The use of digital technologies in the learning process

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Visualisation

- Dynamic graphic representations
- Virtual, augmented reality
- Simulations
- Animations
- Recordings

- Multimedia
- Dynamism
- Interactivity
- Development of spatial perceptions
- Flipped learning
- Creation

DigComp
(Problem solving, Information and data literacy, Communication and collaboration, Creation of digital content, Security)

Active methods and forms of learning

- Game-based learning
- Outdoor classes
- Experimental/practical work
- Collaborative learning
- Research-based learning

- Possibility to choose
- Time limitation
- Scales, points
- Challenges
- Collaboration
- Role playing
- Avatars
- Rewards
- Creation of didactic games

- Interactive learning paths
- Documenting
- Observing
- Photographing
- Recording

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- Recordings of experiments/processes
- experimental work (sensors, interfaces)
- Virtual laboratory
- Remote laboratory
- 3D printers

- Interactive LMS systems (virtual
- connecting information exchange, peer collaboration, reflections)
- Social media (communication)
- Conference systems
- Joint documents for co-creation, providing feedback
- Online collaborative projects

- Problem solving
- Project-based teaching/learning
- Engineering approach

Using digital resources in learning

- E-materials
- I-textbooks D-textbooks
- Internet
- Artificial intelligence
- Sociel networks

- Interactivity
- Multimedia
- Individualisation
- Personalisation
- Reading learning strategies
- Digital reading

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FORMATIVE ASSESSMENT

- LMS systems (virtual connections, exchange of materials, feedback,
- peer-to-peer collaboration, reflection, providing feedback)
- Co-creation of the learning purpose, success criteria, learning activities (billboards,
- mind mapping, joint documents)
- Provision of personalised feedbeck
- Peer-to-peer assessment
- Reflection and evaluation

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INSIGHT INTO A PROBLEM
(Tools for creating mind maps, billboards, blogs, photographs, recording, scanning)

PLANNING
(tools for editing joint documents)

IMPLEMENTATION, ENQUIRIES, IMPROVEMENTS
(data sets, collaboration tools, social networks, computer-supported laboratory, video-conference systems, online surveys, exchange and collaboration tools)

PRESENTATION
- Direct (Prezi, Powerpoint, Slideshare, etc . . .)
- Interactive checking whether a presented (solution) problem/task was understood (Google forms, Arnes planer, AKF quiz, Sokrative Quiz, Kliker, Nearpod, . . .)
- Online presentation
- Didactic (virtual and physical) games
- Products (folders, posters, videos, animations, 3D printer-generated products)