePresence and communication

BEING ONLINE
Access and Inclusion
Learning and Creativity
Media and Information Literacy

RIGHTS ONLINE
Active Participation
Rights and Responsibilities
Privacy and Security
Consumer Awareness

Digital citizenship education framework (Adapted from Richardson & Samara, 2020)

Introduction

Definition: Ethics are the moral principles that govern people's behaviour and the way they conduct life's activities.

In digital environments accepted behaviour often deviates from what is ethical and, unethical behaviour seems to be encouraged in certain social groups.

Example: Bullying is a frequent manifestation of unethical behaviour.

Action required: School strategy must define rules to ensure a common understanding of what is accepted as morally good or bad in the school context that may clash with respective expectations for all school stakeholders.

A bullying prevention strategic action is vital.

Introduction

WELL-BEING ONLINE
Ethics and Empathy
Health and Well-being
ePresence and communication

Definition: Empathy is the capacity to understand or feel what another person is experiencing from within the other person's frame of reference.

Empathy and ethics are based on the values of human dignity and human rights; that combined with skills like listening, observation and cooperation, enable the perception of a **multi-perspective reality and engage with the diversity of ot**hers.

Action required: Schools' strategy should provide for this mutual understanding taking into consideration that in a growing percentage of schools, the framework of reference for teachers largely differs from that of the students and their families.

School strategy must find a **middle ground** with students and their families.

Introduction

WELL-BEING ONLINE
Ethics and Empathy
Health and Well-being
ePresence and communication

Definition: Health and well-being cover a wide-ranging topics and challenges - the social-emotional impact through modified human interactions, the gathering and processing of data and health-related aspects from ergonomics to pseudo-medical data found online.

Examples: lack of non-verbal cues, headaches, blurred vision, dry eye, and light sensitivity from long hours in front of a computer screen. …

Action required: School strategies should ensure that the negative impact of digital communication is counterbalanced with offline communication means.

Data and information: Rigorous data management strategy to ensure the school only handles necessary data.

Health: consider screen time, ergonomics, proper lights, and preventive measures such as regular physical and ophthalmological check-ups, ...

Introduction

Definition:

E-presence is how you maintain your presence online and it extends to your personal and interpersonal qualities that guide you in maintaining your digital reputation and digital identity. Depending on the type of communication, the e-presence can be negative or positive.

Your social and cognitive skills for crafting your digital reputation can also boost or hinder your e-presence.

Action required:

Defining the boundaries between school life and private life for all school stakeholders.

Protect individual rights and freedoms while at the same time, include a capacity-building strategy that helps build e-presence, especially of teachers, that is congruent with the core values of the school

The role of school leaders

Have you ever thought about the role of school leaders to promote digital well-being?

A high level of digital well-being is the basis for our capacity to:

- realise our full potential;

- cope with the daily stresses of our environment;

- work and communicate productively and fruitfully;

- make a meaningful contribution to our community.
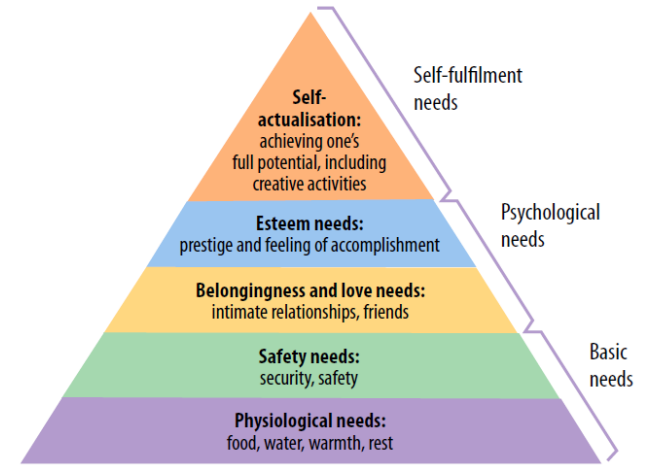
Maslow's hierarchy of needs. Source: DigiLEAD toolkit

The role of school leaders is to **provide the necessary frameworks to safeguard, scaffold and support well-being during the digital transformation strategy development.**

The level of digital well-being can be linked to Maslow's hierarchy of needs and this hierarchy can guide school leaders in developing related strategic action

Methodologies and tools

Duration: 10 minutes

In your group, please discuss and reflect on these questions.

How can digital well-being be evaluated in schools?

Which specific activities can be implemented in schools to promote digital well-being?

What are the main challenges, limitations and problems regarding the implementation of digital well-being in schools?

Methodologies and tools

The SELFIE tool does not have a specific section devoted to well-being, but schools can customise the areas and questions, so it can be used to have a full overview of the situation, forming the basis of the improvement strategies.

How to evaluate the current situation in school?	Does everybody have adequate access to all platforms and tools used in the school?
	Are there proper arrangements for being disconnected?
	Is there a feeling of overexposure to screen or does screen time seem to be adequate?
	Has anybody had experiences within the school's digital context that did not feel safe?
	Is there a trusted person they can turn to in case they feel insecure or harmed (by students, teachers or others)?
	Do they feel their life outside of school is safely protected from school life?

Methodologies and tools

School leaders also should consider the following questions:

What data is collected by the school about students and their families, and school teachers and other school professionals and for what reason?

What data of users are handled by third party providers – a governmental educational platform or a private service –, and how is the right to be forgotten ensured?

What are the potential enablers and risk factors of the physical school environment?

Are there means to learn about the home situation of students?

Qualitative data can complement this information: Organise focus groups including all stakeholders, encourage teachers to talk about well-being in their classrooms, and make sure that everyone has a judgement-free space to share their experiences.

Key aspects: Prioritize privacy, health, security and well-being

Privacy

Data Security

- Implement robust data protection measures, including secure storage, encryption, and access controls to safeguard student and staff data.

Consent and Transparency

- Obtain explicit consent for data collection and clearly communicate how data will be used, stored, and shared. Provide individuals with transparency regarding their rights and the privacy practices in place.

Compliance

- Ensure compliance with relevant privacy regulations, such as the General Data Protection Regulation (GDPR) in the European Union, and develop policies that address data breaches and incident response.

Security

Cybersecurity Awareness

- Educate students and staff about online safety, cyber threats, and best practices for protecting personal information and devices.

Secure Infrastructure

- Implement robust cybersecurity measures, including firewalls, secure networks, and antivirus software, to prevent unauthorized access and data breaches.

Incident Response

- Develop protocols to respond to cybersecurity incidents effectively, including reporting procedures, incident investigation, and recovery plans.

Key aspects: Prioritize privacy, health, security and well-being

Health and Well-being

Screen Time Management

- Encourage a healthy balance between screen time and non-screen activities. Provide guidelines for educators, students, and parents to promote breaks, physical movement, and eye care during online learning.

Digital Citizenship

- Foster responsible and ethical digital behavior, promoting respectful online interactions, digital literacy, and critical thinking skills.

Mental Health Support

- Offer resources and support for students and educators, including access to mental health professionals, counseling services, and guidance on managing stress and well-being in the digital learning environment

Digital Ethics and Equity

Digital Inclusion

- Ensure equal access to digital resources and technologies for all students, addressing the digital divide and providing necessary support to disadvantaged students.

Ethical Use of Technology

- Promote responsible and ethical use of technology, addressing issues such as plagiarism, copyright infringement, and digital rights.

Digital Footprint

- Educate students about the long-term implications of their digital footprint and the importance of maintaining a positive online presence.

Prioritize privacy, health, security and well-being

Norway's Digital Transformation Strategy:

Privacy Protection Measures

- Obtain explicit consent for data collection, storage, and processing

- Inform students and parents about their rights regarding their personal data

- Develop guidelines and regulations for schools to ensure compliance with privacy laws.

Health and Well-being Initiatives

- Promote healthy screen time

- Emphasize the need for breaks, physical activity

- Provide resources and support for mental health, including access to counselors or psychologists

- Promote digital citizenship, responsible online behavior, and digital ethics

- Educate students about the impact of digital actions, promote healthy relationships online, and foster empathy and respect in digital interactions.

Security Measures

- Implement secure systems and networks, including firewalls, strong authentication mechanisms, and encryption protocols

- Provide training and resources to educate students and staff about cybersecurity risks and best practices.

How to put all these elements together?

Devise a strategy and an action plan that includes recommended actions:

1. Implement the stock-taking exercise described above.

2. Organise surveys and focus group discussions among the school leadership, teachers, students and parents

3. Develop a code of conduct covering the most crucial elements for digital well-being including

    a. data handling and privacy rules;

    b. communication rules;

    c. a secure way of handling claims to ensure that bullying, abuse or other inappropriate action by any party can be safely reported and handled;

    d. setting up a collaborative decision-making process to regularly evaluate and update the code of conduct.

4. Develop a strategy for collaborating with software and hardware providers to ensure digital well-being.

5. Develop a capacity-building strategy to promote teachers' collaboration, critical thinking and other active citizenship skills, as well as their understanding of cultural diversity and its impact on communication and digital well-being.

Examples of Good Practices

Digital Well-being Educators

EU-funded project to increase the capacity of lecturers and teachers to integrate digital education in a way that promotes the digital well-being of students

Digital Citizenship Education Handbook by Council of Europe

This handbook is intended for teachers and parents, education decision-makers and platform providers and offers information, tools and good practice to support the development of competences to empower and protect children, enabling them to live together as equals in today's culturally diverse democratic societies, both on- and offline.

References

DigiLEAD project (2022). IO1: TOOLKIT. Ch. 12. https://digilead-project.eu/toolkit

Frau-Meigs, D., O'Neill, B., Soriani, A., & Tomé, V. (2017). *Digital citizenship education: Volume 1: Overview and new perspective*s. Council of Europe.

Lunde, I. M., & Ottesen, E. (2021). Digital technologies in policy assemblages in Ireland and Norway: A visual network analysis. *European Educational Research Journal*, *20*(2), 193-211.

Mulyono, B., Affandi, I., Suryadi, K., & Darmawan, C. (2021,). Digital Citizenship Competence: Initiating Ethical Guidelines and Responsibilities for Digital Citizens. In *ICHELSS: International Conference on Humanities, Education, Law, and Social Sciences* (Vol. 1, No. 1, pp. 165-175).

Richardson, J., Samara, V. (2020). *Digital Citizenship Education Survey 2020. Council of Europe Digital Citizenship Education research.* https://www.coe.int/en/web/education/-/digital-citizenship-education-survey-2020-provisional-report

Soares, F., & Lopes, A. (2020). *Active citizenship skills and active digital citizenship skills in teaching and learning in the digital age.* https://repositorio-aberto.up.pt/bitstream/10216/133948/2/468661.pdf

References

ESHA (n.d.). *Children's Agency in School Toolkit*. https://www.esha.org/wp-content/uploads/2022/09/childup-toolkit.pdf

DigiLEAD project (2022). IO1: TOOLKIT. Ch. 7, 10, 11. https://digilead-project.eu/toolkit

László, L. (2022). *Ensuring Children's Agency in School. Headstart.*https://www.esha.org/wp-content/uploads/2022/09/A4-ESHA-Child-agency.pdf

MENTEP. (n.d.) *Discover thtechnology-enhanced teaching self-assessment tool (TET-SAT).* http://mentep.eun.org/documents/2390578/2452293/TET-SAT+Tool_brochure.pdf/6529220c-b370-4fa2-a419-b65e83d7e3db

Positief Onderwijs Nederland (n.d.). *Kidstool*. https://www.positiefonderwijsnederland.nl/kidstool-english/

Punie, Y., editor(s), Redecker, C., (2017). *European Framework for the Digital Competence of Educators: DigCompEdu*. Publications Office of the European Union.

Wal, V. van der, Mortel, M. van de. (n.d.) Wat als… *Covid-19.* https://backend.voortgezetleren.nl/wp-content/uploads/2020/03/Handreiking-SOML-over-afstandsleren.pdf (DUTCH ONLY)