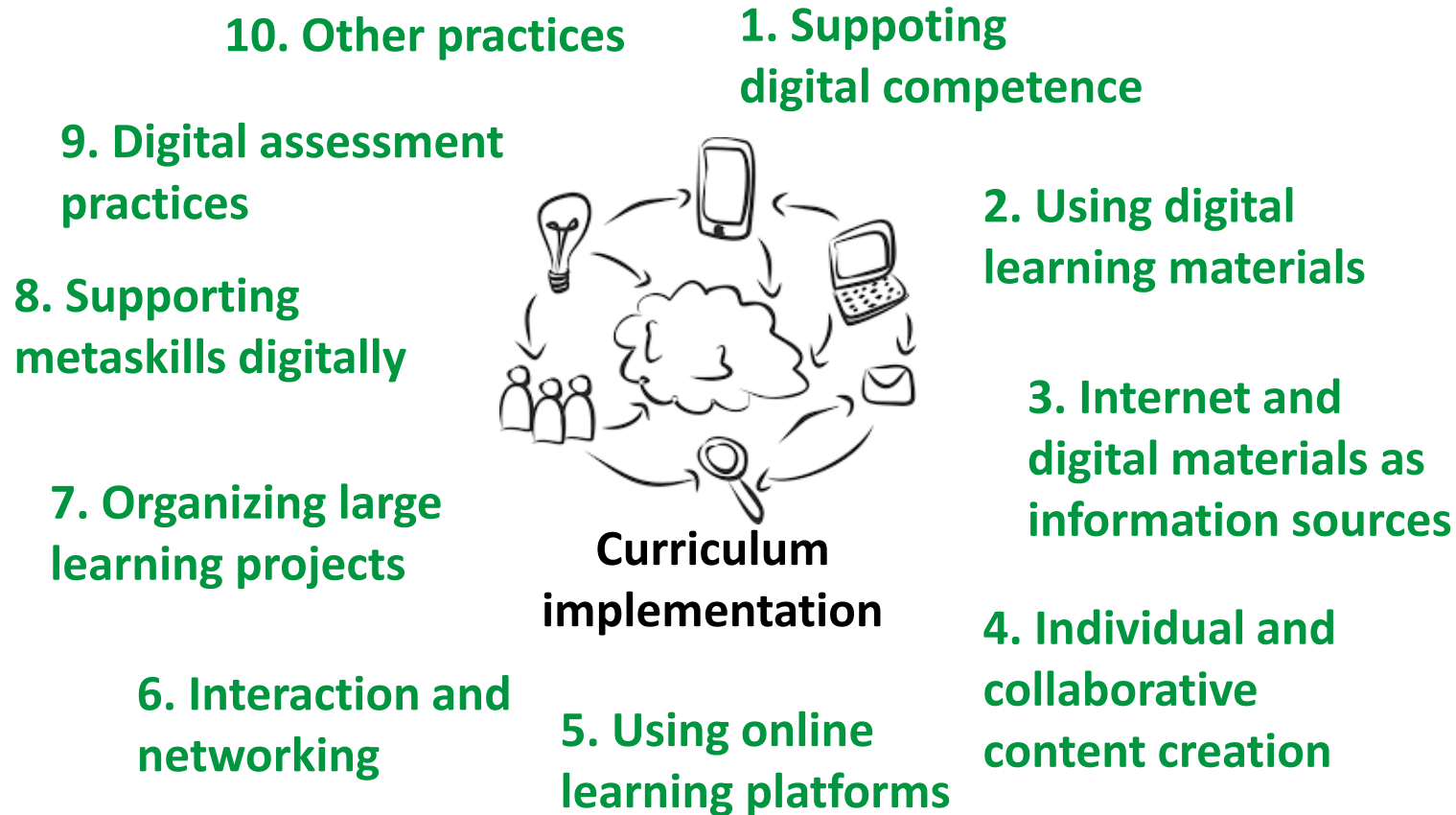# Pedagogical practices with digital technology

The webinar programme on
ICT IN PEDAGOGY

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Ways of using digital technology in teaching

10. Other practices

1. Suppoting digital competence

9. Digital assessment practices

2. Using digital learning materials

8. Supporting metaskills digitally

3. Internet and digital materials as information sources

7. Organizing large learning projects

Curriculum implementation

6. Interaction and networking

5. Using online learning platforms

4. Individual and collaborative content creation

1. Supporting digital competence

- Basic skills in using digital tools meaningfully and appropriately

- Safe and responsible behavior online

- Copyright issues

- Broader skills in using specific applications meaningfully and appropriately: *e.g., GoogleEarth in 4th grade (searching own home)*

- Programming, coding, computational thinking, robotics: *https://www.innokas.fi/en/, https://hourofcode.com/us/uk/*

- Information management, data management, data literacy

2. Using digital learning materials

- Presentation and learning materials created by the teacher

- Using ready-made learning materials / learning objects in teaching: material for different purposes (assessment, rehearsal, information source - *e.g. species learning environment Pinkka* - vocabulary, guidebook, explorations and games, open activity, tool)

- E-books as teaching and study material

- Using digital learning materials in teaching by combining them into meaningful pedagogical entities

3. Internet and digital materials as information sources

- Authentic information sources from the web as teaching and study material collected by the teacher

- Students collecting and sharing links themselves

- Internet as an information source for students' information search (different types of sources, e.g. videos)

- Supporting the development of online inquiry skills (information search, critical evaluation of sources, making the synthesis): *Online inquiry tool*

4. Individual and collaborative content creation

- Basic domain-specific skills for digital content creation: *e.g. using spreadsheet in mathematics*

- Basic academic skills: writing pragmatic and scientific texts, marking references etc.

- Tools and skills for making digital presentations

- Creative production (music, visual arts, voice, videos, etc.)

- Tools and practices for collaborative brainstorming and co-creation: *e.g. Padlet*

- Maker culture (combining handicraft, technical development and creativity): *Interview of Kaiju Kangas, Assistant Professor of Technology in Education*

- Publishing online (producer vs. consumer role): blogs, media sharing like YouTube
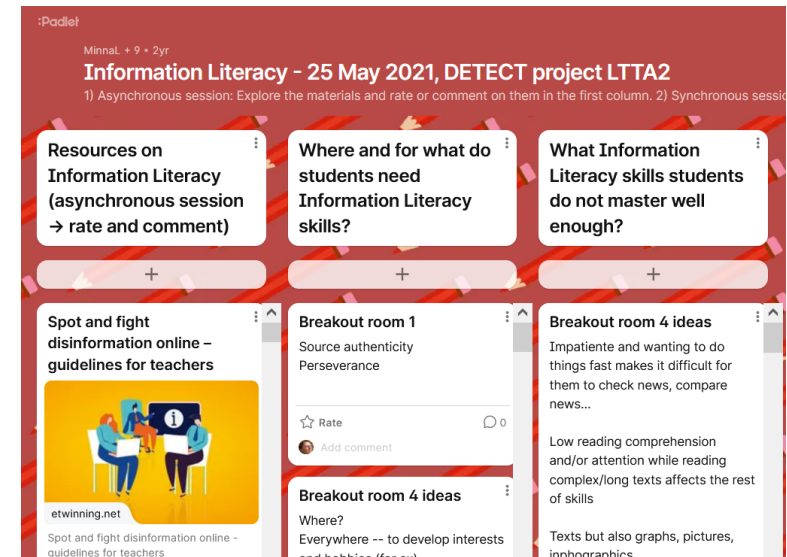
5. Using online learning platforms

- Online platform as a digital "home base" for organizing the working processes: *e.g. Google Classroom*

- Remote / virtual classroom teaching: *e.g. Zoom, Google Meet*

- Ready-made online courses used in contact teaching

- Remote and self-paced studying

- Recommendations about online courses: *e.g. Open University*

6. Interaction and networking

- Skills and practices in using interaction and communication tools with students: *e.g. email, WhatsApp, Zoom*

- Networking as part of teaching, participating in social medial forums and skills related to them: *eTwinning community for schools,* *https://school-education.ec.europa.eu/uk/etwinning*

- External collaboration practices - contacts outside the classroom and schools, collaboration with various external parties and experts: *e.g. a course about volunteering in upper secondary school where students visited various voluntary service organizations*

7. Organizing large learning projects

- Open and authentic assignments like project work, inquiry learning, extensive problem-solving tasks: *Climate Change and Southern Voices learning module*

- Multidisciplinary learning entities, theme studies

- Professional and subject-specific practices and digital tools: *e.g.* *Writing a school journal like a journalist in 5th grade*

- Collaborative knowledge work practices and tools

8. Supporting metaskills digitally

- Study skills

- Self-reflection skills: planning, coordinating, reflecting

- Self-evaluation skills and practices: *e.g. https://qridi.com/*

- Collaboration skills and practices

- Supporting transversal skills embedded in all working practices

9. Digital assessment practices

- Assessment instruments developed by the teacher

- Online exams

- ePortfolios: *e.g. electronic portfolio to support learning and assessment in handicraft teaching*

- Peer and group assessment

- Learning analytics for developing learning and teaching: *e.g. Ville learning platform,* *https://en.learninganalytics.fi/*

Digital affordances

- Affordances mean the aims of the tool (application): for which practices it is designed for and what kind of activities it easily supports. The tool might have also other functionalities that it supports although it is not designed for them.

- New affordances change profoundly the previous working (teaching & learning) processes and that's way the new affordances are not adopted or they raise resistance or, on the contrary, idealistic enthusiasm.

- User's competence and aims influence in how the affordances are recognised and perceived. Digital technology as such has created new opportunities for teaching and learning contents but because they do not resemble the previous understanding about learning, affordances might be "under-used". *For example, writing with digital tools: versioning, track changes –option, collaborative writing and sharing to peers.*

- In pedagogical use, a teacher's solutions are essential for a meaningful use and learning: his/her competence and aims.

- Also students' perceptions about digital technology influence in how they take it into use for learning purposes.

- Examples of deep-level changes by digital techology are e.g., the Internet and the access to endless information vs. a few printed materials, collaborative tools vs. working alone, online teaching vs. f2f teaching

Examples of digital tools' affordances for pedagogical aims

If the aim is …	The solution can be, e.g., …
Support the feeling of a community	Tools which everyone can work with, sharing of pictures, outcomes, also playful outcomes
Brainstorm a collaborative project	Collaborative brainstorming tools, e.g., Flinga, Padlet
Teach to reflect own work (metacognition)	ePortfolios, even with a simple writing apps
Get to know students' pre knowledge	Small questionnaires in Google Forms in which students can answer when they have a possibility
To teach to comment and reflect others' outcomes	Commenting online-documents, also asynchronously