



ICT tools for educators


- Jenny Pange
- Professor, FHSS
- Dean of the School of Education
- University of Ioannina -Greece
- Email: jpange@uoi.gr



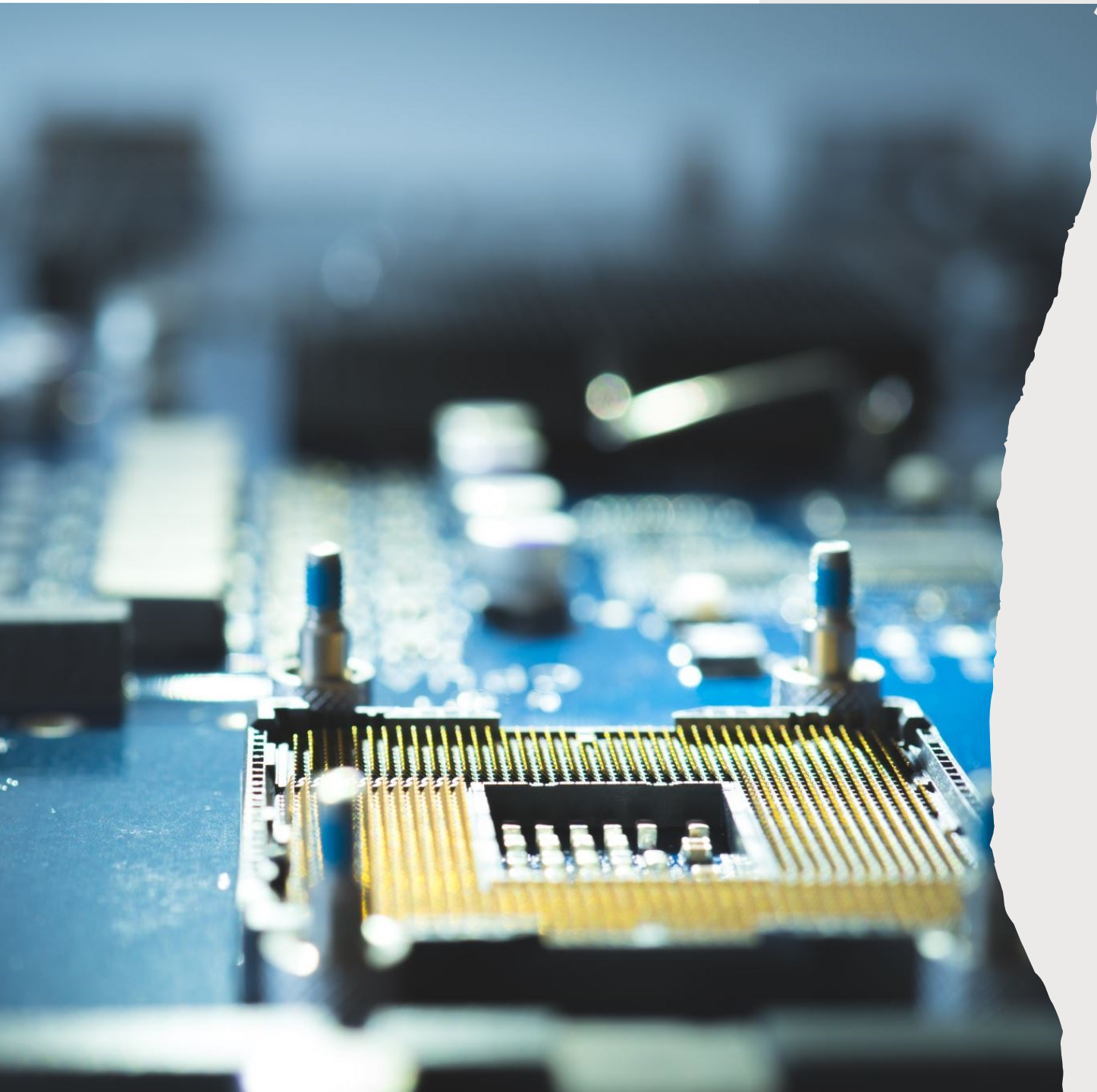
Introduction

ICT tools provide educators with resources:

- To engage students in the learning process, offer soft skills
- To improve teaching and learning outcomes

The image features a background of abstract, wavy lines in various shades of blue and white, creating a sense of motion and depth. The lines are dense and layered, with some appearing as thin, bright streaks and others as broader, softer bands. The overall effect is dynamic and modern.

Learning in the 21st
century = connection
of content to skills



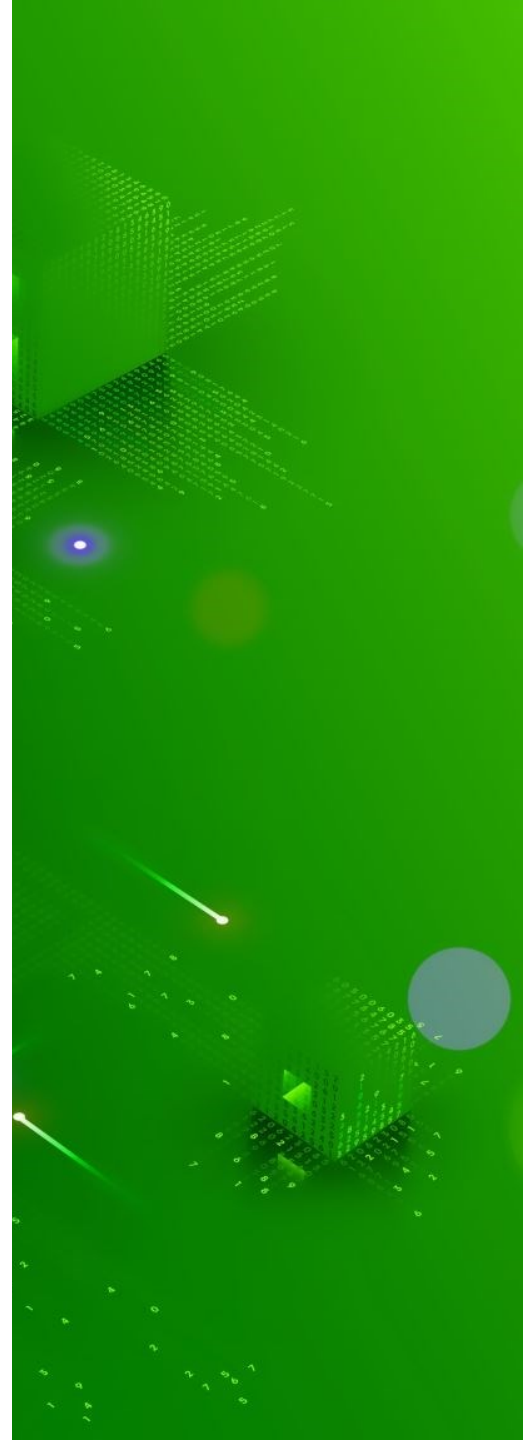
ICT tools for educators include:

- Learning management systems
- Educational software
- Presentation software
- Collaboration tools
- Online assessments
- Video tools
- Social media
- Programming tools
-



ICTs and sustainability

- Technology supports Sustainability
 - Understand the needs of the community
- Creativity in technology offers new equilibrium in organizations
- Technology reduces risk and creates new ecosystems
- Technology creates patterns of data, finds the solution, creates new applications



ICTs for creative environments

Digital Arts

Holography “is best known as a method of generating 3-dimensional images”

“ Holograms are computer generated by modelling the two wavefronts and adding them digitally.

Laser enabled the first practical optical holograms that recorded 3D objects”(Wikipedia)

Example: Holograms, holography

3D printing

Digital storytelling

Creative software –games

Collaboration

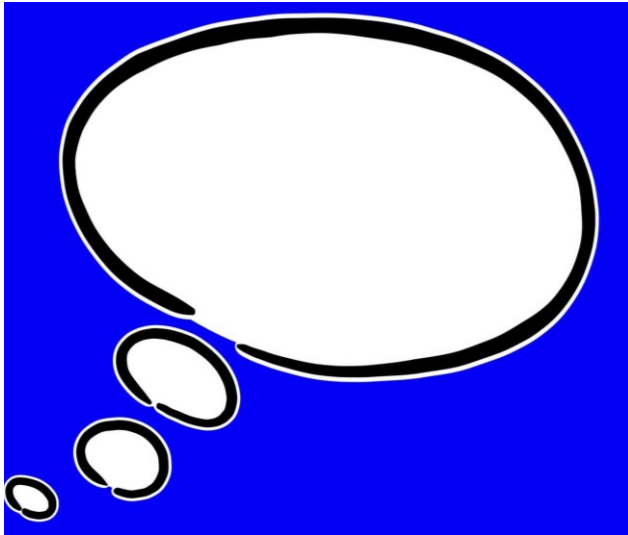
Social media

Data visualization tools

AI and Machine learning tools



_Digital storytelling environments



- The Use of Comics as a Learning Tool

Types:

- Create online stories on various subjects
- Various stories on a particular subject

Online storytelling for teaching & learning

❖ Comics

- ❖ Tools for innovative educational environments

❖ Creativity in storytelling (ICT tools)

- ❖ Mind maps
- ❖ Games

➤ Ethical issues for ICT use



Online storytelling

**engage
learners in**

- collaborative activities,
- support building new knowledge and concepts,
- support critical thinking

**comics help
teachers to**

- Have control in the learning process
- Convey messages
- Use technology for teaching
- Create presentations
- Assess students

Why Comics ?

Balance between technology and traditional teaching

- critical thinking,
- collaboration,
- motivation and
- creativity

Digital comics are :

digital tools for storytelling



which combine

graphical and

textual
elements.

Online free ICT Tools for comics

- Pixton,
 - MakeBeliefComix,
 - Storyboardthat,
 - Padlet,
 - StoryMapJS,
 - Scratch,
 - Google slides....
-
- Rubrics for evaluation: presentation, creativity, content, multimedia, technical proficiency, storytelling technique



EVALUATION: the “Dimension star Model”

the user contribution
(role),

the logical structure of
the comic,

the concreteness of the
statistical idea,

the virtuality of the
comic,

the cognitive effort,
the spatiality,
the collaboration,
the control of the comic,
the interactivity,
the engagement.

Online course development using ICTs

Needs : Identify the audience

Resources: Choose the platform, Choose the Content type

*Curriculum design: Develop
course structure, learning outcomes,*

*Content creation :
content, including text, images, videos, and interactive elements,*

*Course structure :
modules, lessons, assessments*

Consider assessments, feedback, and improvement

Use collaboration tools: group projects, webinars

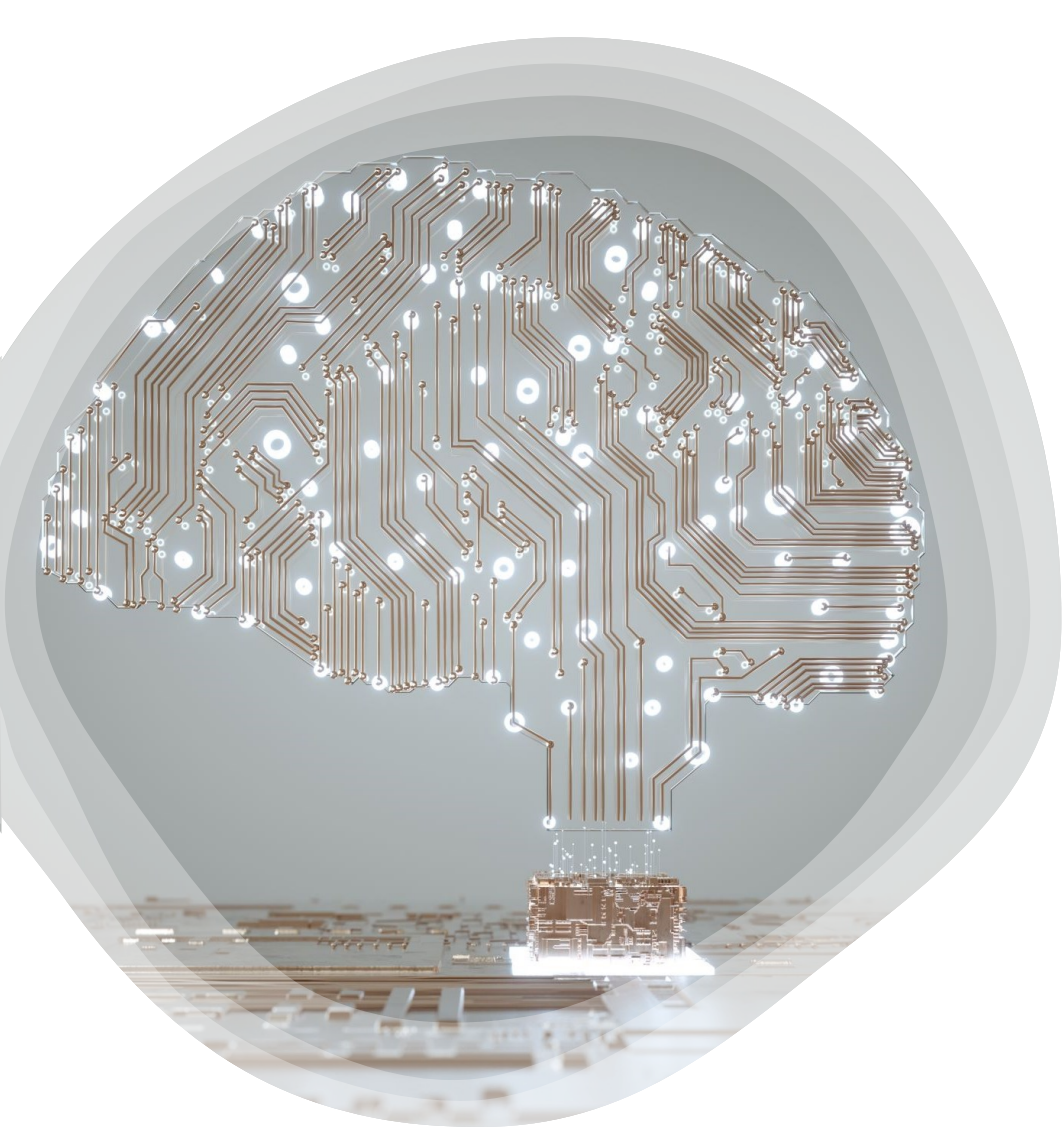
Quality assurance: multimedia, links, Visual appeal

Use analytics

Include posting, updates, maintenance, support, assistance

Apply ethics and Inclusivity

*Add quality matters
requires a creative approach to keep user interest.
Issue certificates*



Artificial intelligence

Definition “... *Artificial intelligence (AI) is intelligence demonstrated by machines, as opposed to the natural intelligence displayed by animals including humans.*

AI research has been defined as the field of study of intelligent agents, which refers to any system that perceives its environment and takes actions that maximize its chance of achieving its goals....

This definition has since been rejected by major AI researchers who

now describe AI in terms of rationality and acting rationally, which does not limit how intelligence can be articulated.” (Wikipedia)

- Example : chatgpt

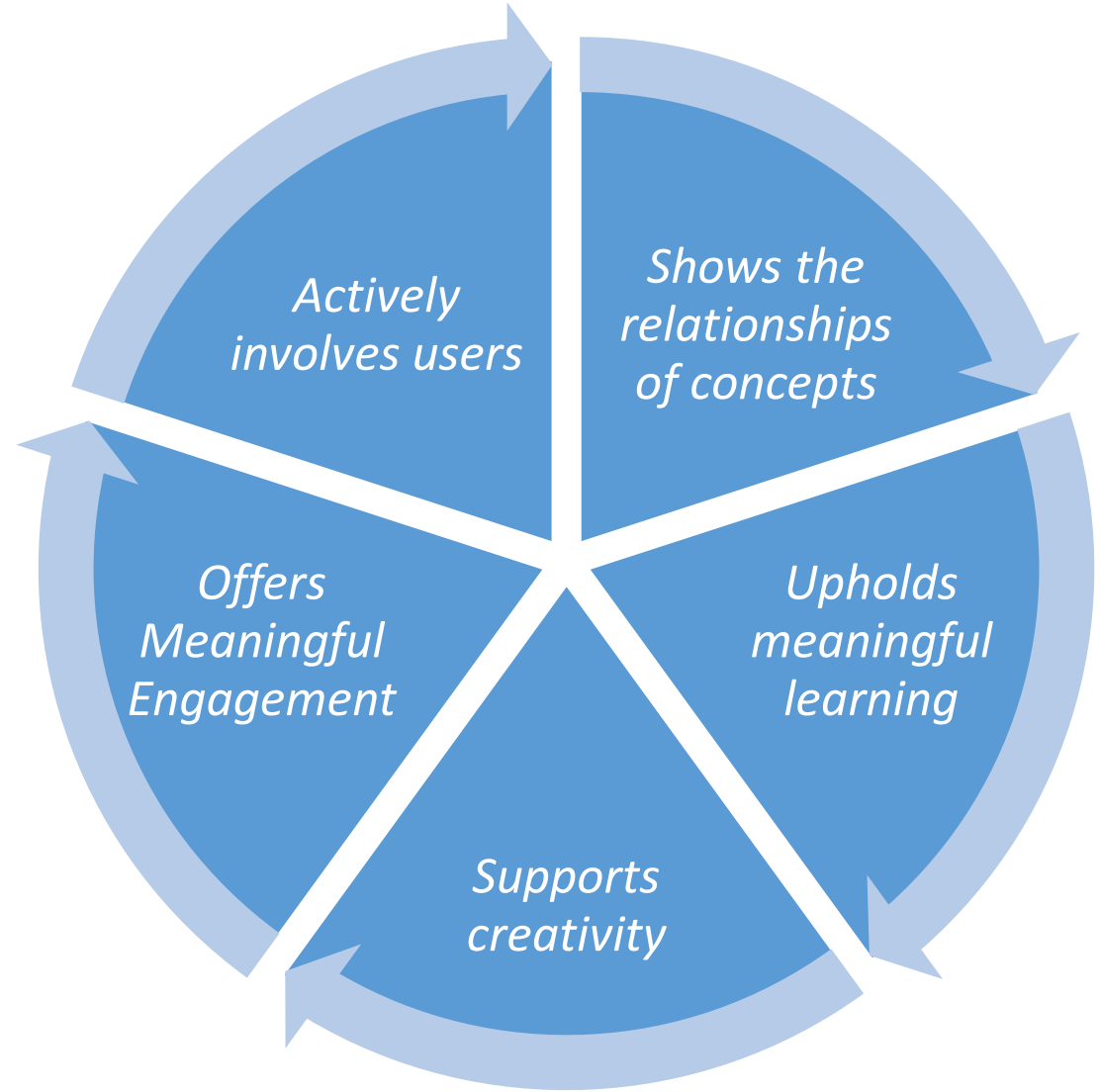


Brainstorming -ICT tools to upgrade creativity

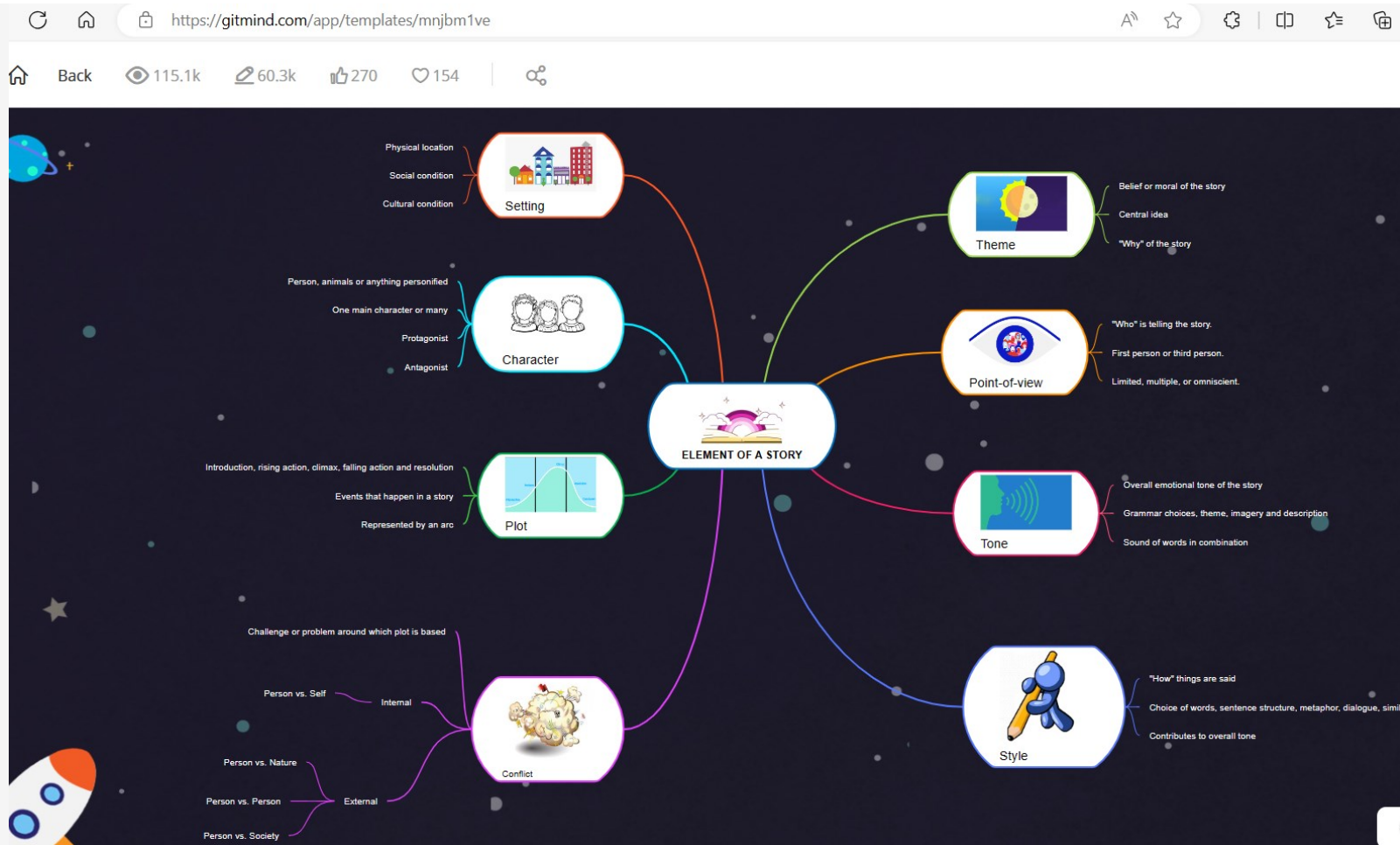
- Information is presented and analysed using brainstorming tools
- Brainstorming is presented digitally
- Digital mapping is organizing concepts and presents ideas visually
- Software is used to present all underlying connections in thoughts and ideas
- Many brainstorming apps appear online. Some are paid others not

- Examples: GitMind, Padlet, Bubll.us
- Software GitMind : <https://gitmind.com/> free software

Mind mapping



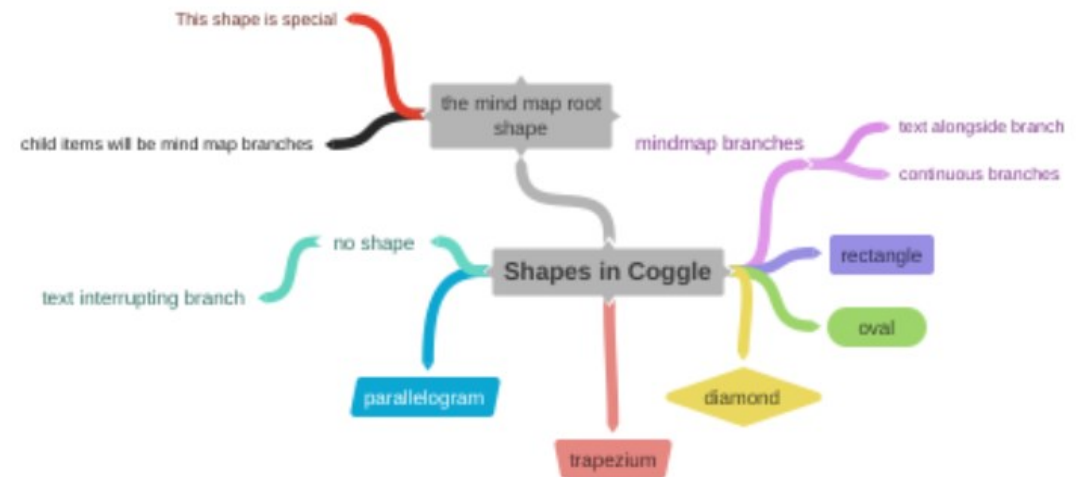
Software GitMind : <https://gitmind.com/> free software



Brainstorming tools

- Brainstorming is an attitude which generates more ideas
 - Review the ideas and collect the most suitable
- Examples : google docs, Mind map, Coggle

- Coggle: <https://coggle.it/>



Online Games for Learning

- “*game theory is the formal study of*
- *conflict and cooperation.*

.....

- *The concepts of game theory provide a language to*
 - *formulate,*
 - *structure,*
 - *analyze, and*
 - *understand strategic scenarios.”*

Source: Turocy T., Bernhard von Stengel, at <http://www.cdam.lse.ac.uk/Reports/Files/cdam-2001-09.pdf>



Ethics and ICTs

- Ethical principles are considered either in creating stories or other ICT use:
 - gender,
 - environmental sustainability,
 - equality
- Ethical issues of the activities of a digital environment, ethics in collaboration
- Ethical issues for digital content (ie pictures document, personal data) etc

Conclusions

- Educators play the most important role in the creation of digital culture in Universities
- Data privacy and security issues must be included
- Traditional teaching can include technology
- Technological proficiency of future teachers
- Educators can share best practices and collaborate
- Life-long learning development