



How can AI support growth in education?

AI and assessment

Objectives of this session

- We reflect on AI and the usage of AI in an educational context.
- Get a view on criteria to implement digital tools in a durable way.
- We explore educational possibilities AI can offer us in the scope of (formative) assessment and citizenship education.

Structure of the session

1. What is AI?
2. Discussion: first thoughts about AI
3. AI and new educational theories
4. How can AI support formative assessment
5. AI in practice: examples + exercise
6. Remarks

1. What is AI?

- **Text calculator** – Natural Language Processing
- Trained by huge **datasets**
- Unused or unknown **potential**
- Works through **prompts** (instructions)
- **No replacement** for humans in education
- Not only text processing, all sorts of data

- Examples: chatGPT, Llama2(Meta), virtual assistants like SIRI, connectedpapers, data analytics, ...

 Meta AI



2. AI: an educational bliss or problem?

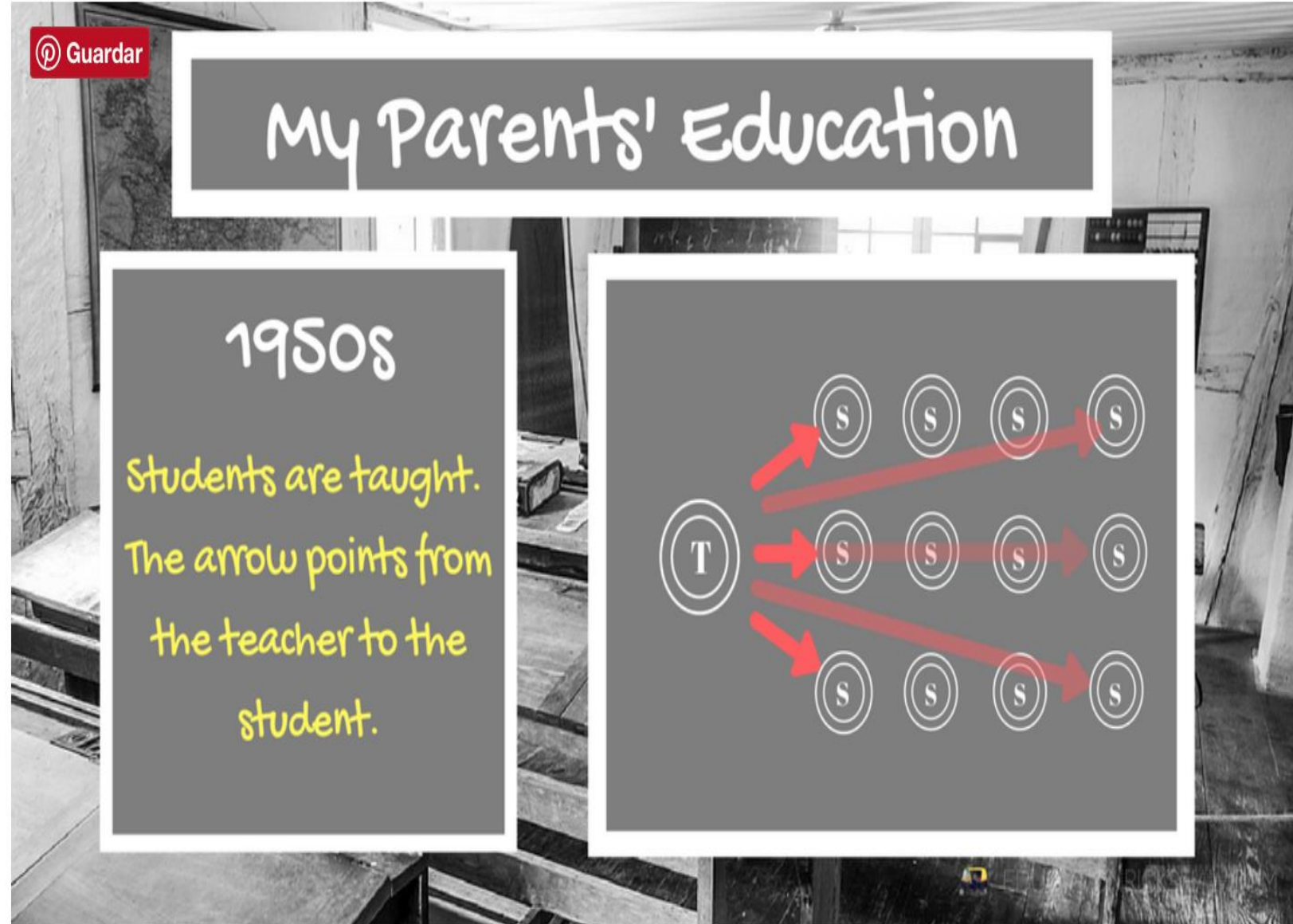
- What is your experience as a teacher or educational researcher?



"Technology is no longer a mere instrument, but it actively gives form to who we are and how we perceive reality."

Peter-Paul Verbeek

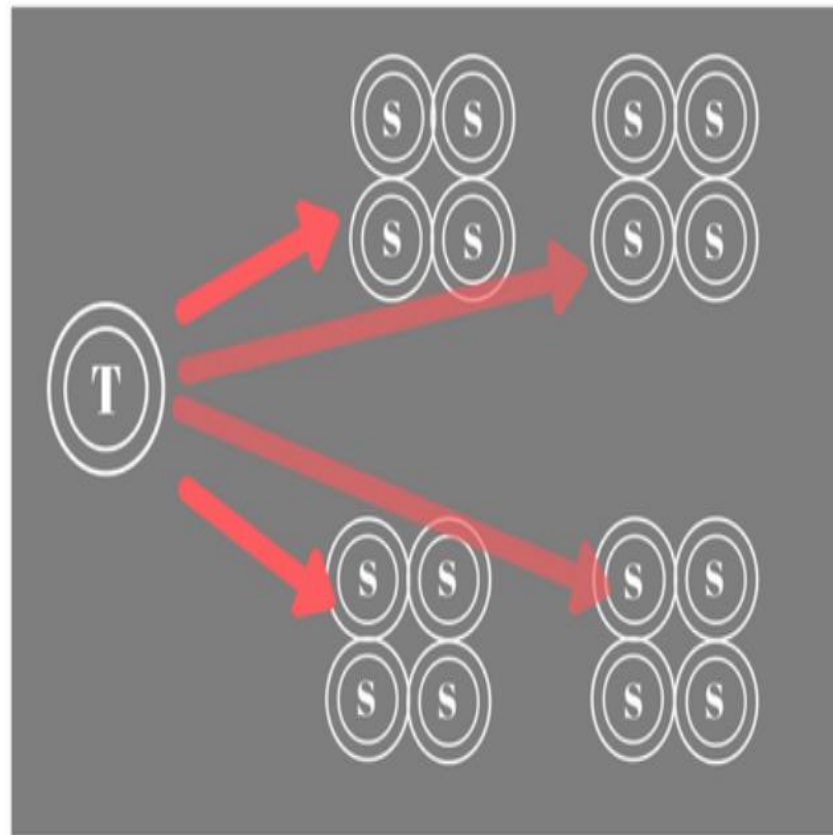
3. AI and innovative educational theories



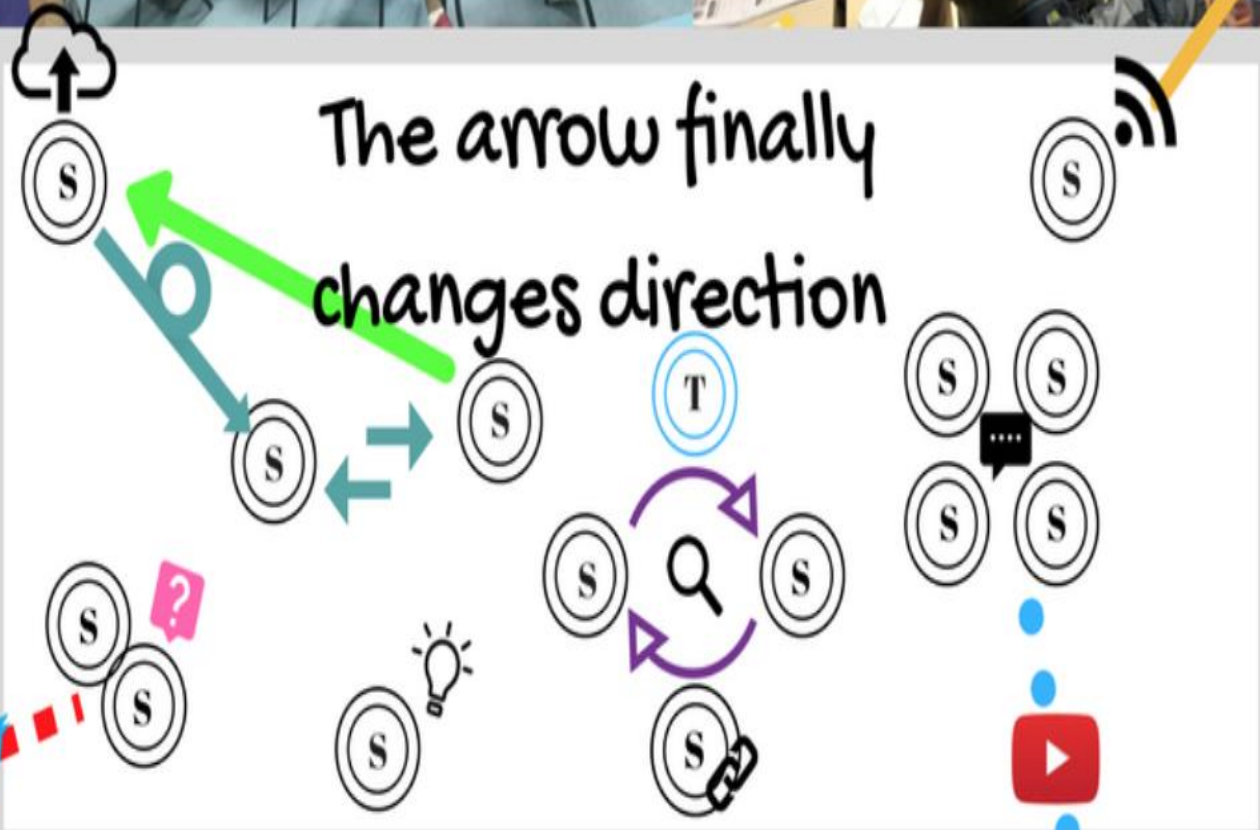
My Education

1990s

They rearranged
the desks, but the
arrow **STILL** points
from the teacher to
the student.



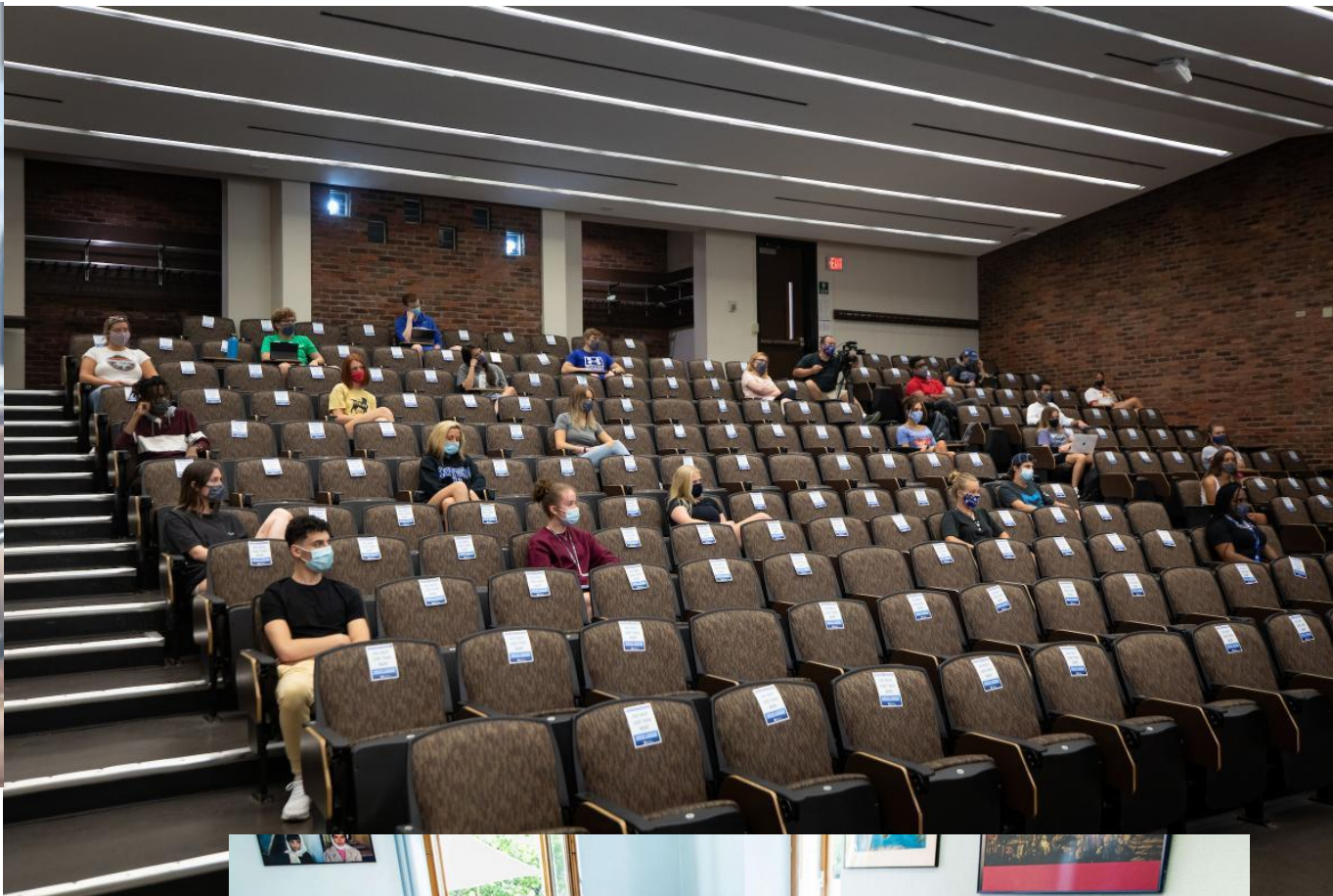
Education in the 21st Century





New Scenarios!?







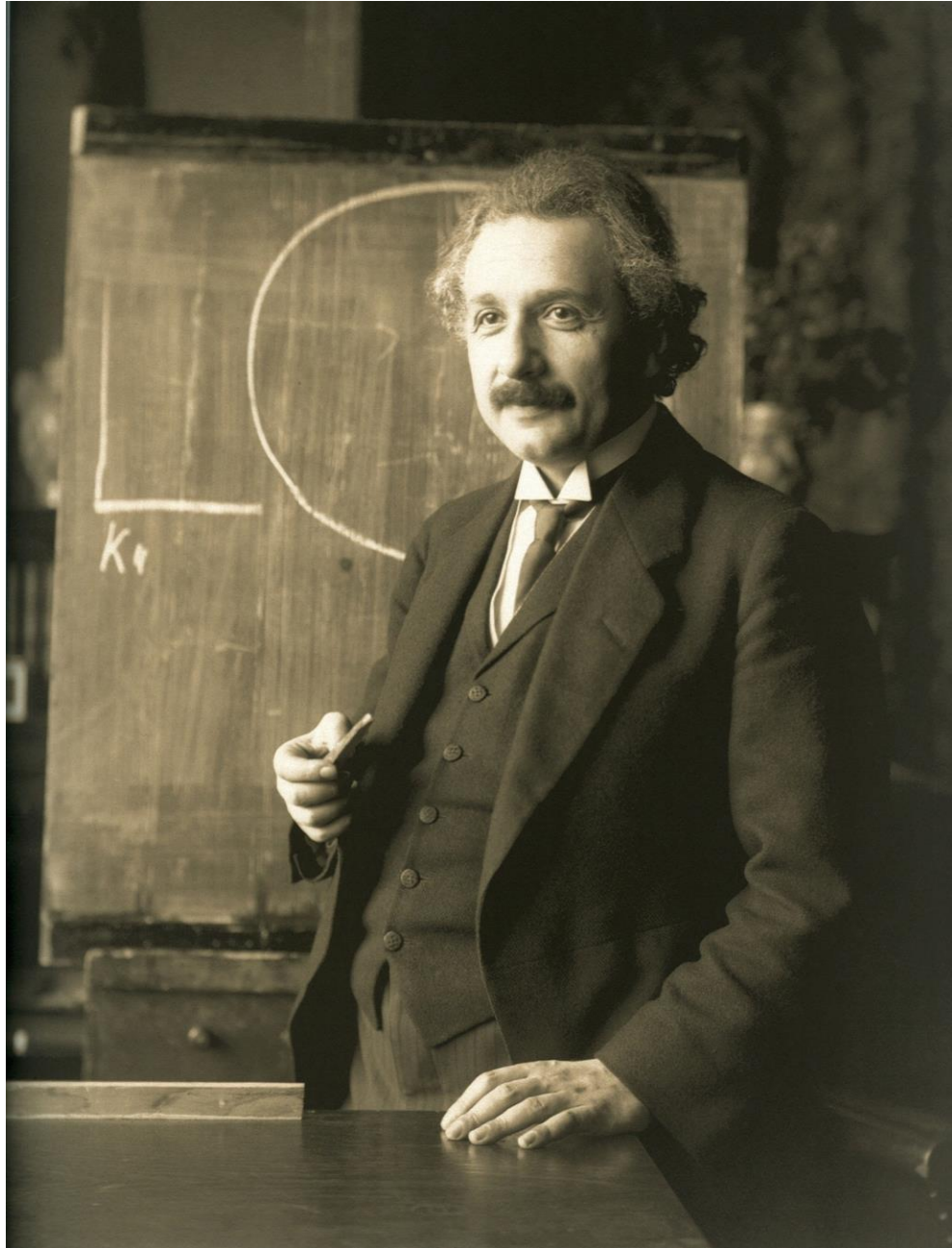


Change?



“Any teacher who can be replaced by a machine should be”

Arthur C. Clarke



“I never teach my pupils, I only attempt to provide the conditions in which they can learn.”

Albert Einstein

Learning 2.0

Pedagogy 2.0

~~Content is King~~

Content is a tyrant!
Context is King!



Steve Wheeler

Standardised → Personalised

Design

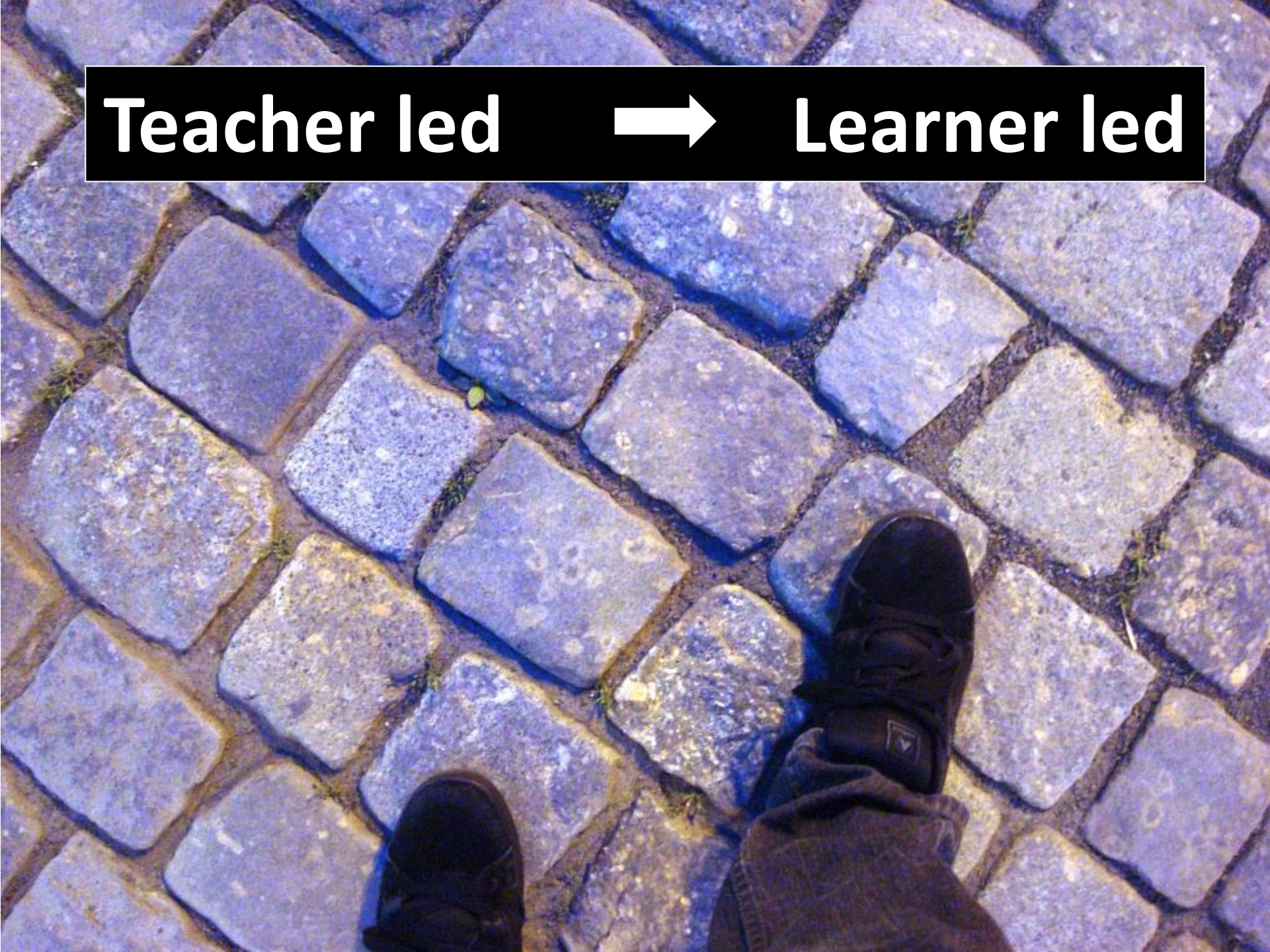
User Experience



Teacher led



Learner led



Learning Theories 2.0 (Redecker, 2009)

- **Communities of learning**
(Wenger et al., 2002)
- **Communities of Inquiry**
(Garrison & Anderson, 2003)
- **Connectivism**
(Siemens, 2005)
- **Produsage**
(Bruns & Humphreys, 2007)



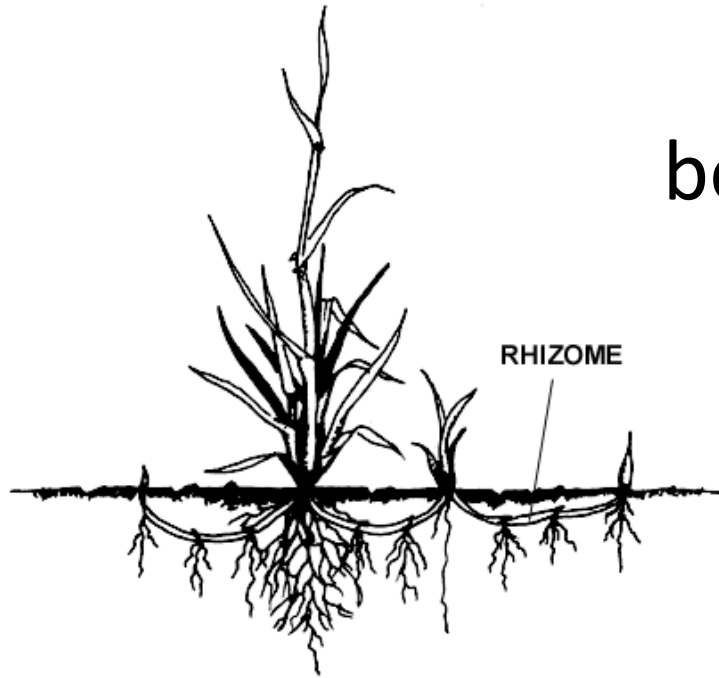
An aerial photograph of a large, dark blue body of water, possibly a bay or a large lake, surrounded by a network of roads and rivers. The roads and rivers are visible as a complex web of light-colored lines against the darker land. The water is a deep, dark blue, and the surrounding land is a mix of green and brown, indicating vegetation and urban areas.

The primacy of the connection

Connections are to learning as atoms are to the physical world...

Siemens

Rhizomatic learning



“A rhizomatic plant has no centre and no defined boundary; rather, it is made up of a number of semi-independent nodes, each of which is capable of growing and spreading on its own, bounded only by the limits of its habitat.”

4. How can AI support formative assessment?

- 4E model as a guidance (Liz Kolb, 2017 and Kopcha, 2020)
- 4 criteria:
 - **Enhance**
 - **Engage**
 - **Extend**
 - **Efficiency**

Enhance

Does the digital tool/software support the learning proces and achieving the learning objectives?

- Enhancement of the learning proces
- Innovation
- High level thinking / meta skills



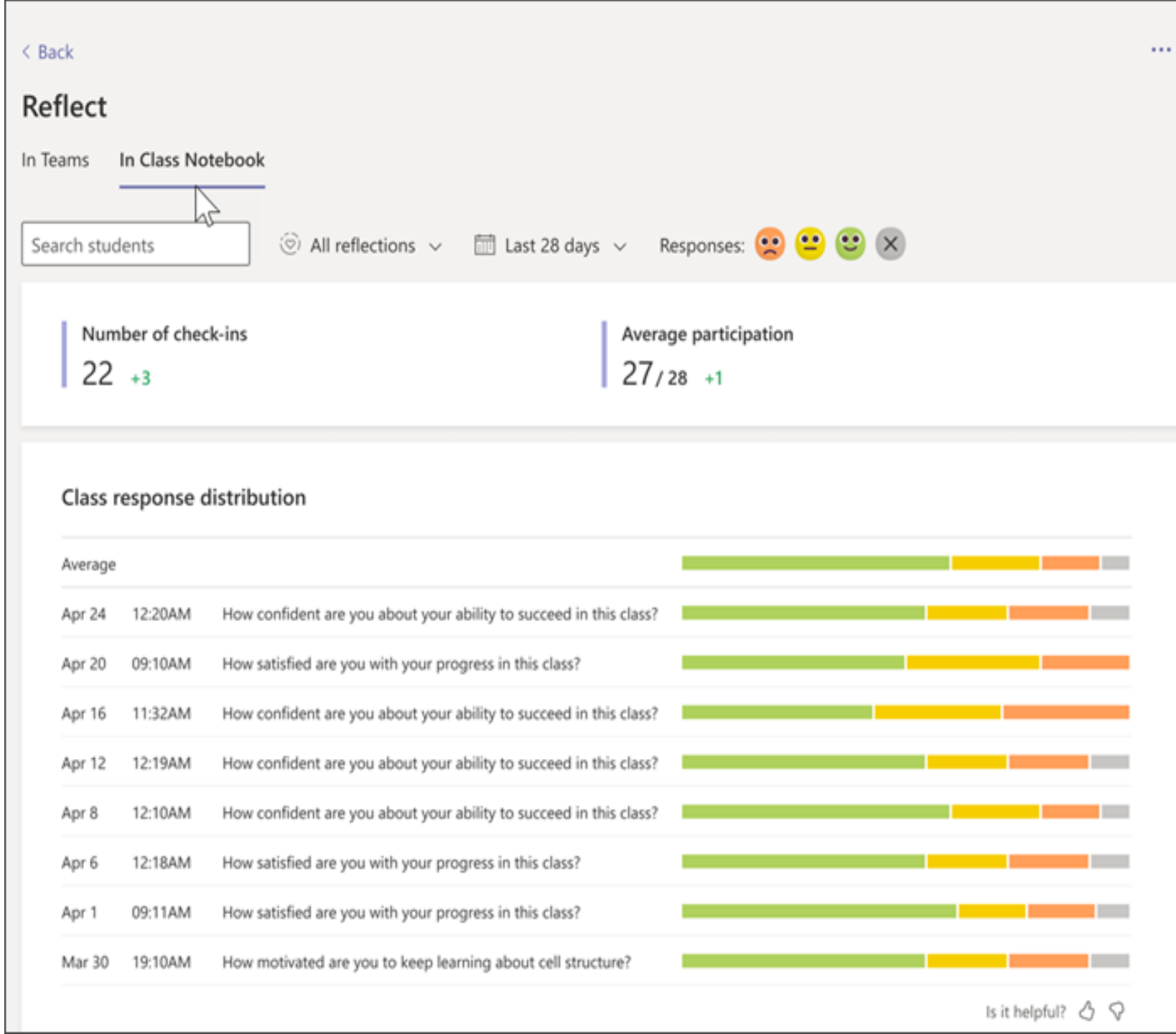
Engage

Is the tool or software an enhancement for more active and goal oriented lessons?

- Challenge
- Creating focus
- Motivating
- Connecting
- activating



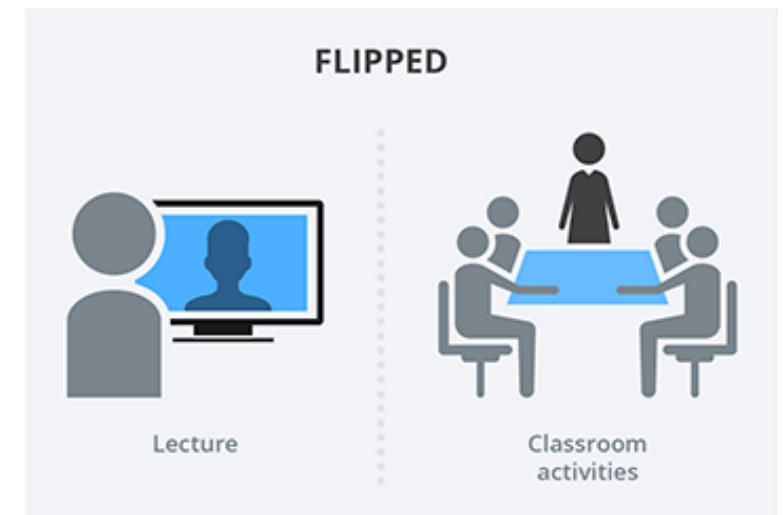
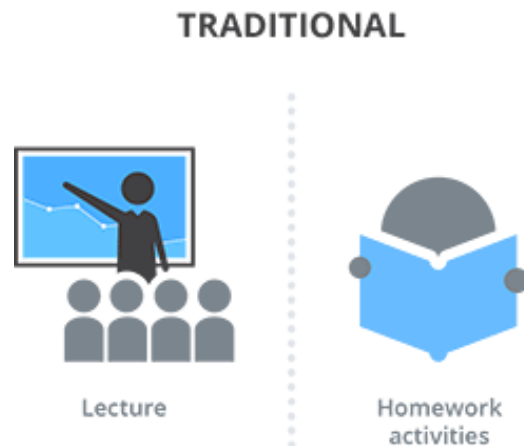
Example
daily/weekly
check in

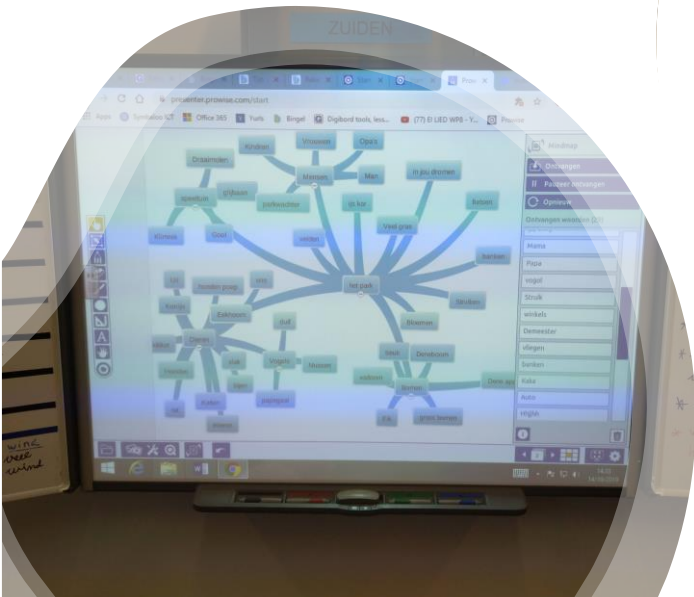


Extend

Is the tool and/or software an expansion of the learning process and learning environment?

- 24/7 learning
- Authentic experiences
- Soft skills





Efficiency

Are your lessons more efficient with the tool and/or software?

- Time saving
- Smooth organization of the lesson/classroom
- Simplifying interaction

Examples City Education of Antwerp

- Example coöperation schools (Antwerp) - Microsoft
 - Primary education – but components can be translated to secondary education.



- Using microsoft teams as a learning platform
 - Assignments and assessments
 - Positive identity through **social/emotional/cognitive polls**
 - Creating **automatically assessed assignments** and instant tailormade feedback
 - Working with **reading progress to enhance language skills**
 - Teamsspace functions as a **portfolio** of the learner.



5. AI in practice

1. Design rubrics / assessment by creating qualitative prompts.
2. Usage of AI to directly assess a task or assignment.
3. Make AI a part of a task or assignment.
4. How to cope with the usage or misuse of AI in education?

Examples for educational practice

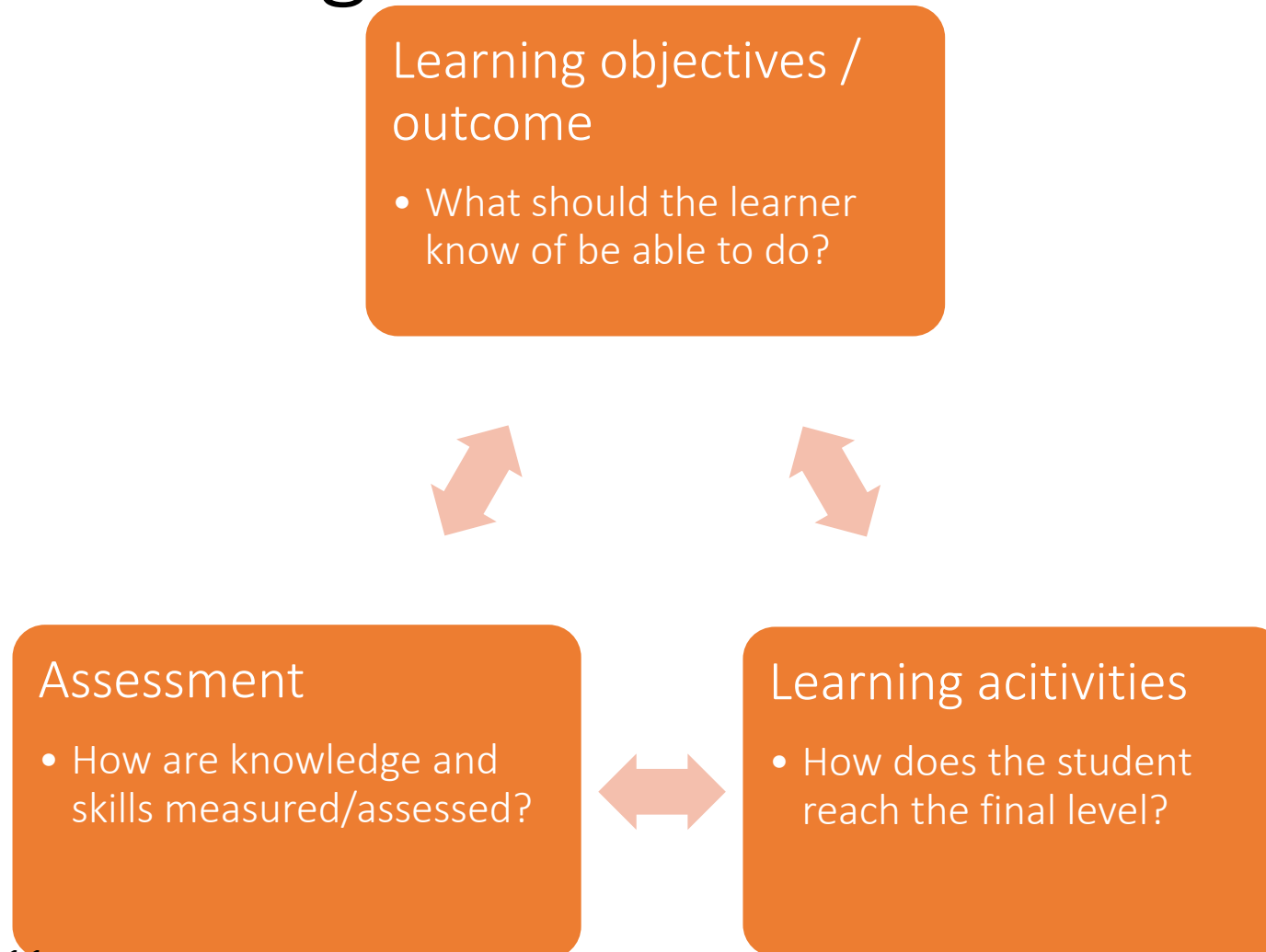
Example 1: creation of rubrics / assessment through the usage of AI

1. Assign a role to the chatbot (educational researcher, (subject)teacher, ...)
2. Setting objectives/goals
3. Choosing conditions, criteria + assessment framework / taxonomy / framework own country (EQF, Bloom, Kienstra, ...)
4. Describe the context (agegroup, background, learning activities)
5. Create a detailed prompt containing previous phases, ask for a format
6. Adjust your results

--> Mindless prompts = mindless, sloppy outcomes

--> Keep **constructive alignment** in mind

Constructive alignment

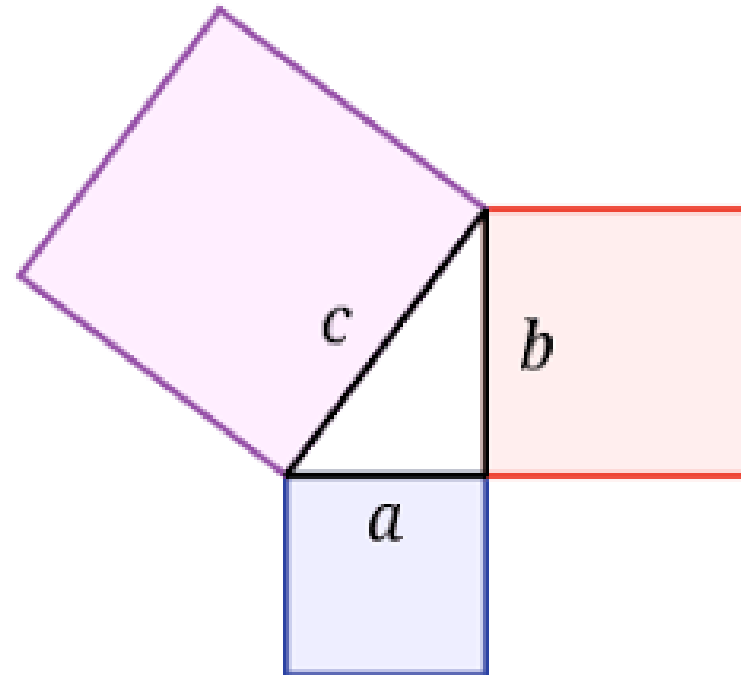


- Example 2: usage of AI to directly assess assignments

Correction mathematics [Pythagoras](#)

Correction [plastic usage](#)

Correction of [paper](#)



- **Example 3: using AI for peer and self-assessment**

- Swap tasks and let students correct another task with the aid of AI-tools. Afterwards you can let them tutor each other.
- Written tasks can be fragmented and phased.
 - Own writing
 - Correction / feedback AI
 - Reviewed output AI
 - What did you learn?
- [Comproved](#) as an accurate assessment tool

Example 4: How to cope with AI in assignments?

- Recognize:
 - Detection tools
 - AI itself
- Usage of references
- Make it part of assignments.
- Sensibilisation, learning responsible usage of AI, critical thinking
- Invest in good writing skills (functional use of AI vs structural use)

AI teacher manuel (AMAI)

- Challenge students to learn new things
- Use formative assessment to map out strengths and growing opportunities of students
- Complex tasks that connect to the knowledge and skills of students
- Present clear criteria, qualitative examples and results to students
- Explain and teach about relevant concepts
- Reflection and communication
- Detailed and specific feedback
- Use educational strategies and offer plans/tools/...

In practice

- Go to <http://openai.com>
- Make an account
- Open chatGPT3.5
- Develop assessment(tool) for your teaching subject

Remarks

- Lack of depth and creativity
- Knowledge cut-off (autumn 2021)
- Critical thinking, Reflection – citizenship education
- Companies behind AI
- Bias
- Ethical AI – Anthropic

The logo for ALICE is displayed on a white, brush-stroke-like background. The letters are stylized and multi-colored: 'A' is purple with a yellow dot, 'L' is green, 'I' is red with a yellow dot, 'C' is purple with a yellow dot, and 'E' is blue with three horizontal lines.

5. Discussion

Questions / remarks