



What kinds of students do we wish to educate? What kind of education and world are we aiming for?

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Several studies (DK, NO and SE):

Generative AI is part of HE students' study life, and students lack guidance.

Djøf, 2023, Malmström, H., Stöhr, C., & Ou, A. W. (2023), Møgelvang, A; Ludvigsen, K; Bjelland, C.; Schei, O. M. (2023), Otto, S. (2024), Skytte Jensen, A., (2024)

So... How do we even engage in this?

- What to do in teaching **depends** on **how we understand this matter** of GAI in education
- Invitation to **take a few steps back, before engaging** in what to do with GAI in teaching

generate an image of taking a few steps back, before engaging

 Copilot ⓘ



Here's the image representing the concept of "taking a few steps back before engaging." It shows two boxers in a ring, both in a guarded stance, maintaining distance and assessing each other before committing to an attack. The scene conveys the idea of pausing and preparing strategically rather than rushing in.

Would you like me to create **another version with a more metaphorical or abstract interpretation** of this concept?

Course: AI literacy and digital literacy pedagogy

Purpose and target group

The course is open to teachers from the Faculty of Humanities, the Faculty of Social Sciences, the Faculty of Theology and the Faculty of Law.

30 hours for participation (incl. preparation and development of teaching experiment).

Period: three months & three seminars

Purpose and content

How may you work with the ways in which digitalisation in the world (including generative AI) impacts the educational programme and your subject, and support your students' AI literacy and digital literacy in your teaching? Get inspiration for and insight into specific approaches and methods. Design activities for use in your own course and try them out.

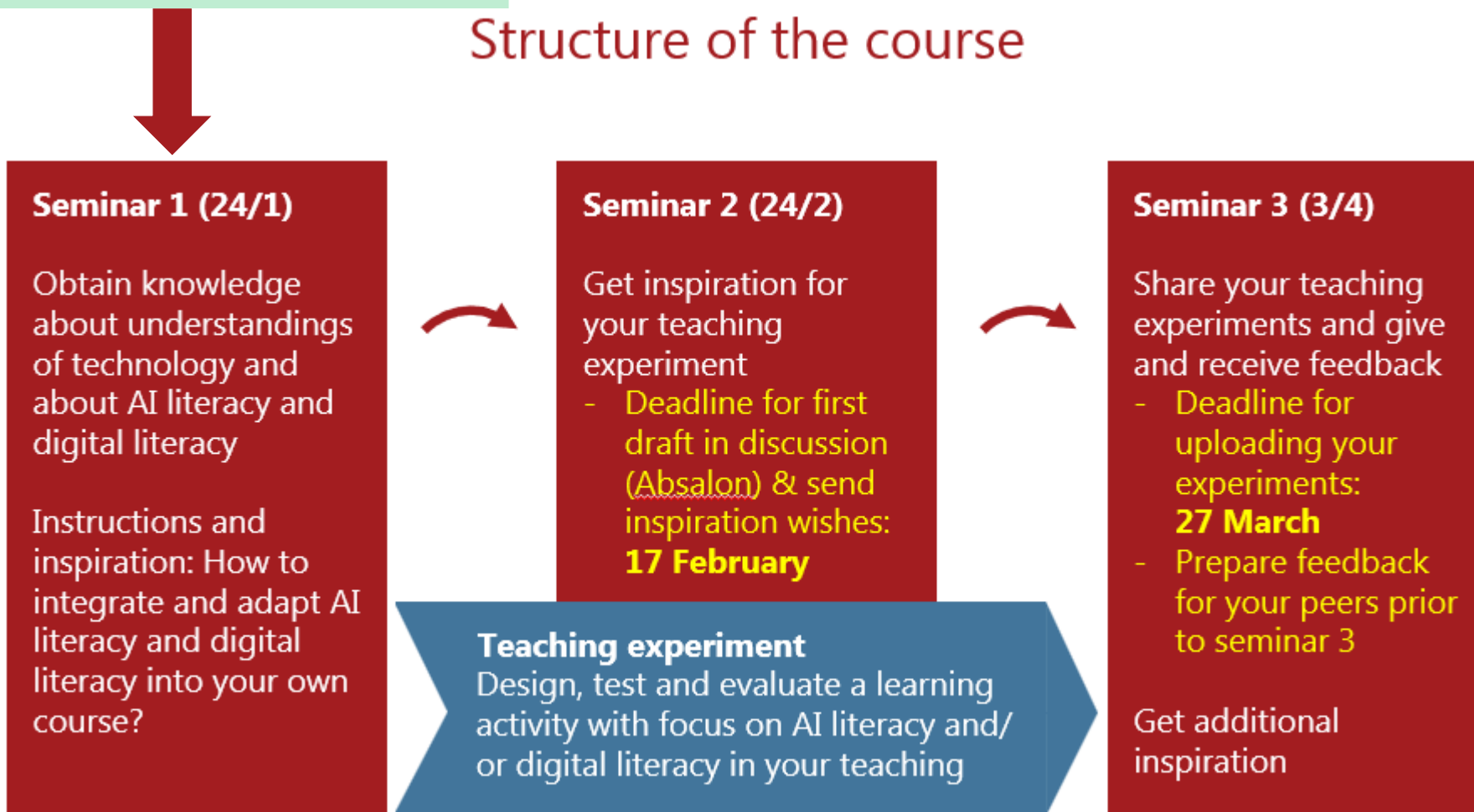
As of September 2024, all (BA) degree programmes include a focus on students' digital literacy as a mandatory element (cf. [the UCPH model for students' digital literacy and skills](#) ↗; Danish version [here](#) ↗), and as of September 2025, the academic environments must decide how they want to allow and support students' use of generative AI as an aid in study activities and exam practices (cf. [New rules and principles from September 2025 on KUnet](#) ↗).

The course offers pedagogical inspiration to get started with supporting the students' AI literacy and broader digital literacy in a way that suits your wishes for development (cf. e.g. [the navigation model in KUnet](#)). You will get ideas for and concrete suggestions on how you may meaningfully incorporate AI literacy and digital literacy into your teaching and support your students in gaining both critical-analytical and constructive-creative competencies. Tools constitute an essential, integrative part of the course.

This course is not a prompting course (prompting didactics), but a course to help you connect students' academic and digital literacy and AI literacy. Competencies cannot stand alone, but especially now with the spread of generative AI in many of our work tools (the Office

Course design (example)

Structure of the course





Our understanding of technology
becomes part of the foundation on which
we build education and the world

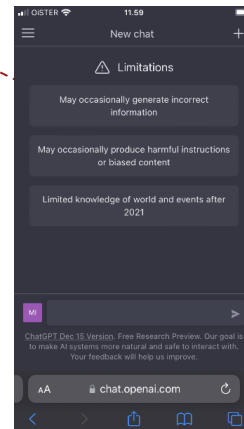
Four ways to objectify technology

Knowledge, procedures, forms of organisation and tools/instruments

Monolithic
Absent
present
AI/IT



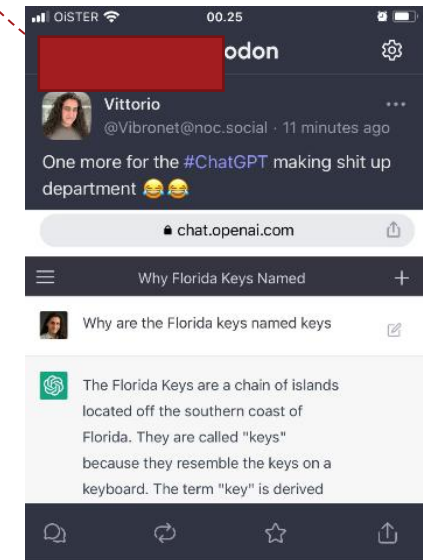
Technology
determinism
AI/ChatGPT
↓
culture

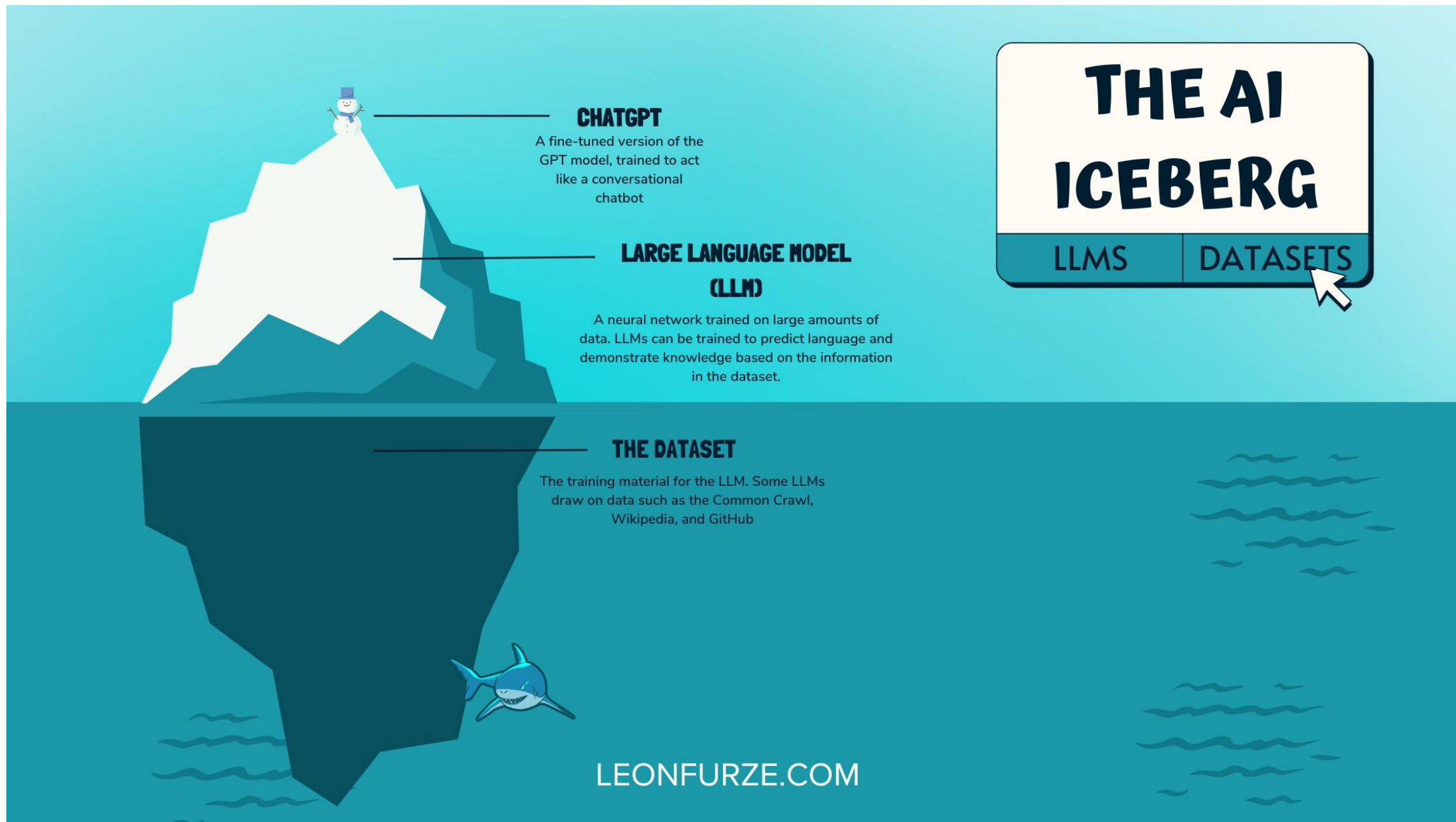


Social
determinism
Social, cultural
history
↓
ChatGPT



Integrative
Hybrid – human,
world, knowledge,
technology,
interaction





Generative AI chatbots (e.g. ChatGPT, CoPilot) are based on Large Language Models (LLM)

What is LLM?

- Probabilistic systems
- Predict and generate sequences of words that "sound right"
- LLM "seem to respond"

Technical limitations: inherit and amplify bias from training data, fabricate nonsense, massive text data and resources

"LLMs are as incapable of fabricating falsehoods as they are of telling the truth." (p. 23)

What are the effects of LLM?

Social, political, legal, psychological, philosophical, etc. **contexts and consequences** of technical limitations, e.g.

- **Resources and environmental impacts:** expensive digital equipment, massive data centres, high electricity and water consumption. Carbon footprint. Cloud-distributed applications.
- **Ethics** e.g. copyrighted training data!! No commitments, compensation, and credit. Plagiarism, authorship and authority, bias, privacy, own power of thought, creativity, learning processes

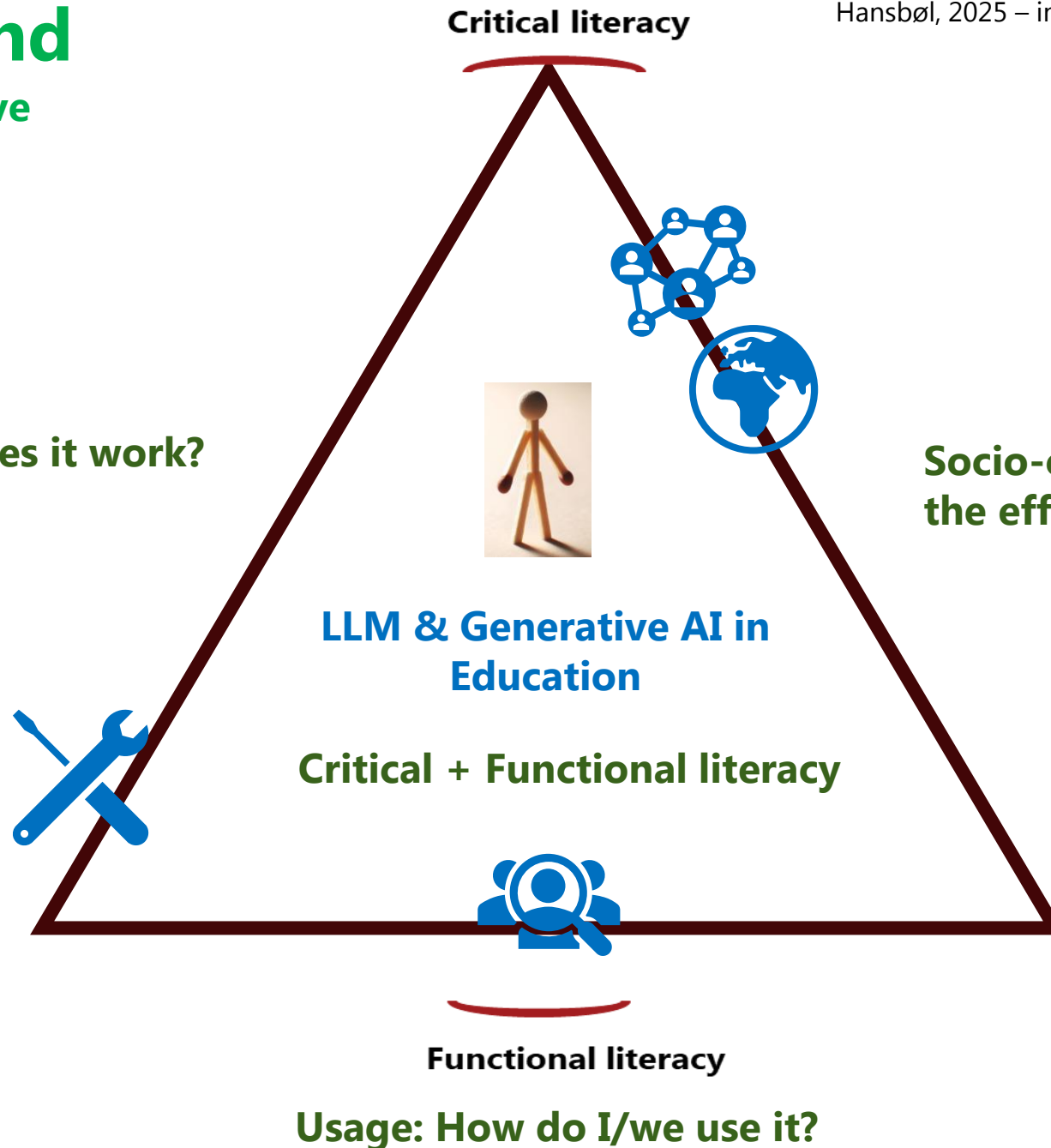
Common ground

- A multiliteracy perspective

Hansbøl, 2025 – inspired by Dagstuhl Triangle, Gupta et al., 2024

Technological: How does it work?

Socio-cultural/-material: What are the effects?



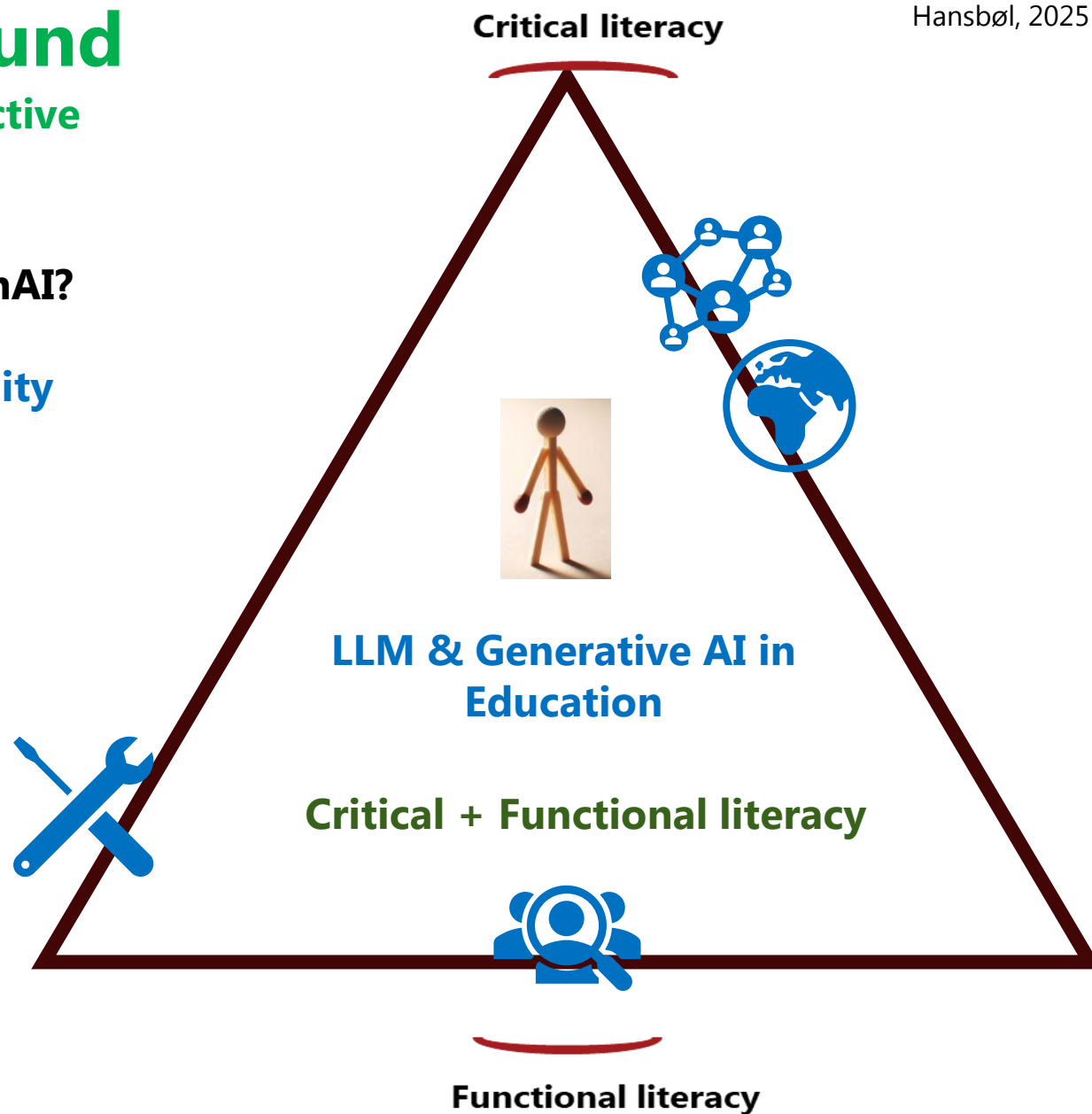
Common ground

- A multiliteracy perspective

What is LLM & GenAI?

Statistical probability

History, concepts,
terminology



Hansbøl, 2025 – inspired by Dagstuhl Triangle, Gupta et al., 2024

How does LLM & GenAI affect?

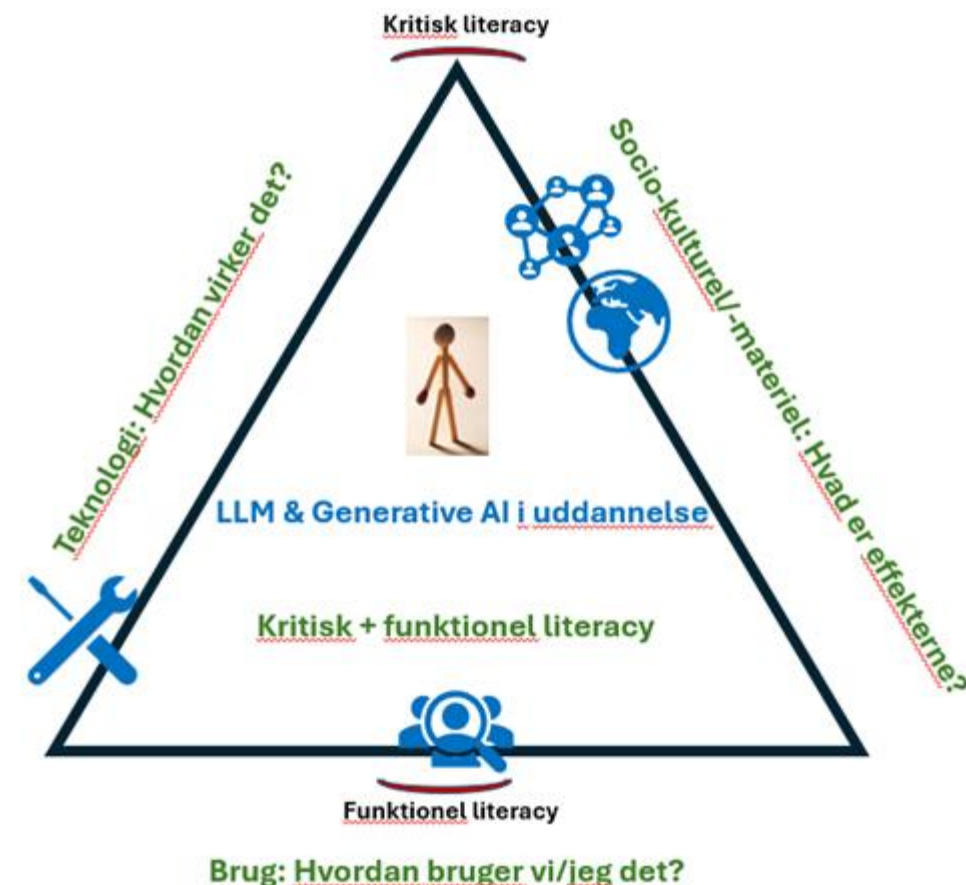
(e.g. **Social, political, philosophical, cultural, psychological**):

Is it necessary? How does using a LLM and GenAI affect learning processes, knowledge, subject matter, culture & the world?

Ethical (e.g. deepfakes hegemonic perspectives, bias, sycophantic, hallucinations/mis-information) **and legal challenges**

Aiming for the middle

METAPHOR	HUMAN	ANIMAL/PLANT/HUMANOID?	NONHUMAN/INANIMATE
Functional view of AI	Helper/Assistant Genius in a room Neural network AI-tutor, AI-coach, AI-mentor, AI-teammate, AI-student Life-saver		Cake-making Blood transfusion Calculator for words Auto-complete AI-tool AI-simulator
Critical view of AI	Mansplainer Fahlawi Mckinsey	Stochastic Parrot Octopus Shoggoth Wolf in sheep's clothing Terminator Venus Fly Trap	Blurry JPEG Chat Fast food Opium Plastic surgery Western museum Madly math Colonizing loudspeaker
Rhetorical view of AI (Blends functional and critical)	Clueless intern	Two edged word Cute, hapless robot	Registry of Power Atlas Leveling the playing field



Crawford, K.

Ethan Mollick

Emily M. Bender et al.

(Gupta et al., 2024)

What kinds of students & digital literacies (examples)?

User

Raw material (cf. Shoshana Zuboff)

IT user

Consumer

(e.g. how do we learn to use ChatGPT)

Critic

Reflexive thinker

The dangers and risks, e.g.

Fake news and misinformation

Critical consumer

(e.g. how can we be critically reflexive towards AI and machine learning in the world, misinformation and Dark AI?)

Maker

Creator

Entrepreneurship

Commercialization and what about repair and recycling?

(e.g. how can we write a poem with ChatGPT and with Shakespeare's voice, algorithm and technology development?)

Knowledgeable

Reflecting the world....

Acting

What kinds of students & digital literacies (examples)?

Expert

The students are involved in the formulation of e.g. strategies (e.g. how do we handle AI, privacy policies and ChatGPT in our everyday education?)

Eco-soph

Interconnected:

People, Society, Technology, Economy, Environment

(e.g. what about diversity and that the data we feed ChatGPT contributes to, develops their commercial platforms? Climate costs?)

Social designer

Digital World:

Design, Media, Social, Cultural, Economic

Computer science, digital design, solution-focused?

(e.g. how can we use ChatGPT to code and program e.g. malware?)

Acting

←————→
Diffracting the world....

→ The world could be different



NATIONALT VIDENCENTER FOR LÆSNING

VIDEN OG VÆRKTØJER

Integrative teknologiforståelser for en bæredygtig verden

Skrevet af Mikala Hansbøl, universitetspædagogisk konsulent og ph.d., TEACH (HUM, JUR, TEO), Københavns Universitet

Udgivet den 20. november 2023

Uddannelse er en væsentlig dimension af vores demokrati og mulighed for at skabe en bæredygtig verden. Digitale teknologier eksisterer i verden og er i vores grundskoler og ungdomsuddannelser. Derfor er det væsentligt, at vores uddannelser er i stand til at adressere, hvordan digitale teknologier på komplekse måder filtrer sig sammen med vores verden og liv – altså eksisterer som del af

Forskerklummen er en kort anbefaling om at interessere sig for en forsker eller et fænomen inden for literacy-feltet. Klummen redigeres af Kristine Kabel, Lektor ved DPU, Aarhus Universitet og Lene Storgaard Brok, centerleder i

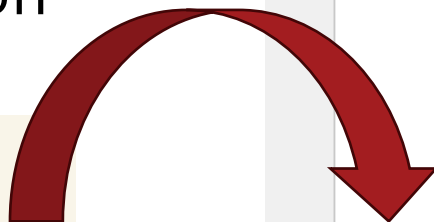
[Integrative teknologiforståelser for en bæredygtig verden \(videnomlaesning.dk\)](https://videnomlaesning.dk)

HE scenarios

What kinds of students, education and world?

For example, do we imagine that the students should be:

- users and learn to prompt
- critics and be able to relate to sources critical of ChatGPT and to the spread of misinformation
- makers and creatives could create with large language models and generative AI, including perhaps developing chatbots themselves
- experts and enter into dialogues about how we relate to generative AI in education and everyday life
- ecophilosophers and ethics relate to the interaction between technology, humans and the world, including climate, social inequality, diversity, economy, culture and consequences for democracy
- social designers and be able to code and program and create the digital technologies and social forms of the future



What kinds of students walk-the-talk exercise – Mikala Hansbøl & CoPilot, [ph.d.](#), TEACH 300724

Sure, let's imagine a futuristic scenario where a higher education (HE) student navigates their academic and personal life with the help of AI. This scenario will incorporate elements of being a raw material (as per Shoshana Zuboff's concept), an IT user, and a consumer.

Year 2040: A Day in the Life of an HE Student

Morning Routine: Alex, a 20-year-old university student, wakes up to the gentle voice of their AI assistant, Nova. Nova has already analyzed Alex's sleep patterns and optimized the wake-up time for maximum rest and productivity. As Alex gets ready, Nova provides a personalized news briefing, highlighting relevant academic articles and global events.

Learning and Research: Alex heads to the university's virtual campus, where classes are held in immersive VR environments. Today, Alex has a lecture on quantum computing. Nova assists by summarizing complex topics in real-time and providing additional resources tailored to Alex's learning style. During a break, Alex uses ChatGPT to brainstorm ideas for a research paper, receiving instant feedback and suggestions.

Data as Raw Material: Throughout the day, Alex's interactions with various digital platforms generate vast amounts of data. This data is continuously analyzed to improve personalized learning experiences. For instance, Nova tracks Alex's progress and adapts study plans to address weaknesses and reinforce strengths. This data-driven approach ensures that Alex's education is highly customized and efficient.

IT User: Alex is also an adept IT user, leveraging advanced software and tools for coursework. For a group project, Alex uses collaborative AI tools to coordinate with classmates, manage tasks, and even simulate project outcomes. The university's IT infrastructure is seamlessly integrated with AI, providing a smooth and intuitive user experience.

Consumer: In the evening, Alex decides to unwind by exploring a virtual shopping mall. Nova assists by curating product recommendations based on Alex's preferences and past purchases. The AI also ensures that Alex's data privacy is maintained, providing transparency about how data is used and offering options to control data sharing.

Learning to Use AI: Alex's journey with AI began in high school, where basic AI literacy was part of the curriculum. By the time Alex entered university, using AI tools like ChatGPT was second nature. The university offers ongoing workshops and resources to help students stay updated with the latest AI advancements and ethical considerations.

Reflection: As the day ends, Alex reflects on the seamless integration of AI in daily life. From personalized learning to efficient task management and enhanced consumer experiences, AI has become an indispensable part of Alex's academic and personal journey.

This scenario illustrates how AI can transform the higher education experience, making it more personalized, efficient, and integrated into everyday life. How do you envision AI impacting your own learning or work in the future?



What kinds of students, education and world are we aiming for?

SUSTAINABILITY and ECOLOGICAL THINKING – What I/WE do matters to the world

Human-world-machine interactions



What is generative AI? Critical perspectives...

Surveillance capitalism, radical behaviorism and indifference

- Users are raw material (data!)
- More use (data), no matter what
- Machines 'without messages' and **economy as value**

(Zuboff, 2022)

Innovation-centric accounts

- Technology = digital
- Change = digital (tech boosterism and alarmism)
- Lack of context, culture and use
- Lose sight of the fact that much is (can be) done without a computer
- Everyone/-thing else become backward-looking
- Forget to ask: why are 'things' the way they are?
- Rejection of technology = problem, rather than basic conditions

(Edgerton, 2008)



NY SØGNING RESEARCH ASSISTANT SPØRG BIBLIOTEKET

Min konto

Skriv et fagligt spørgsmål og udforsk relevant litteratur.

**Iris van Rooij**

@irisvanrooij.bsky.social

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Was looking into what Cognitive Scientists mean by 'domain-general' cognition, and then hit upon this. This is definitely NOT how we use that term.

Tip: read the last sentence to understand what went wrong here.

Sigh.

Domain-General Cognitive Ability

In subject area: [Psychology](#)

Domain-general cognitive abilities refer to cognitive skills that are not unique to humans but are present across various primate species and potentially other mammals and birds, indicating a general factor underlying cognitive performance that correlates with brain size and is associated with selective attention and working memory capacity.

AI generated definition based on: [Trends in Cognitive Sciences, 2012](#)



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*"We must **protect and cultivate the ecosystem of human knowledge**. AI models can mimic the appearance of scholarly work, but they are (by construction) unconcerned with truth—the result is a torrential outpouring of unchecked but convincing-sounding "information". "*

(<https://irisvanrooijcogsci.com/2025/08/12/ai-slop-and-the-destruction-of-knowledge/?blogid=145582815&blogsub=confirmed#subscribe-blog>)

Consequences in the long run...



Don'tloitte (Australia)



Deloitte to refund government, admits using AI in \$440k report

Edmund Tadros and Paul Karp

Oct 5, 2025 - 7.41pm

Deloitte Australia will issue a partial refund to the federal government after admitting that artificial intelligence had been used in the creation of a \$440,000 report littered with errors including three nonexistent academic references and a made-up quote from a Federal Court judgement.

A new version of the report for the Department of Workplace Relations (DEWR) was quietly uploaded to the department's website on Friday, ahead of a long weekend across much of Australia. It features more than a dozen deletions of nonexistent references and footnotes, a rewritten reference list, and corrections to multiple typographic errors.

Tromsø municipality wanted to close 8 schools based on a report that referred to school research that does not exist (27 March 2025)

Kommunen skal ha ros både for å ta i bruk teknologien, men også for å være åpne og reagere raskt når det viser seg at feil har blitt gjort.

KI er et av de kraftigste verktøyene vi har tilgjengelig for å effektivisere og modernisere arbeidsprosesser, særlig i offentlig sektor. Derfor har jeg satt som mål at 80 prosent av offentlige virksomheter skal ta i bruk KI innen 2025, og alle innen 2030. Innbyggere i Norge skal oppleve en moderne offentlig sektor, som gir gode tjenester når vi trenger det.

Nettopp fordi verktøyet er så kraftig, er det viktig å huske at det kun er etisk riktig, etter god samfunns- og menneskene må all

Viser til skoleforskning som ikke finnes: – Det er helt vilt

Flere av forskningskildene i forslaget til ny skolestruktur i Tromsø eksisterer ikke. – Her lurar man rett og slett folk, sier en professor som er sitert på en bok han aldri har gitt ut.



Karianne Tung · Følger

Digitaliserings- og forvaltningsminister
2d · 🌐

<https://www.vg.no/nyheter/i/3MdVzv/viser-til-skoleforskning-som-ikke-finnes-det-er-helt-vilt>

Impact on teachers and students and transferability

- The course has run twice and is now in its third iteration. **Teachers report gaining nuanced understandings of technology and it's co-constitutive roles in education.** They recognize the need to lead and address GAI explicitly in teaching and supervision. Establishing these foundations is essential **before** designing student activities involving GAI.
- This approach argues that **understandings of “technology” are as fundamental as concepts of “learning” and “knowledge” in higher education.** These concepts and the ways we imagine them are co-constituting HE and the world.

Background readings:

- Gupta, A., Atef, Y., Mills, A., & Bali, M. (2024). Assistant, parrot, or colonizing loudspeaker? ChatGPT metaphors for developing critical AI literacies. *Open Praxis*, 16(1), 37-53. <https://doi.org/10.55982/openpraxis.16.1.631>
- Hansbøl, M. (2014). Flere veje til at begribe og håndtere teknologi i professionsarbejdet. *Dansk Pædagogisk Tidsskrift*, 3, 36-44. [DpT 03.2014.pdf](#)
- Hansbøl, M. (2023). Integrative teknologiforståelser. *Nationalt Videncenter for Læsning*. [Integrative teknologiforståelser for en bæredygtig verden](#)

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