# AI and Education

## – perspectives from the Swedish National Agency for Education

WASP-ED Community Event, 2024-04-22

*Skolverket*

# In this presentation

- Johan Falk – lead of AI and education at Skolverket (National Agency for Education)

- A few words on where we are with AI at Skolverket.

- How Skolverket is supporting schools in AI.

- Where are schools when it comes to AI?

- Cooperation with other agencies and national organizations.

- Concering long-term effects of AI on education.

## What AI?

Only generative AI.
Mostly chatbots and other AI systems based (primarily) on large language models.

# Where is Skolverket when it comes to AI?

- **Pre-alpha:** before November 2022
  - Some people talked about AI.

- **Pioneer phase:** December 2022 to March 2023
  - Enthusiasts meet informally, networks start to form.

- **Emerging practice I:** March to August 2023
  - Formal group established; routines missing.

- **Emerging practice II:** September 2023 to present
  - Routines are improved iteratively.
    Group for internal AI needs is established.

# What have we learned?

- Act early if possible. (Schools took an early hit from AI!)

- Encourage pioneers.

- Form teams that are self-sufficient when it comes to competence.

- An agile-inspired approach to improving routines has been useful.

- Cooperate both inside and outside the organization.

- Aim at reducing bottlnecks and being dependent on single individuals.

# What is Skolverket doing?

- Supporting schools in understanding AI and its practical effects on schools.

- A new AI subject introduced at upper secondary schools from autumn 2024.
  - Possible next step: Add AI to the official supplemental texts for some of the subjects in primary school.

- Encouraging cooperation between other agencies and national organizations.

- Strategic work concerning long-term effects on schools.

# How is Skolverket supporting schools when it comes to AI?

Skolverket

# What are our main messages to schools?

- Learning should always be front and center.

- There is a difference between AI as a learning tool and AI as learning content.

- Some examples of how AI may affect subject content: critical thinking, programming, writing…

- Some pitfalls to be aware of when/if exploring generative AI in teaching.

- We encourage schools to have explicit guidelines for generative AI.

# Our channels of communication

- Always up-to-date information at skolverket.se/ai.

- Talks online, talks at schools, participating at conferences, organizing online conferences…

- Open webinars where practitioners share experiences.

- Proactive stance and positive media coverage has increased trust in Skolverket and made communication easier.

- Still needed: A platform for sharing research and teacher experiences.

# Where are schools?



- Focus has largely shifted from cheating to how AI can be a useful tool.

- We're starting to see a shift from dependency on individual persons to a more structured AI use.

- Half of the teachers are using AI in teaching.*

- More than half of the teachers say that they have good or very good knowledge on AI.*

- There is still a huge demand for information and guidance.
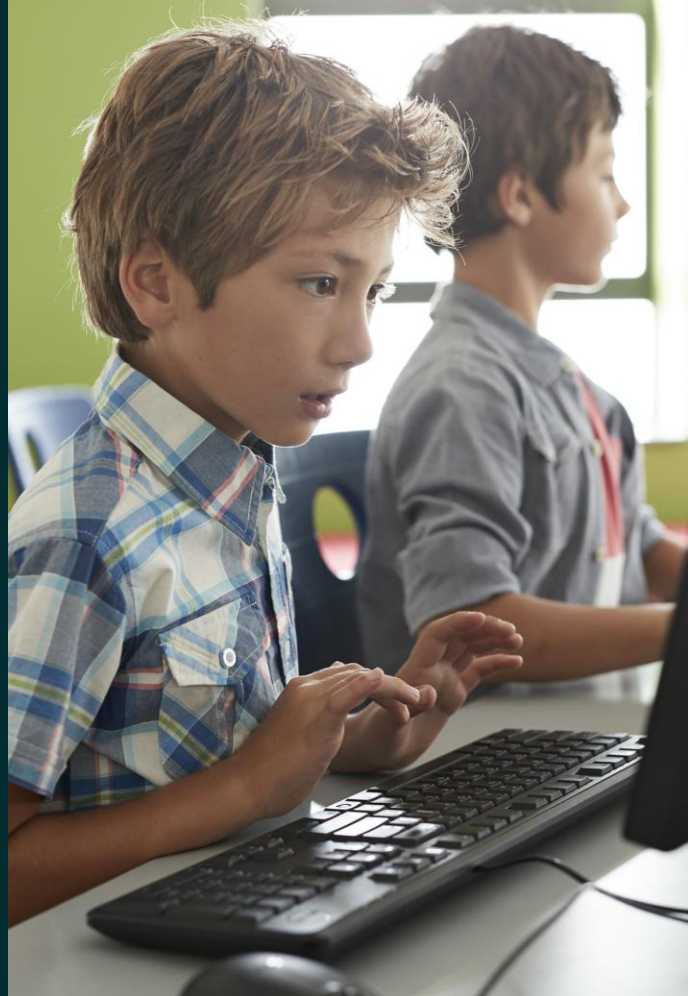
# "Sector responsibility" for digitalization in schools

- We aim at coordinating efforts, removing obstacles and identifying important tasks left unattended.

- We have hosted a meeting with 35 organizations and have regular meetings with a handfull.

- The sector responsibility has been really useful for facilitating contacts and getting work done.
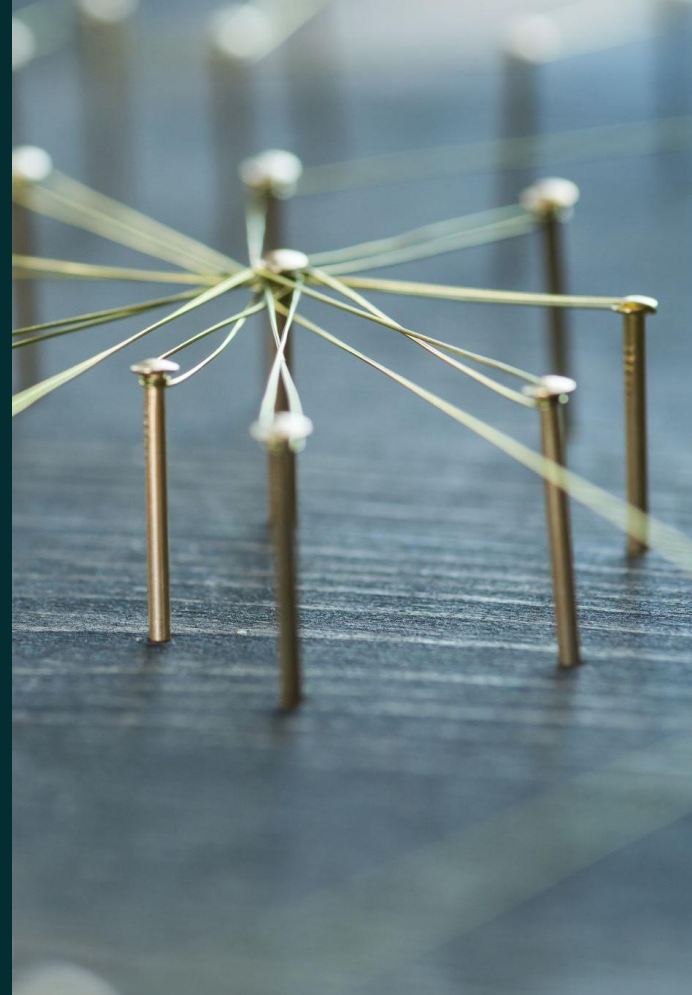
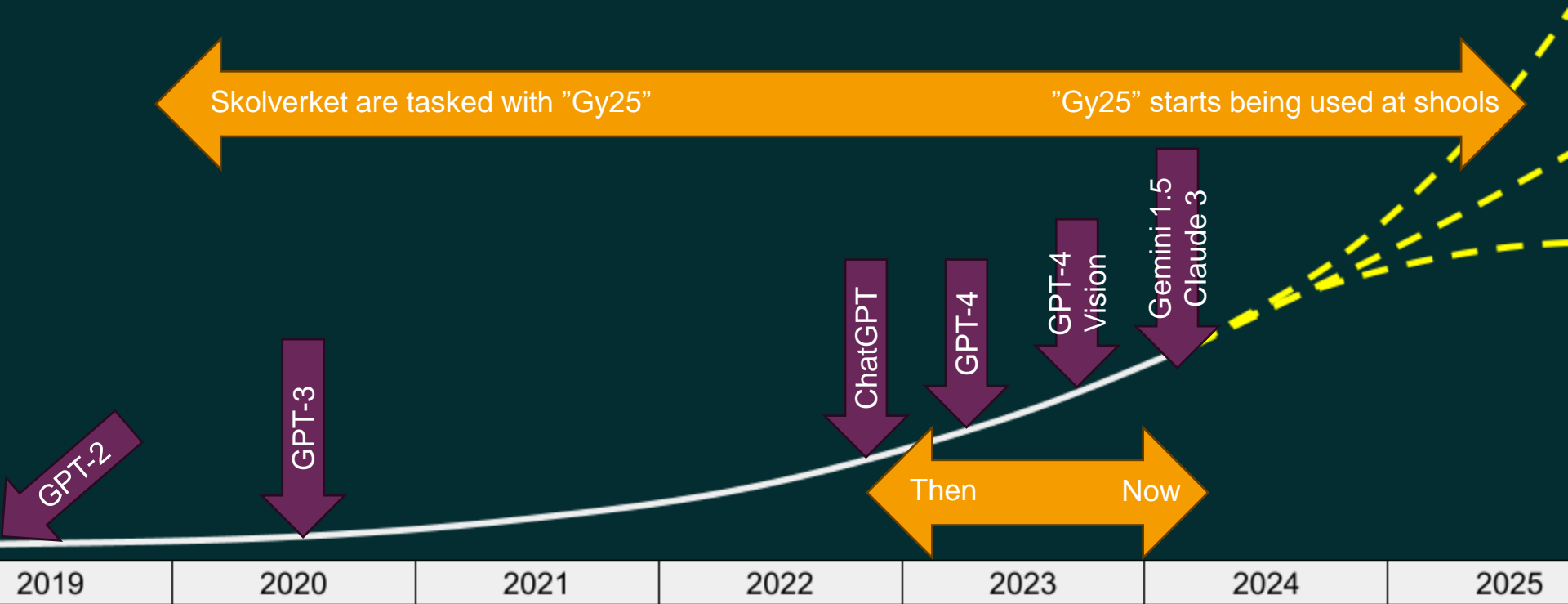# Concerning long-term effects
# of AI on education

# Things are moving fast

There is more at stake than cheating on homework.

- **2020**: GPT-3 took *at least* one month to train.
- **2024**: The best computers can do the same task on four minutes.

- **2019**: GPT-2 could not reliably count to ten.
- **2023**: GPT-4 gets good grades on university-level exams.

# Time is the biggest challenge



Skolverket are tasked with "Gy25"

"Gy25" starts being used at shools

GPT-2

GPT-3

ChatGPT

GPT-4

GPT-4 Vision

Gemini 1.5 Claude 3

Then

Now

2019 2020 2021 2022 2023 2024 2025

# Do we have the required agility?

- We can look ~6 months into the future when it comes to AI development.

- Changes in schools usually requires at least 3–5 years.

- We must assume that continued rapid progress is possible (and probably the default). Skolverket is actively working on evaluating different possible futures and increasing our action readiness.

# Let's talk!

- In which ways do you think AI will change schools in 10 years?

- In which ways do you think schools will be the same in 10 years?

- What happens if the school system in 10 years has failed to adapt to changes caused by AI?