

# Learning My Way & AI

*Our new friend in Education*



Some Promising Applications For Teachers and Students

**Marc Cleiren -**

Head Personal Development Centre  
AI Integration Officer Leiden University FSW

Where we are now..



Universiteit  
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The Netherlands

PrAIa Leiden



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Leiden  
Social and Behavioural Sciences

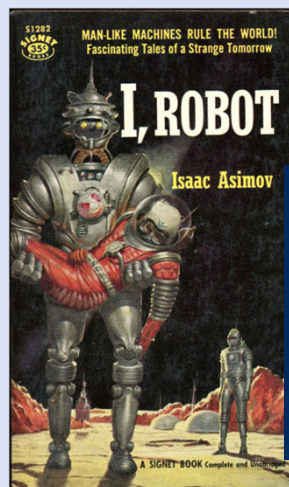
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1



Summer 1972  
Renesse, Netherlands



**Isaac  
ASIMOV's**

### Three Laws of Robotics

- 1) A robot may not injure a human being, or, through inaction, allow a human being to come to harm.
- 2) A robot must obey the orders given it by human beings except where such orders would conflict with the First Law.
- 3) A robot must protect its own existence as long as such protection does not conflict with the First or Second Law.

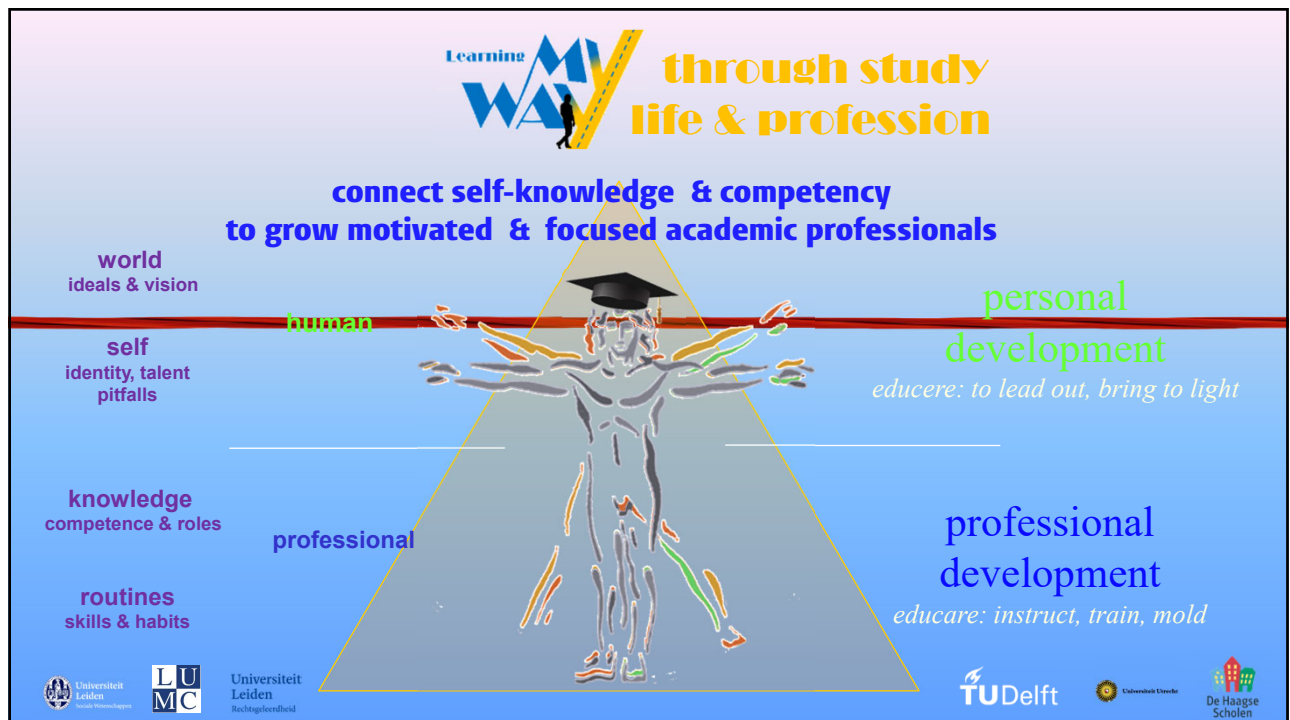
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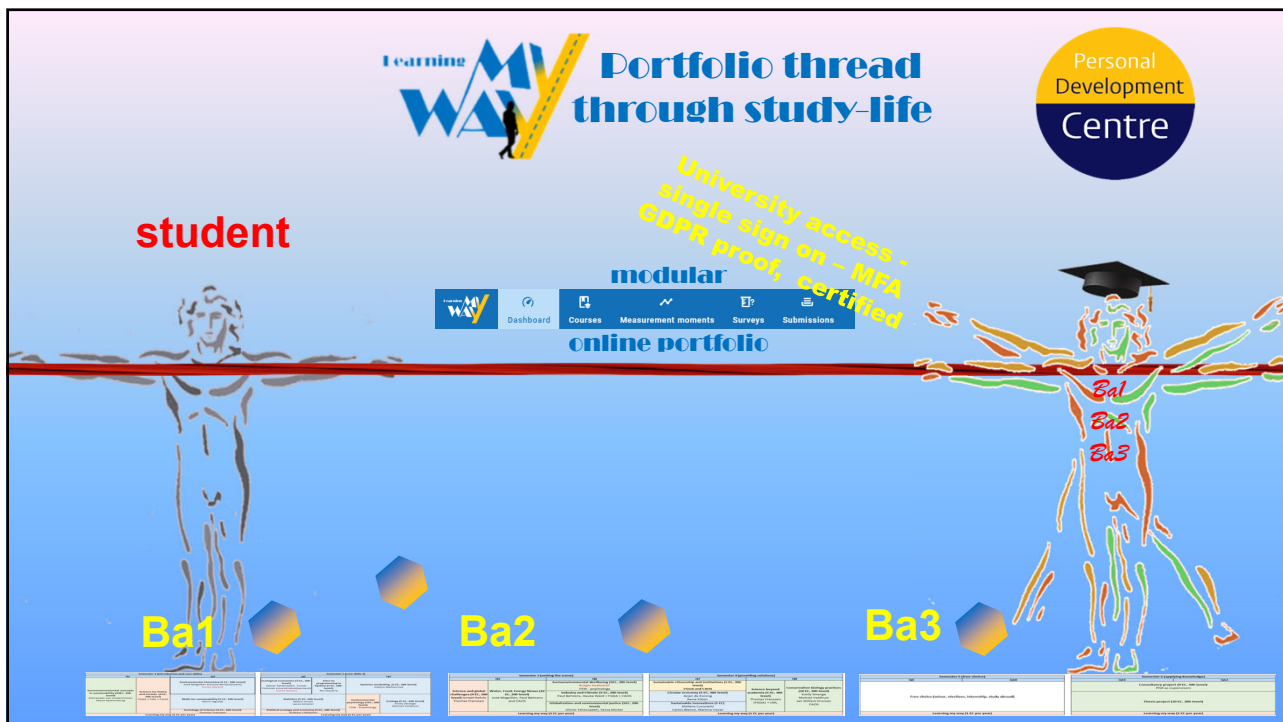
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Made with Kling 1.6. Person walking through downtown Leiden, the Netherlands, followed by five smiling humanoid robots. Robots carry his bags and one laptop. the camera rotates around the subject

3



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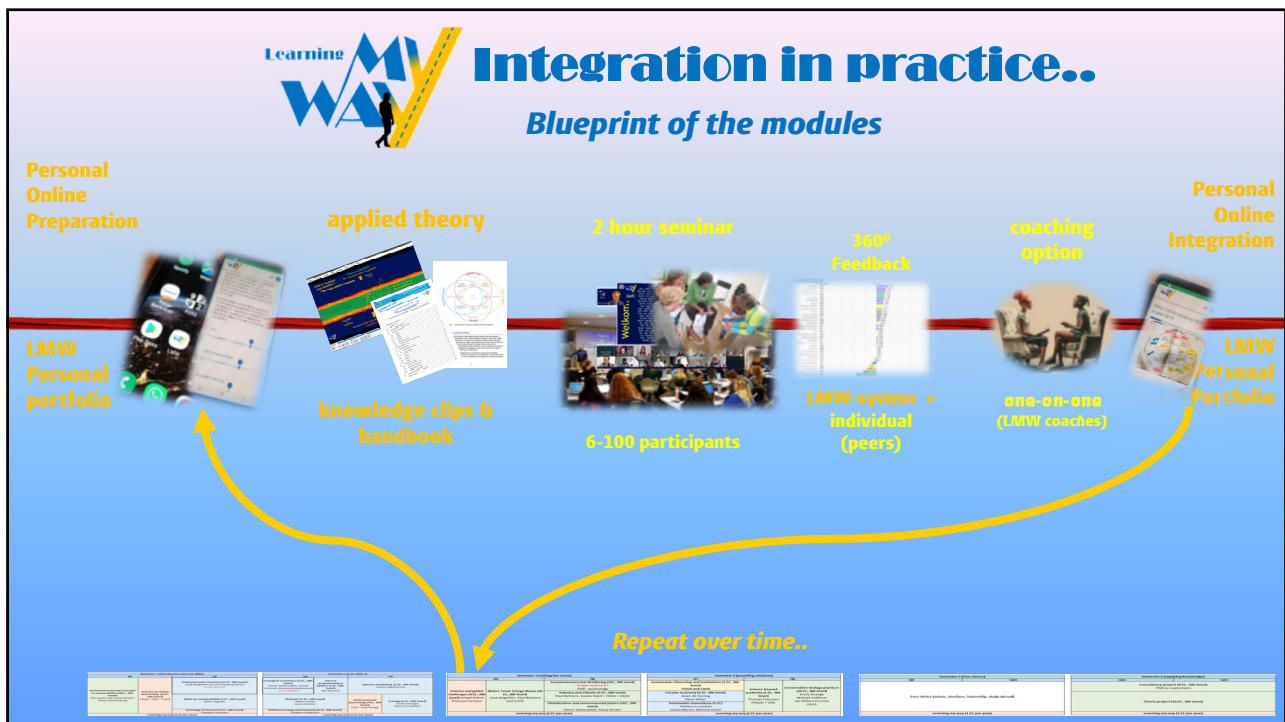
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### Online system Learning My Way.nl / .net)

- **Web based Multi Access**  
(Smartphone/PC/Apple etc.)
- **European GDPR proof**
- **Secure Single-Sign On (SSO)**
- **Multi Factor Authorization**
- **Multi-language**
- **University owned software & source code**
- **Can follow the student** (across different studies)
- **Data Access transparency**  
(State of the art approach data security -logging every use)

6





7

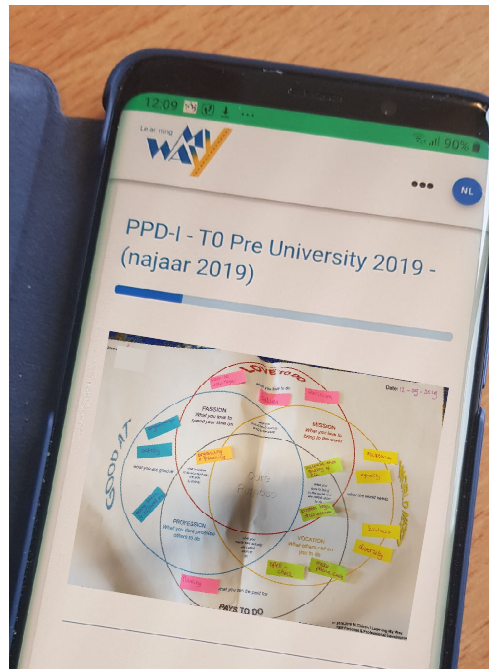


8

**Online Post integration  
Learning My Way**

## **Core Purpose Diagram**

**Upload picture of any  
work immediately into  
LMW portfolio**



9

**Learning**



10

## AI supported teaching & coaching

world  
values, mission  
& vision

self  
identity, talent  
motivations & pitfalls

knowledge  
competence & roles

routes  
skills, techniques  
& habits

personal  
development

professional  
development



Learning  
**WAY** system  
with AI coaching  
support



with AI teaching  
support

11

## The Consulting Bot



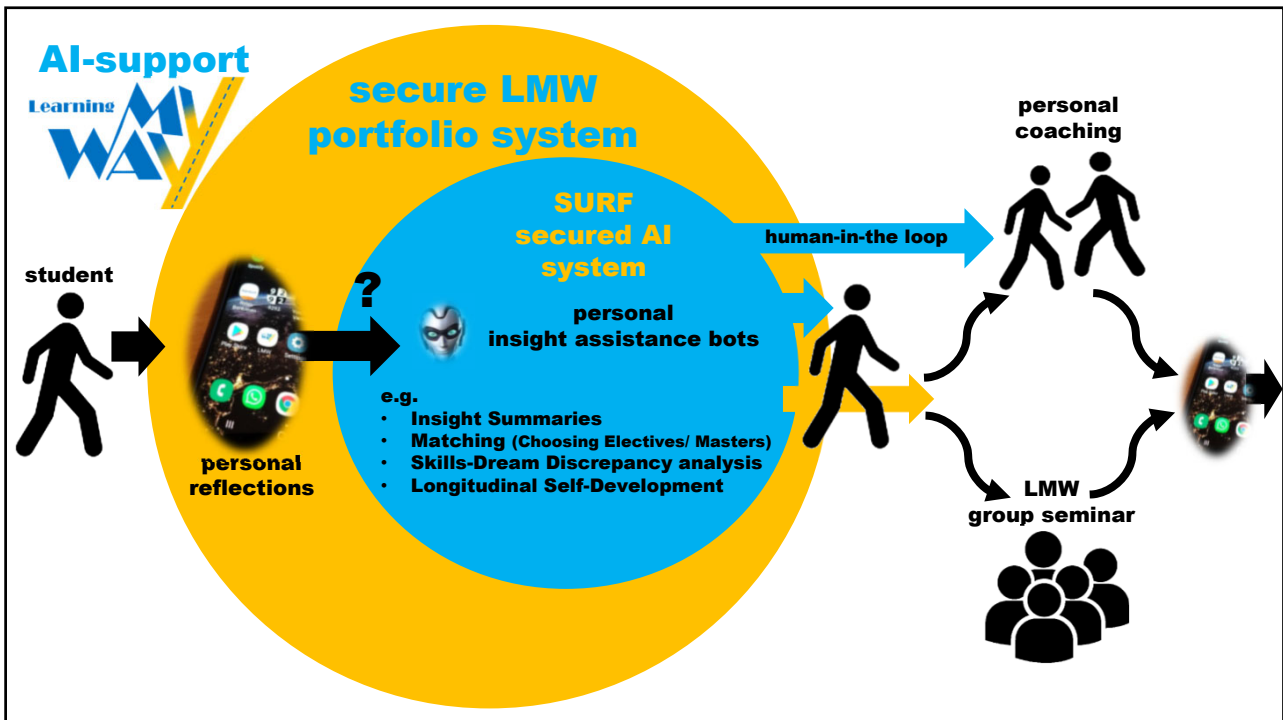
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12



13

**Let's take a look**

The screenshot displays the PPSL (Personal Professional Skills Lab) interface. It features four modules, each with a progress indicator (a circle with a number inside) and buttons for **View invitation**, **Start survey**, and **Show results**. The modules are:

- 1. Politieke Wetenschap 2024**: PPSL Starter module - preparatory questionnaire. Submit before: 7/24. Progress: 0.
- 2. Psychologie 2024**: PPSL Starter module - preparatory questionnaire. Submit before: 1/5/25. Progress: 100.
- 3. Culturele Antropologie and Development Sociology (CADS)**: PPSL Starter module - preparatory questionnaire. Submit before: 1/29/25. Progress: 0.
- 4. International Bachelor in Psychology (IBP) 2024**: PPSL Starter module - Concluding Questionnaire Psy/IBP. Submit before: 1/5/25. Progress: 0.

**Currently: > 7000 users; > 600 reflective surveys; > 20,000 entries**

14



# Gen-Z<sub>AI</sub> needs to *re-learn* studying in the AI age

- clues to why & how -

Marc Cleiren - Julian van der Kraats - Jaap van den Herik - Peter van der Putten



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some (neuro) psychology:

## Dopamine System (reward and pleasure)

- **Happiness, excitement & anticipatory joy**
- **Motivation and Desire**  
to take action toward desired outcomes.  
Encourages goal-directed behavior.
- **Love and Affection:**  
feeling attachment and love,  
romantic and parental affection,  
reinforcing social bonds and cooperation

## Human System Prompts

Do!

Don't!



## HPA Axis (stress en threat)

- **Fear:** crucial for survival.  
Prepares the body with "fight-or-flight" response.
- **Anxiety:** Chronic activation:  
prolonged worry and unease.  
Includes generalized anxiety (disorders).
- **Frustration:**  
invigorating stressful situations that  
block goals.  
obstacles to reaching desired outcome.

\* hypothalamic-pituitary-adrenal

16



## Dual motives in all of us: two basic orientations

(e.g. Gray, Cloninger, Carver & White, Ryan, Sheldon, Kasser, Deci, Higgins, Cleiren, Kahneman)

### Self-transcending orientation

creative  
original  
usually conscious

*Go!*



*inner friction*



### Self-protective orientation

quick  
automatic  
usually subconscious

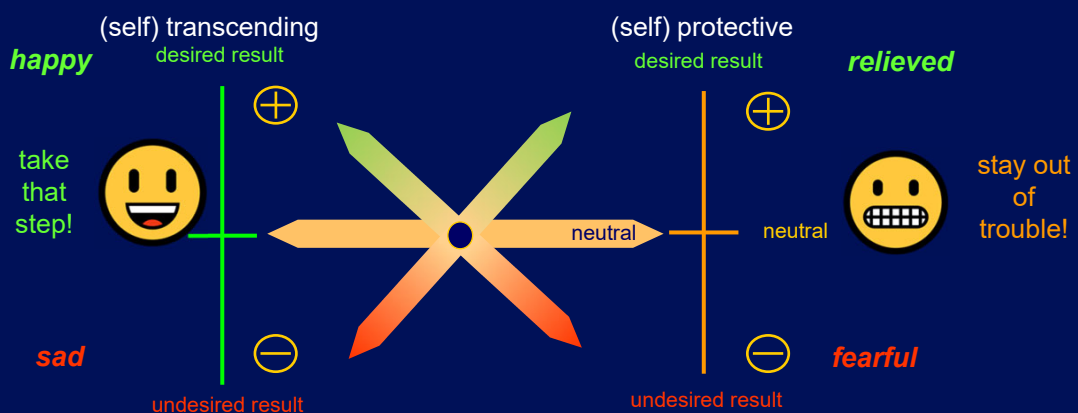
*Slow down!*

I want  
new things  
trying out  
learning  
growing!

I want  
what I know well  
what I can oversee  
safety  
security!

17

## Transcending & Protective motives two emotional feedback systems



(loosely adapted from Carver & Scheier, 1998, p.138)

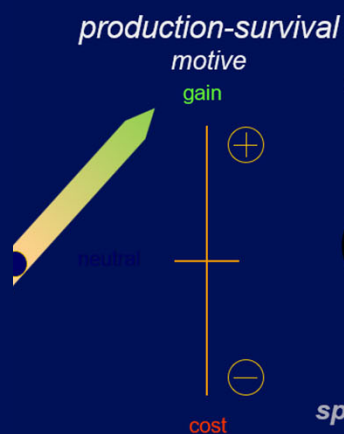
18

## AI use when our students get stressed..



19

**System 1 dominant**  
treat AI as a subordinate  
managing attitude



**conservation  
of resources**



I need to  
get this  
done fast!

spend time & money  
choice intensive



20

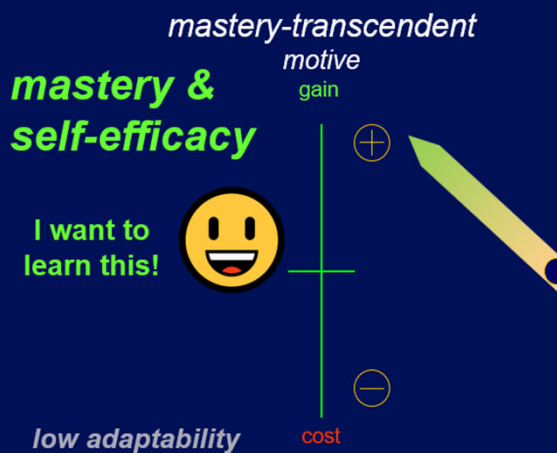
## AI use when our students are relaxed...



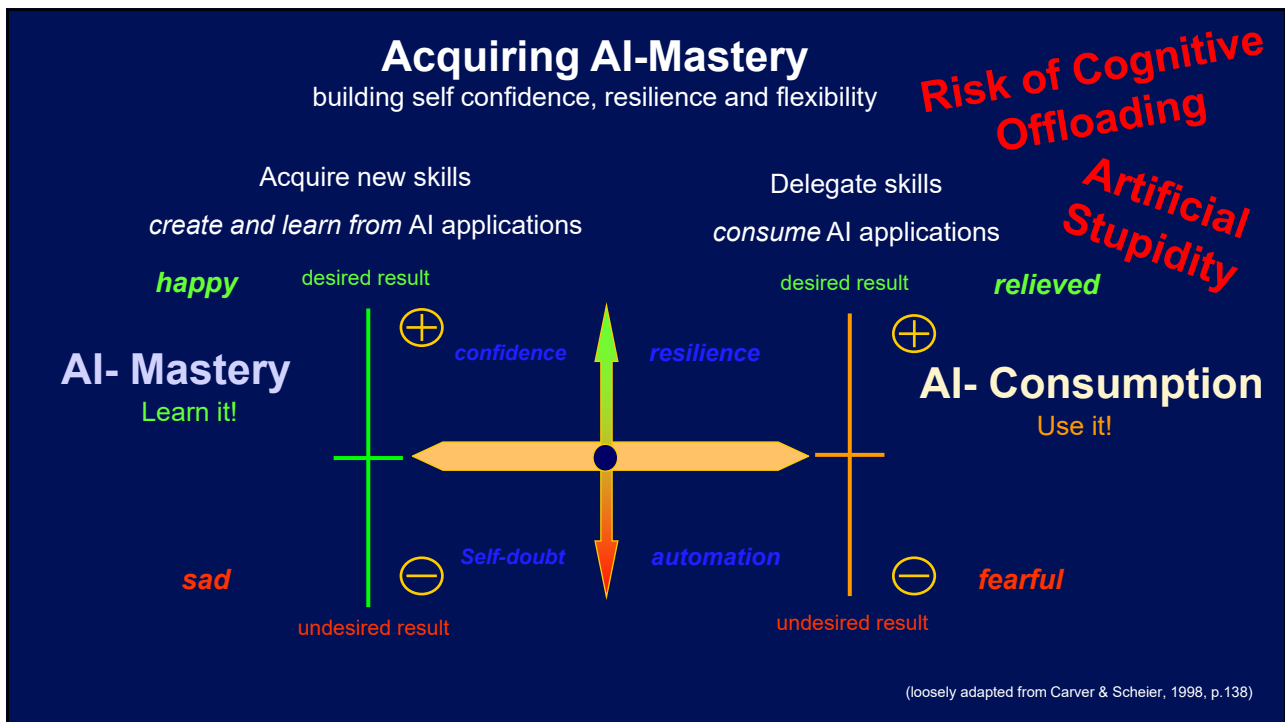
21

### System 2 dominant

treat AI as a *teacher*  
*learning attitude*



22



23

**A push toward a learning mindset:**

**Honours Course**  
**AI – Understand & Create**



24





25

### Some experiences:

1. In a competitive environment, students tend to **behave as managers rather than learners**: commanding AI for efficiency purposes rather than *mastery*. This causes 'cognitive offloading' of academic skills and impedes mastery learning.
2. To counter this, it helps to **reorient teaching strategies** (promote *mastery* over *efficiency*) and testing (*progress* reward over *outcome* reward). This also leads to better final product quality.
3. Effective student mastery learning should **resemble modern extended training of LLM's**. This implies challenge students to themselves practice Chain of Thought (CoT); Reward Learning with Human Feedback (RLHF; in this case teachers & classmates) and AI Feedback (RLAIF).



26

# AI Supported Teaching

*State of the art @ Leiden University*

initiated by **Julian van der Kraats**  
– AI Product developer ISSC



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**Julian van de Kraats – ISSC computing centre Leiden University**

based on Cogniti system (Sydney, Liu) see <https://cogniti.ai>



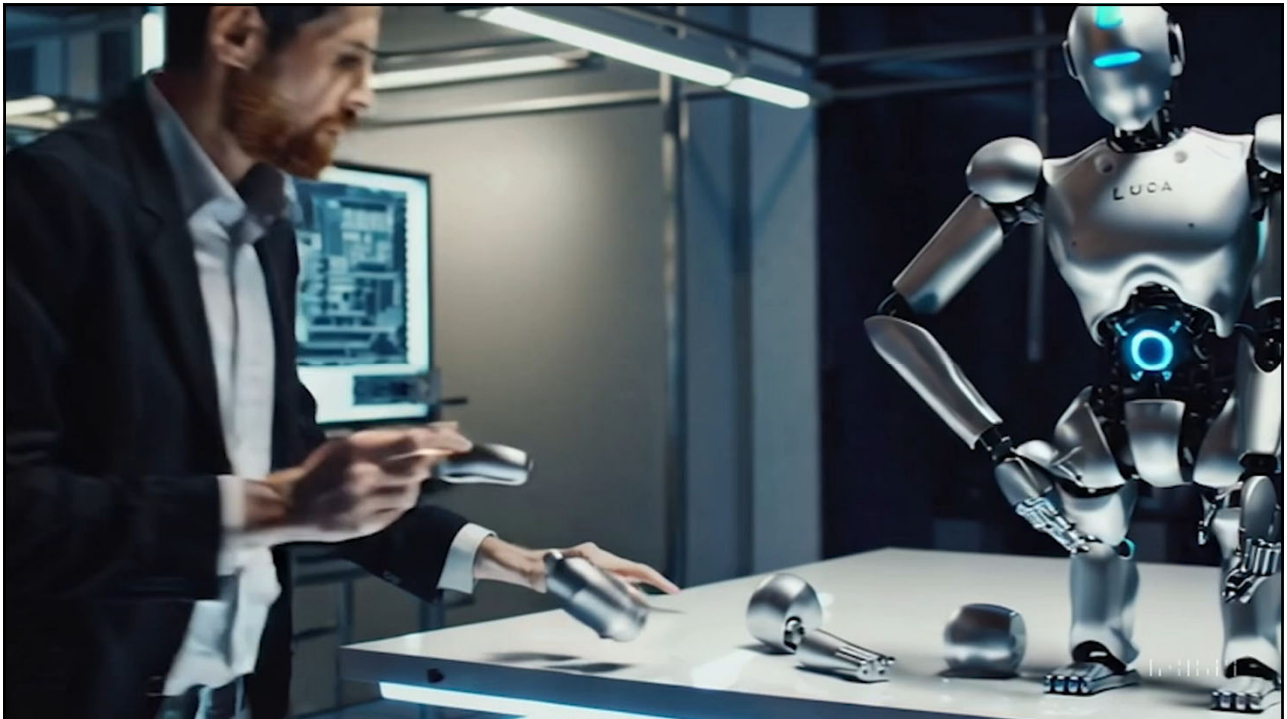
# LUCA

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28



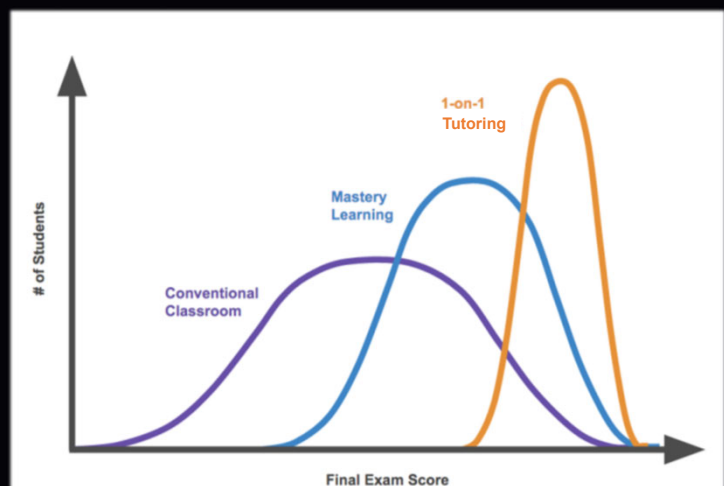
29

# Bloom's 2- Sigma problem



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Bloom, B. S. (1984). The 2 sigma problem: The search for methods of group instruction as effective as one-to-one tutoring. *Educational researcher*, 13(6), 4-16.

30