

Book of abstracts

TAL2025

Teaching for Active Learning

6 November 2025, University of Southern Denmark

Programme

- 9.00:** Coffee and rolls – *Udsigten at the main entrance*
- 9.30:** Welcome – *Room O100*
Rie Troelsen and Torben K. Jensen, SDU Centre for Teaching and Learning
- 09.45:** Opening keynote – *Room O100*
Keynote José Antonio Bowen: *“Teaching and Thinking with AI”*
- 11.15:** Break
- 11.30:** Parallel sessions 1-5 – *conference rooms O100, O95, O96, O97, O99*
Short communications, workshops, and posters
- 12.30:** Sandwich lunch – *Udsigten at the main entrance*
- 13.15:** Parallel sessions 6-10 – *conference rooms O100, O95, O96, O97, O99*
Short communications, and workshops
- 14.15:** Break
- 14.30:** Closing keynote – *Room O100*
Keynote José Antonio Bowen: *“Educating Humans to Thrive in an AI World”*
- 15.15:** Closing remarks – *Room O100*
- 15.30:** See you again next year

MAP

Location and address

Auditorium O100
Syddansk Universitet
Campusvej 55 5230 Odense M

[See map](#)

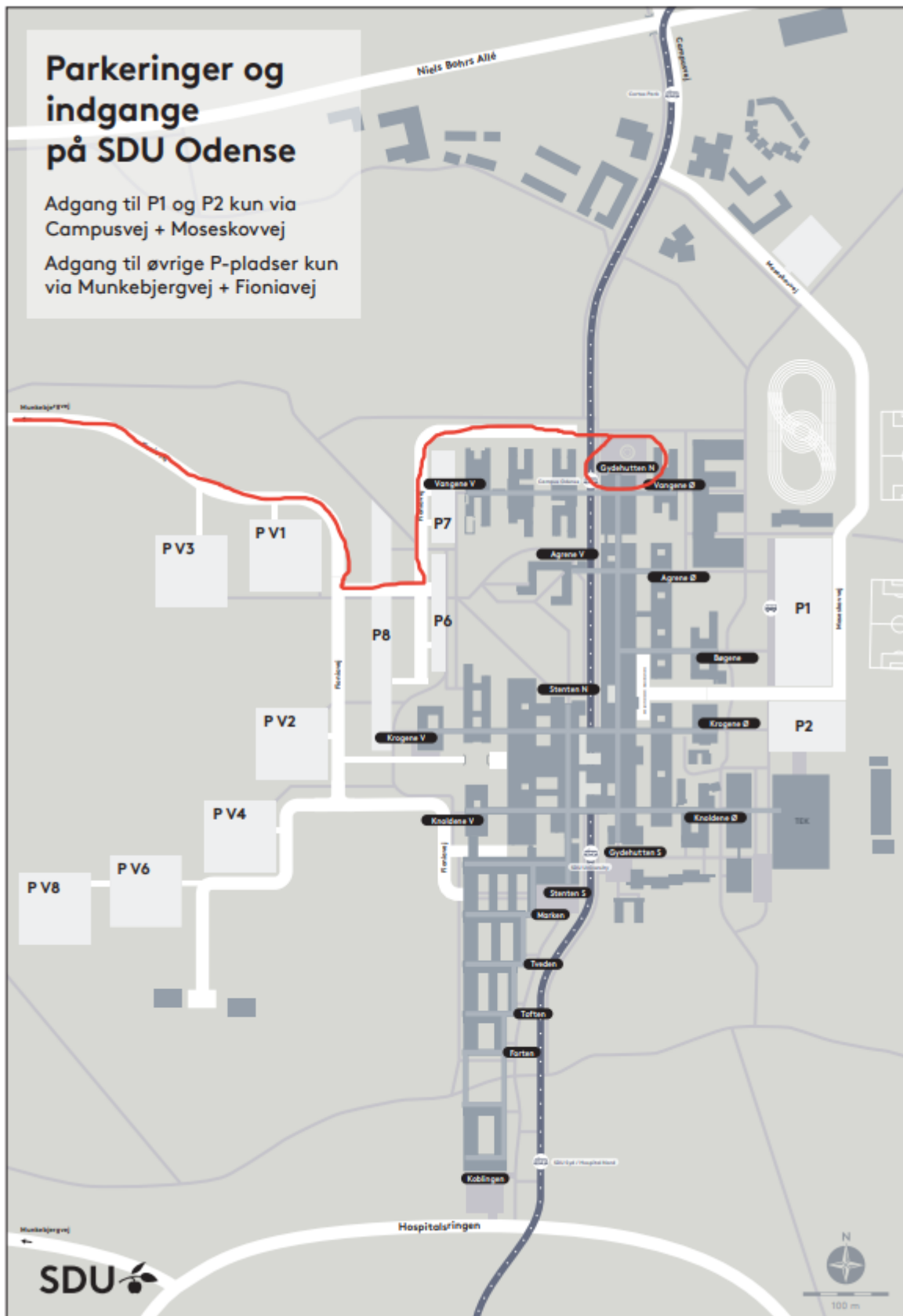
Parking

If you arrive at SDU by car, we advise you to enter by Munkebjergvej and Fioniavej and to use the parking spaces at Fioniavej (P West – PV1, PV3 ...). Then head for Auditorium O100 near the main entrance (15). Parking at P East, P1, P2 via Moseskovvej can be very difficult, and there are far more available parking spaces at Fioniavej (parking at O).

See the map at the next page. The red circle is the main entrance.

Odense Letbane / Tram

If you arrive at SDU by tram, get off at Campus Odense and head for the main entrance (15). You can buy tickets via the app "RejseBillet" or from one of the local vendors (for instance at Odense Banegård and at the book store Academic Books at SDU, Campus).



Keynote: José Antonio Bowen

José Antonio Bowen has had a forty-year academic career and has held positions at a number of prestigious American universities as a scholar, educational developer, dean, and university president. Read more about him at josebowen.com.

He is the author of three highly influential books on teaching:

- *Teaching with AI – A Practical Guide to a New Era of Human Learning (2024)*
- *Teaching Change – How to Develop Relationships, Resilience and Reflection (2021)*
- *Teaching Naked: How Moving Technology Out of Your College Classroom Will Improve Student Learning (2012)*

He also maintains the extensive teaching resource site teachingnaked.com.

José Antonio Bowen is a highly sought-after educator, speaker, and consultant at universities across the world on the topic of quality teaching in general and particularly regarding the opportunities and challenges of teaching with AI, - and he is also a brilliant jazz musician.

Opening keynote: “Teaching and Thinking with AI”

This keynote address by José Bowen raises a number of pressing questions brought to the forefront by the advent of AI: How can AI be integrated into course learning activities? How do we teach students to write when writing becomes increasingly blended with AI? How do we motivate students to engage deeply with content when AI seems to do the work for them? Should academic standards be revised—including, for example, the passing threshold? What should the future of classroom interaction look like: when should technology or AI be incorporated, and when should it be deliberately excluded (so-called “naked teaching”)? What is the distinctive human contribution that must ensure academic quality in AI-generated products? How should assessment and examinations be designed, and how should we address academic dishonesty? In this keynote, José Bowen offers a practice-oriented presentation with numerous examples of how teaching can benefit from thoughtful integration of AI.

Closing keynote: “Educating Humans to Thrive in an AI World”

It is hard to ignore the AI threats to economic, academic, political, environmental and psychological well-being. Higher education, however, finds itself in a unique position to understand and combat these threats: asking better questions and judging answers has always been at the center of a critical thinking education. Education manages the tension between learning to be fully human and preparing for a successful career. Since expertise is also essential to using AI well, we will need to prepare students to be experts in a world where AI can produce better work than many interns. Understanding how we might (or might not) use AI to support human thriving will be essential as we begin the process of maintaining the best of our tradition while rethinking curriculum for a new world.

Overview of sessions

Please note that the presentations in the Danish Sessions may have an English title and abstract, even though they will be held in Danish.

Morning 11.30-12.30

Session: 1 Language: DK Room: O100 Chair: Pernille Stenkil Hansen	Session: 2 Language: ENG Room: O95 Chair: Donna Hurford	Session: 3 Language: ENG Room: O96 Chair: Rie Troelsen
SC 1 Active and Inactive Learning with AI Tools <i>Kristian Redhead Ahm</i>	SC 4 Lessons taught on, and learned from, mandatory use of generative AI <i>Christian Martin Bächler Jacob Christensen</i>	SC 7 Quantitative evaluation of the quality of research based teaching <i>Ali Muhammad</i>
SC 2 AchyBot: An AI-Powered Chatbot to Support Clinical Reasoning in Preclinical Chiropractic Education <i>Henrik Hein Lauridsen Steen Harsted Magnus Mortensen Martin Sand Jensen</i>	SC 5 Writing positive climate futures: Active learning and AI in climate fiction writing <i>Patricia Wolf Bryan Yazell Thomas Kaarsted Line Laursen Corydon Szabolcs Dezso Fabian Christina Tjørntved Hansen</i>	SC 8 Embedding Research Practice in Teaching: A Conference-Based Model for Active Learning <i>Marco Scirea</i>
SC 3 Hvilken betydning har AI Literacy i gruppearbejde? <i>Helle Tougaard Annegrete Skovbjerg Mette Mørk</i>	SC 6 LLM-Assisted Paper Reading <i>Lukas Galke</i>	Poster 1 Active learning using AI-supported case discussions: A three-year teaching reflection <i>Fereshteh Baygi</i>


Morning 11.30-12.30

<p>Session: 4 Language: ENG Room: O97 Chair: The presenter manages their own time</p>	<p>Session: 5 Language: DK Room: O99 Chair: The presenter manages their own time</p>
<p>Workshop 1</p> <p>Developing synthetic data for practice-based teaching</p> <p><i>Martin Rehm</i> <i>Jesper Piihl</i> <i>Kent Adsbøll Wickstrøm</i> <i>Zhiru Sun</i> <i>Stig Børsen Hansen</i></p>	<p>Workshop 2</p> <p>GenAI & the human touch. Improved classroom management with a little help from GenAI idea generation</p> <p><i>Simon Laub</i></p>

Afternoon 13.15-14.15

Session: 6 Language: DK Room: O96 Chair: Lotte Dyhrberg O'Neill	Session: 7 Language: ENG Room: O95 Chair: Vitus Vestergaard	Session: 8 Language: ENG Room: O100 Chair: Vibeke Damlund
SC 9 Samarbejdslearning mellem studerende – udfordringer og løsninger <i>Flemming Smedegaard</i> <i>Maria Mejnberg Lidsmoes</i>	SC 12 New technology in the classroom. Why scaffolding matters <i>Lise Stenbæk</i>	SC 15 Enhancing engagement in pharmacology through flipped learning: a mixed approach to active learning <i>Lanfranco Pellesi</i> <i>Louise Torp Dalgaard</i>
SC 10 What kinds of students do we wish to educate? What kind of education and world are we aiming for? <i>Mikala Hansbøl</i>	SC 13 Enhancing Student Engagement and Learning Outcomes in Programming Courses using Student-generated Quizzes <i>Srinivasa Raghavendra</i> <i>Bhuvan Gummidi</i>	SC 16 CANCELLED Beyond the Page and Screen: Enhancing Student Engagement and Comprehension through Experiential Learning Modalities <i>Su Hyun Berg</i> <i>Mia Høj Mathiasson</i>
SC 11 AI i projektledelse – erfaringer med at lede AI-integrationsprojekter i undervisning <i>Anna Spon Stecher</i>	SC 14 Impact of Generative Artificial Intelligence (GAI) in Science Education <i>Chunfang Zhou</i> <i>Serhii Petrovych</i>	SC 17 Enhancing Student Engagement through AI-Generated Quizzes <i>Tove Faber Frandsen</i>

Afternoon 13.15-14.15

<p>Session: 9 Language: ENG Room: O97 Chair: The presenter manages their own time</p>	<p>Session: 10 Language: ENG Room: O99 Chair: The presenter manages their own time</p> <p style="text-align: center;">CANCELLED</p>
<p>Workshop 3</p> <p>Cultivating a mindset and an approach for experimenting with new technologies</p> <p><i>Inger-Marie Falgren Christensen</i></p>	<p>Workshop 4</p> <p>Guided inquiry through small group work</p> <p><i>Siddharth Bhaskar</i></p> 

Abstracts for parallel sessions

Session 1

Short communication 1:

Active and Inactive Learning with AI Tools

Authors:

- Kristian Redhead Ahm, Assistant Professor, Media Production & Management, Danish School of Media and Journalism

What did you intend the students to achieve from this teaching and learning activity/curriculum intervention?

I intended to strengthen the 1st semester students' engagement with academic literature by introducing them to NotebookLM to approach texts in a dialogic and interactive way. I introduced Perplexity to support their independent desk research, hoping it could help them identify relevant literature for their written exam. The overall aim was to pair new AI tools with existing academic skills, not as a replacement, but as a supplement that might open new opportunities for active learning.

Which general features of the teaching and learning activity will you share at TAL2025?

I will share how I introduced these AI tools in class, the tasks I asked the students to complete with them, and how I sought to link them to traditional practices such as academic reading and information search. For example, the use of NotebookLM was combined with guided reading, so the students could both read texts and discuss them with the AI tool. The goal was to show that active learning does not require AI, but that it may create new possibilities for engagement and personalization. Perplexity was introduced with a (too) broad exercise description.

According to you and the students, what was the impact of the intervention on student learning/engagement/ development of competences?

The use of Perplexity quickly proved problematic. Students placed too much trust in its confident but low-quality search outputs, often based on personal blogs or commercial websites. This created the illusion of academic work, while in fact undermining their source evaluation skills. With NotebookLM, I observed less obvious issues, but the risk was similar: the instant summaries made it too easy to skip the demanding process of reading. For 1st semester students, who have little prior experience with academic texts, this risked cutting short a learning process they urgently need.

How could your practice be inspirational/transferable to other teaching contexts?

The key takeaway is the importance of timing when to introduce AI tools. My experience suggests that introducing them too early can be harmful, as students lack the foundation to use them critically. At the same time, it raises the question of whether we as educators should instead help students face AI critically from the very beginning, since many will use such tools regardless. By sharing this dilemma, I hope to inspire other teachers to reflect on how and when to integrate AI into their practice, and I invite discussion on alternative

approaches, such as using AI to demonstrate poor outputs as a way of teaching critical thinking. A possible way forward is to introduce reading as an inquiry-based methodology (Katan & Baarts, 2020). I hope to gather input from the audience about possible ways to proceed.

Short communication 2:

AchyBot: An AI-Powered Chatbot to Support Clinical Reasoning in Preclinical Chiropractic Education

Authors:

- Henrik Hein Lauridsen, Associate Professor, Department of Sports Science and Clinical Biomechanics, SDU
- Steen Harsted, External lecturer, Department of Sports Science and Clinical Biomechanics, SDU
- Magnus Mortensen, Student, Department of Sports Science and Clinical Biomechanics, SDU
- Martin Sand Jensen, Student, Department of Sports Science and Clinical Biomechanics, SDU

OBS: Note the presentation will be in Danish even though the abstract is in English.

What did you intend the students to achieve from this teaching and learning activity/curriculum intervention?

The goal was to enhance chiropractic students' clinical and diagnostic reasoning in musculoskeletal care by simulating realistic patient encounters. AchyBot allows students to practice focused case history taking, select appropriate physical examination procedures, and make differential diagnoses in a safe and interactive environment. Importantly, the chatbot provides immediate feedback on the plausibility and correctness of the students' diagnostic decisions, supporting reflective learning and self-assessment.

Which general features of the teaching and learning activity will you share at TAL2025?

We will present a collaborative student-teacher project that developed and implemented AchyBot using prompts on the OpenAI platform, structured dialogue logic, and integrated clinical cases. The chatbot was built in [R](#) as a [Shiny app](#) and published as open source on [GitHub](#). We will describe the development process and demonstrate the user interface. The presentation will also address how the clinical validity of the chatbot's responses was assessed and how students engaged with the tool in a preclinical chiropractic course.

According to you and the students, what was the impact of the intervention on student learning/engagement/ development of competences?

Student feedback on AchyBot is currently being collected through an online questionnaire. The evaluation focuses on the chatbot's potential to support learning in clinical reasoning, case history taking, and examination selection. At TAL2025, we will present findings from the feedback and explore how students engaged with the tool in a conversational, low-risk learning environment.

How could your practice be inspirational/transferable to other teaching contexts?

The AchyBot model is highly transferable. Similar chatbots can be developed for a wide range of clinical education contexts and even extended beyond healthcare, wherever interactive case-based reasoning and decision-making are valuable. The modular and open-source structure makes it adaptable for various educational purposes and disciplines.

Short communication 3:

Hvilken betydning har AI i gruppearbejde?

Authors:

- Helle Tougaard, Lektor, Kommunikationsuddannelsen, Danmarks Medie- og Journalisthøjskole
- Annegrete Skovbjerg, Pædagogisk Udviklingskonsulent, Center for Pædagogisk Udvikling og Digitalisering, Danmarks Medie- og Journalisthøjskole
- Mette Mørk, Uddannelseskoordinator, Journalistuddannelsen, Danmarks Medie- og Journalisthøjskole

What did you intend the students to achieve from this teaching and learning activity/curriculum intervention?

En spørgeskemaundersøgelse blandt 200 studerende på Danmarks Medie- og Journalisthøjskole (DMJX) samt et fokusgruppeinterview med en gruppe 1. årsstuderende på Kommunikationsuddannelsen indikerede, at de studerende generelt ikke har en klar praksis for eller i det hele taget diskuterer, hvordan og hvorfor de anvender AI i deres gruppearbejde. Vores formål er derfor at skabe refleksion hos de studerende over deres brug af AI, og dermed bidrage til at de opnår et højere niveau af AI Literacy (Ng et al, 2021).

Which general features of the teaching and learning activity will you share at TAL2025?

Refleksiv praksislæring (Horn et al, 2020) er det pædagogiske afsæt for undervisningen på DMJX og betoner vigtigheden af samarbejde, dialog og inddragelse af egne erfaringer i et kollaborativt gruppearbejde. Men spørgsmålet er, hvorvidt og i så fald hvordan ny teknologi i form af AI udfordrer dette.

I undersøgelsen fra DMJX påpeger flere studerende - udover en række positive effekter af brugen af AI til bl.a. kreativ idéudvikling, opsummering af lange tekster, korrektur og transkribering - at de kan være bange for, at AI forringer deres læringsmuligheder, og at deres medstuderende bruger AI for ukritisk.

For når de studerende ikke tager stilling til eller diskuterer hverken deres individuelle eller deres fælles brug af AI, vil teknologien få indflydelse på, hvordan de pædagogiske principper bliver omsat i samarbejdet i gruppen, hvor der hverken er underviser eller vejleder til stede. Undersøgelsen indikerer, at AI i nogle tilfælde optræder som en slags blind passager i gruppen. Dermed bliver brugen af AI i sig selv en aktør i opgaveløsningen (Dalsgaard og Ryberg, 2022,) og som undervisere er det derfor vores opgave at arbejde med de studerendes AI literacy og bidrage til at bringe dem fra et udgangspunkt, hvor de har et grundlæggende kendskab til AI til at kunne anvende, evaluere og diskutere AI og ikke mindst de etiske udfordringer ved brugen (Ng et al, 2021).

Vi vil vise, hvordan vi som en del af studiestarten for Kommunikationsstuderende har arbejdet med tre forskellige aktiviteter, der tilsammen har til formål at understøtte dannelsen af de studerendes AI literacy – herunder AIs rolle i forbindelse med gruppearbejdet. Vi har endnu ikke haft mulighed for at måle den mere langsigtede effekt af aktiviteterne, men vil dele den foreløbige evaluering vi netop har lavet med de studerende.

According to you and the students, what was the impact of the intervention on student learning/engagement/ development of competences?

Undersøgelsen viste, at de studerende i højere grad blev bevidst om brugen af AI, når de blev bedt om at reflektere over brugen af AI som en del af deres samarbejde i studiegruppen. Vi kan ikke på den baggrund dokumentere, at øget bevidsthed fører til bedre brug, men evalueringen af de konkrete aktiviteter indikerer, at dannelsen af AI literacy bliver understøttet.

How could your practice be inspirational/transferable to other teaching contexts?

Undersøgelsen har resulteret i to konkrete aktiviteter, som kan bruges i de fleste undervisningssituationer:

- At facilitere rammesatte refleksioner og samarbejdsaftaler vedr. brug af AI ved projekter og gruppearbejde
- At eksperimentere med prompts, der indtager rollen som sparringspartner – herunder for grupper i projektarbejde.

Session 2

Short communication 4:

Lessons taught on, and learned from, mandatory use of generative AI

Authors:

- Christian Martin Bächler, PhD student, Department of Design, Media and Educational Science, SDU and associate lecturer at Social Work Education, UCL
- Jacob Christensen, PhD and Associate Lecturer, Social Work Education, UCL

What did you intend the students to achieve from this teaching and learning activity/curriculum intervention?

New UCL guidelines allowed the students to use generative AI working with their bachelor projects from winter 2024. The primary goal with our intervention was to prepare social work students for their bachelor projects by equipping them with practical and critical skills in using generative AI, specifically implementations of LLMs. This was done by adding a layer of mandatory AI use at the students' exam in their final course designing their bachelor project. This course is on philosophies of science and academic methods. Lessons in the module integrated reflective and practical use of gen AI. The intervention aimed to foster both technical understanding and reflective competence, enabling students to apply AI tools meaningfully within the context of academic work.

Which general features of the teaching and learning activity will you share at TAL2025?

At TAL2025, we will present the design and implementation of the module and an exemplary teaching module on generative AI, integrated into one of five thematic areas of the final course in the social work program. Key features include:

A structured learning pathway introducing gen AI concepts and ethical considerations.
Hands-on activities using language models in academic and professional scenarios.
Reflections from lecturers and evaluations from students on the use of gen AI.

According to you and the students, what was the impact of the intervention on student learning/engagement/development of competences?

The feedback given from students was based on both formal and informal evaluations, such as plenum discussion and written delphi evaluations. Feedback indicates increased student engagement and curiosity, particularly in exploring the relevance and limits of gen AI. Students reported feeling better prepared for their bachelor projects and more confident in navigating AI tools critically and ethically. At the same time, though, students' doubts also seemed to persist on how much gen AI could be used without cheating and some students finding the requirement of having to use gen AI for the exam to be irrelevant and another thing to deal with rather than a support.

How could your practice be inspirational/transferable to other teaching contexts?

This initiative offers a scalable model for integrating AI into students' work with projects in higher education. The modular structure makes it adaptable to various institutional contexts. It demonstrates how AI can be embedded meaningfully into professional education, supporting both pedagogical innovation and alignment with evolving workplace demands.

Short communication 5:

Writing positive climate futures: Active learning and AI in climate fiction writing

Authors:

- Patricia Wolf, Professor, Department of Business & Management, SDU
- Bryan Yazell, Associate professor, Department of Culture and Language, SDU
- Thomas Kaarsted, Head of Communications, The University Library, SDU
- Line Laursen Corydon, Academic Staff, The University Library, SDU
- Szabolcs Dezso Fabian, PhD Student, Department of Business & Management, SDU
- Christina Tjørntved Hansen, Student Assistant, Department of Business & Management, SDU

What did you intend the students to achieve from this teaching and learning activity/curriculum intervention?

We aim to help high school students to imagine positive climate futures to overcome climate anxiety and strengthen their creativity and critical thinking. Through writing short stories on their own and with AI tools, students should learn to reflect on how AI influences narratives. In addition, it is also intended to increase their understanding of AI's possibilities and limits.

Which general features of the teaching and learning activity will you share at TAL2025?

At TAL2025, we will share the active learning approach that we applied in the Climate Fiction Writing Project 2024. In this project, we asked 78 Danish teenagers aged 16-18 years to flow-write three 150-300-word Flash Fiction stories about a protagonist in the climate future 40 years from now. These stories were then expanded into complete short stories in the students' English classes under the guidance of their teachers, using a work sheet with structured questions to expand the Flash Fiction stories. After they had developed their stories, the students were asked to go back to and expand upon their original Flash Fiction stories by using again a structured work sheet with the same questions and instructions on how to prompt a LLM program of their choice.

Teachers led the in-class analysis and comparison of the human-generated and AI-generated stories, where students were asked to think critically about the changes AI makes, such as simplifying dialogue and pushing for optimistic endings. In addition, as researchers, we used thematic and structural analysis to compare the stories. At the final red-carpet event, we shared the differences we found between the AI- and human-generated stories with the students and discussed these findings with them. We also awarded the best human-created stories.

At TAL2025, we will focus on sharing how we have integrated AI into the classroom and what the results have been.

According to you and the students, what was the impact of the intervention on student learning/engagement/ development of competences?

After the intervention students reported feeling more motivated and hopeful about the future. They became more creative and better at thinking critically about technology. The climate future life worlds in the AI stories were classified by the high school students as boring and not motivating action - in stark contrast to the human-written stories, that evoked strong emotions and the desire to act. They highlighted that using AI helped them to better understand AI's storytelling capabilities, and the importance of human input.

How could your practice be inspirational/transferable to other teaching contexts?

Combining active learning with AI reflection allows students to build critical digital skills, while staying engaged. The structure of creative production and afterwards integration of AI can be used in multiple teaching contexts and because it is student-centered, this method can easily be adapted to age groups.

We will also provide an outlook on our own learnings and what we plan to change in the FUSION project, which will work with German and Danish students in the next round of climate fiction writing in 2025.

Short communication 6:
LLM-Assisted Paper Reading**Authors:**

- Lukas Galke, Assistant Professor, Department of Mathematics and Computer Science, SDU

What did you intend the students to achieve from this teaching and learning activity/curriculum intervention?

The intended outcome of this learning activity is three-fold: First, students learn how to responsibly interact with modern AI technology (specifically, large language models, or LLMs for brevity). Second, students learn how to validate the outputs of large language models in the context of paper reading – a skill that will be valuable for their careers in academia and beyond. And lastly, students learn about course-relevant material from a pool of state-of-the-art research papers – sparking curiosity.

Which general features of the teaching and learning activity will you share at TAL2025?

Students are asked to use large language models to summarize and explain the main takeaways from state-of-the-art research papers.

The activity starts with a brief modeling phase, demonstrating the task and showing what can go wrong (5min). Thereafter, students engage in group work (30min). Each group selects a separate research paper to study, from a pool to which students could contribute in advance. Students then interact with LLMs to complete the assignment. Subsequently, in a synthesis phase (30min), each group presents their findings with a special focus on judging the language model outputs: “What did the language model get right?”, “Where was it wrong?”, “Could it be nudged in the right direction”. The teacher, who is familiar with all papers from the pool, and other participants can ask clarification questions and may enter a brief discussion.

According to you and the students, what was the impact of the intervention on student learning/engagement/ development of competences?

Students mentioned that they learned about the potential pitfalls of using AI technology, i.e., in one case, the model summarized a completely different paper out of nowhere. At other times students spotted a potential mistake, and experienced excessive degree of sycophancy that is typical for proprietary large language models (i.e., the LLMs being overly agreeable).

Nonetheless, students were also positively impressed by the assistance supplied by LLMs and how it can accelerate paper reading. They further got the opportunity to dissect the pros/cons of different AI tools (NotebookLM: close to its sources, Gemini: long context, ...). Regarding course-relevant content, students highlighted that they gained a good overview of different papers, but they also noted that they “get a lot of insights of my own paper. But not so much about the others”. Thus, some students suggested having a longer synthesis phase. Interestingly, some students mentioned that this is how they do group work anyways.

This leaves the impression that a controlled environment of this learning activity is very valuable to students as it enables teachers and students to openly discuss the risks and opportunities of modern AI technology.

How could your practice be inspirational/transferable to other teaching contexts?

The learning activity was followed by a classroom-wide reflection (5min) guided by the question: "Would you recommend this teaching activity to others?"

Students answered this question generally positively, with the caveat that a more extensive introductory phase (e.g., an introduction to prompting a large language model, or a longer modeling phase) may be needed when using this learning activity in other disciplines (this class was AI506: Advanced Machine Learning). I believe that it would be worthwhile to further explore this learning activity in other teaching contexts because students will use AI technology anyways – and teachers now need to guide them to use it responsibly.

Session 3

Short communication 7:

Quantitative evaluation of the quality of research based teaching

Authors:

Ali Muhammad, Assistant Professor, The Maersk Mc-Kinney Moller Institute, SDU

What did you intend the students to achieve from this teaching and learning activity/curriculum intervention?

Almost all university programs involve a final year project, which demands the students to use their knowledge and engage in research activities to solve a practical/industrial challenge. Observations show that a large majority of students report they successfully solved these challenges even when the experts have been trying to solve these challenges for several years. With this background the goals of this study were:

- Change the mindset of the students that they are not graded based on successfully solving the challenge, but they are graded based on what they learn using the scientific and research-based approach to solve the challenge.
- Develop my own teaching such that it is research-based and to develop a methodology through which I can objectively evaluate the quality of my research-based teaching.

Which general features of the teaching and learning activity will you share at TAL2025?

The little deeper analysis showed that the student mindset is the direct result of the reporting format defined by the teacher. In many cases students focus on producing lengthy reports where the actual essence of their work is lost. To ensure that students follow a scientific approach, and there is an alignment between learning objectives and students' learning activities, a new reporting template was introduced following the format of a scientific publication, which includes all the elements required for qualified research work. These templates have already been designed for reporting scientific work and there is already existing internationally established methodology to evaluate the scientific publications.

According to you and the students, what was the impact of the intervention on student learning/engagement/ development of competences?

I was positively surprised during the final feedback session, when 12 groups sent me their first draft for the feedback. At least 5 of these reports could be considered high-quality scientific work. In fact, these reports could even be submitted to some scientific conference, which I recommend to these groups. This was one of the positive indicators for me to continue this approach for the future.

How could your practice be inspirational/transferable to other teaching contexts?

This study shall be considered as an attempt to encourage the teachers to adopt more scientific approach towards the evaluation of their performance. Furthermore, the concept of measurable KPI may not be limited only to measure the success of research-based teaching. But this concept can be extended further for teachers to improve other aspects of their teaching, such as: Feedback/feedforward, expectations alignment, supervision, etc. where appropriate KPIs and data collection methodologies can be implemented as per course structure and requirements.

Short communication 8:

Embedding Research Practice in Teaching: A Conference-Based Model for Active Learning

Authors:

- Marco Scirea, Associate Professor, The Maersk Mc-Kinney Moller Institute, SDU

What did you intend the students to achieve from this teaching and learning activity/curriculum intervention?

The primary goal was to immerse students in authentic academic research practices by simulating the experience of submitting to a real conference. By framing the Advanced Artificial Intelligence in Games course around the IEEE Conference on Games (CoG), students were expected to develop research competencies, deepen their understanding of AI in games, and produce a paper-quality project. The course aimed to foster critical thinking, academic writing skills, and engagement with the research community.

Which general features of the teaching and learning activity will you share at TAL2025?

The course was structured around a hybrid model: half of the sessions were dedicated to lectures on state-of-the-art research, and the other half to guided project work. Key features include:

- A simulated (or real) academic conference as the course framework.
- Milestone-based project development (e.g., concept, research questions, methodology).
- The teacher acting as a co-researcher and mentor.
- Use of collaborative tools (e.g., shared spreadsheets for idea generation and feedback).
- Rubrics and writing guidelines to scaffold academic writing.
- Optional real-world publication opportunities post-course.

According to you and the students, what was the impact of the intervention on student learning/engagement/ development of competences?

Students reported increased motivation and ownership of their projects, driven by a tangible goal and good amount of time to work on it. The structured milestones helped them navigate the research process with clarity, while the teacher's mentorship encouraged deeper reflection and iterative improvement. Several students continued developing their work after the course, with some submitting to actual conferences—demonstrating both skill development and increased academic confidence.

How could your practice be inspirational/transferable to other teaching contexts?

This approach is adaptable to any research-oriented course where students are expected to engage with academic literature and produce original work. The simulated conference model provides a clear, motivating structure that can be tailored to different disciplines. The co-creative teacher role, milestone-based progression, and emphasis on real-world relevance make it a compelling model for fostering active learning, especially in higher education settings focused on research and innovation.

Poster 1:

Active learning using AI-supported case discussions: A three-year teaching reflection

Authors:

- Fereshteh Baygi, Senior Researcher, Department of Public Health, SDU

What did you intend the students to achieve from this teaching and learning activity/curriculum intervention? The primary goal was to enhance students' active participation in case-based discussions (small-group discussions) by integrating AI tools. AI tools were used by the teacher to generate realistic health care scenarios, encouraging students to discuss complex cases, even though they did not interact with AI directly.

Which general features of the teaching and learning activity will you share at TAL2025? I will share how AI tools, such as ChatGPT, were used to revise clinical cases and discussion questions, enhancing their relevance to engage active participation of the students. Additionally, I will present a three-year reflection, emphasizing how the use of AI progressively increased student participation in both classroom discussion and final assessment response.

AI was introduced in stages: it was not used in spring 2023, introduced partially in autumn 2024 to refine discussion prompts, and fully integrated in spring 2025 to generate case content and questions. In the course exam, students were allowed to skip one question. I tracked how many chose to answer the question linked to my session, this voluntary choice reflected their level of engagement with material.

According to you and the students, what was the impact of the intervention on student learning/engagement/ development of competences? Students' engagement in classroom discussions and final assessments appeared to increase steadily over the three semesters (Spring 2023, Autumn 2024, and Spring 2025). Based on the teacher post-session reflection, there was a noticeable rise in students' interaction and interest as AI tools become more integrated. While only a limited number of students chose to answer the exam question in Spring 2023, more participated in Autumn 2024, and by the Spring 2025, a large majority appeared to be engaged with the topic in the final exam.

How could your practice be inspirational/transferable to other teaching contexts? Although these trends are based on reflective observations rather than precise measurements, they suggest a potential positive shift in students' motivation and active participation. Therefore, teachers aiming to promote active learning may find AI-supported case discussion to be a promising approach. This method offers opportunities to personalize content, enhance engagement, and encourage deeper learning. I believe these are the features that can be adapted to various disciplines and teaching contexts.

Declaration of Generative AI and AI-assisted technologies: This study was revised with the assistance of Microsoft Copilot to improve clarity and language.

Session 4

Workshop 1:

Developing synthetic data for practice-based teaching

Authors:

- Martin Rehm, Associate Professor, Department of Design, Media and Educational Science, SDU
- Jesper Piihl, Associate Professor, Department of Business and Sustainability, SDU
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Developing synthetic data for practice-based teaching

Educational institutions are increasingly adopting data-driven approaches to enhance teaching and learning. This development is driven by the growing demand from practice for students to be able to work with large datasets in future jobs. This, however, presents substantial difficulties, which can be summarized by two key aspects. First, real-life data from organizations are difficult to use as they are generally prohibitive in sharing their relevant datasets. Second, privacy regulations such as the General Data Protection Regulation (GDPR) and institutional ethics guidelines limit the scope of using identifiable personal data, sensitive internal business data or data behind paywalls for educational purposes. Synthetic data offers a way to simulate real-world scenarios, support instructional design, and facilitate the development and testing of predictive models without compromising privacy or data security.

In this context, this workshop will report initial findings and experiences from an ongoing project on developing synthetic data at a Danish university. The purpose of the project is to develop and test synthetic data in the context of practice-based teaching. Moreover, analysis of large datasets plays an increasing role across different activities in contemporary society. When teaching students to work with such datasets, they should ideally mirror relevant features of real-world data in business, education and elsewhere.

The proposed workshop will present concrete use cases and avenues of development that have already been identified and showcase the use of synthetic data that mirror data from social media, learning analytics and business data.

Guiding questions that drive our work are: How does this use of AI motivate students? In what ways can AI support the generation of synthetic data?

The workshop is targeted towards teachers. More specifically, while teachers from all domains are welcome, the organizers are based in the social sciences and the humanities. The workshop will be based on the following activities:

- 1) Brief introduction (20 minutes):
 - a. Theoretical and conceptual overview of synthetic data in education

- b. First considerations and insights from three existing use cases, namely: i) business processes, ii) learning analytics, and iii) knowledge mobilization on social media. Specifically, we will go into:
 - i. How to create synthetic data
 - ii. Envisioned teaching activities
 - iii. Incorporating feedback from students
- 2) Roundtables / Break-Out Sessions, where participants will be guided along the following questions (40 minutes):
 - a. Can I use synthetic data in my teaching?
 - b. What would be the added value of using synthetic data in my teaching?
 - c. What other cases would it be possible to create?
 - d. How can I create my own synthetic data?
 - i. Overview of (technical) requirements and some first-hand experiments

Developing synthetic data for practice-based teaching

What do you intend the workshop participants to achieve from this workshop?

The aim of this workshop is to showcase and discuss use cases and best practices for integrating synthetic data in teaching.

The learning outcomes for workshop participants is to heighten awareness of the possibilities that synthetic data offer teaching. Additionally, participants will have the opportunity to get some first-hand experiences in creating synthetic data for teaching purposes.

Which activity will you include at the workshop TAL2025?

The participants will be included actively in the workshop through “quick and dirty” attempts at generating synthetic data and identification and discussion of own use cases.

According to you, what could be the impact for participants participating in the workshop?

Knowledge of an avenue of using AI in teaching that is increasingly called for from practice. More specifically, being able to create synthetic data, will allow teachers to more effectively support students in working with large datasets, gaining insights and experience that will benefit them in their later work.

How could this workshop be inspirational/transferrable to other teaching contexts?

By actively engaging participants in the brainstorming and identification of use cases relevant to their own teaching.

Primary literature:

References

Assefa, S. A., Dervovic, D., Mahfouz, M., Tillman, R. E., Reddy, P., & Veloso, M. (2020). Generating synthetic data in finance: Opportunities, challenges and pitfalls. *Proceedings of the First ACM International Conference on AI in Finance*, 1–8.
<https://doi.org/10.1145/3383455.3422554>

Flanagan, B., Majumdar, R., & Ogata, H. (2022). Fine grain synthetic educational data: Challenges and limitations of collaborative learning analytics. *IEEE Access*, *10*, 26230–26241.

Sagduyu, Y. E., Grushin, A., & Shi, Y. (2018). Synthetic social media data generation. *IEEE Transactions on Computational Social Systems*, *5*(3), 605–620.

Session 5

Workshop 2:

GenAI & the human touch. Improved classroom management with a little help from GenAI idea generation

Authors:

- Simon Laub, Lektor, Erhvervsakademi Århus (EAAA)

OBS: Note the presentation will be in Danish even though the abstract is in English.

Most educators have experienced classes, where some of the students haven't been particular receptive to learning.

In a class such students might show signs such as:

Passivity, lack of engagement during class, few or no questions during lectures, silence during group work or dialogue-based teaching, "hiding" behind screens, repeatedly checking their phones, Lack of preparation for the day's topic, absence and irregular attendance, missing assignments and missed deadlines.

Often, such behaviors and lack of participation might be signs of complex underlying issues, such as:

Stress and performance pressures, depressions, lack of academic skills, poor study practices, lack of connection to instructors and fellow students etc.

Given such a wide variety of potential problems it will not be realistic to expect the individual educator to fix all problems in the classroom.

Still, the problems need to be dealt with in the best possible way. And it might actually be possible to let GenAI help (pre)process some of these problems.

Certainly, in this presentation, it is suggested that generative Ai can provide some assistance.

- First the problem (as it presents itself) in the classroom can be described informally to the GenAi, that can be asked to highlight the problems impact on the teaching in the class.
- Secondly, the GenAi can be asked to come up with steps in a possible solution.

With these two inputs, this second opinion, the educator can then re-evaluate the situation, and be better prepared before taking action.

Indeed, often the GenAi will be able to point to similar cases, and be able to highlight the underlining problems, and appropriate next steps for dealing with the problems in the classroom. Giving the educator a quick overview that might be helpful before the educator applies his or her own "human touch"

to the situation.

3 case stories will be given (in this presentation), along with GenAI feedback to these scenarios. Exemplifying GenAis role in solidifying the educators work with these cases and come up with practical suggestions for dealing with real world situations.

In the presentation it will be clearly stated that GenAI feedback should not be seen as a substitute for feedback from colleagues or mentors. But only as one additional teaching resource when it comes to classroom management.

What do you intend the workshop participants to achieve from this workshop?

In a workshop format the small presentation will highlight the possibilities for getting assistance from GenAI in complex , real world classroom scenarios.

In a workshop format the latter part of the workshop will allow participant to engage with their own real-life cases, and discuss them and the Feedback from GenAI with fellow educators.

Where the learning outcome will be increased familiarity with this way of working with classroom management. Gaining inspiration on strengths and weaknesses

in using GenAI as a sparring partner for classroom management challenges.

In a short presentation – the workshops more thorough discussion will be shortened to a small list of questions to listeners, at the end of the talk.

Which activity will you include at the workshop TAL2025?

Cases will be used to ensure activation of participants.

Where participants will be included actively in the workshop through time for investigation of (their) own practical examples of real-world problems with classroom management, followed with group discussions.

According to you, what could be the impact for participants participating in the workshop?

The expected take home messages will be that complex classroom management problems can appear very intimidating. Getting started is obviously the first step though. And GenAI can often be a good way to get started.

How could this workshop be inspirational/transferrable to other teaching contexts?

Finding the right way to use GenAI is the hard part. Especially in very complex problem areas like classroom management.

Primary literature:

For some years now, teachers have worried that students use GenAI Inappropriately. Recently, students have begun to worry that teachers use GenAI inappropriately.

<https://www.nytimes.com/2025/05/14/technology/chatgpt-college-professors.html>

But well, much of it is a learning process, exploring what is appropriate use and what is less so. With this presentation as one small step of the way.

Session 6

Short communication 9:

Samarbejds læring mellem studerende – udfordringer og løsninger

Authors:

- Flemming Smedegaard, Lektor og studieleder, Institut for Kultur- og Sprogvidenskaber, SDU
- Maria Mejnborg Lidsmoes, Kommunikationskonsulent, SDU Uddannelse

What did you intend the students to achieve from this teaching and learning activity/curriculum intervention?

“Manglende arbejde, stor forskel på niveau, mangel på kommunikation” er et typisk eksempel på de svar om gruppearbejde, som vi har fået i det forskningsprojekt om studerendes samarbejde, vi er i gang med at gennemføre. Aftagerne taler om, at et af de allervigtigste krav til kandidaterne er store samarbejdsevner, og at samarbejde i høj grad skal udgøre en vigtig konkurrencefordel for Danmark. Aftagerne efterspørger derfor, at vi på universitetet gør endnu mere ud af at udvikle de studerendes samarbejdsevner gennem obligatoriske studiegrupper, gruppeprojekter mv. Både spørgeskemaer og interviews i vores forskningsprojekt viser imidlertid, at et flertal af de studerende har overvejende negative samarbejdsoplevelser og har oplevet store udfordringer med at få et samarbejde med medstuderende til at fungere.

Which general features of the teaching and learning activity will you share at TAL2025?

Vi vil på TAL2025 præsentere hovedresultaterne af både vores spørgeskema- og interviewundersøgelse. Vi har særligt spurgt ind til, hvilken rolle digitale platforme spiller i de studerendes samarbejde, og vi vil særligt komme ind herpå. Stort set alle benytter digitale platforme, men mest til deling af dokumenter og til onlinemøder.

According to you and the students, what was the impact of the intervention on student learning/engagement/ development of competences?

Vores undersøgelser peger tydeligvis på, at der er stort behov for, at vi på universitetet gør meget mere ud af at arbejde med at udvikle de studerendes samarbejdsevner og at facilitere de studerendes gruppearbejde. Vi vil i indlægget skitsere nogle forslag til, hvordan vi på uddannelserne kan blive bedre til dette, fx at indføre undervisning i teamlæring på studiets 1. semester.

How could your practice be inspirational/transferable to other teaching contexts?

Vores undersøgelse er gennemført på en række humanistiske uddannelser, men alt tyder på, at samarbejdsudfordringerne er fælles på tværs af uddannelser, og at vi derfor også med fordel kan lære af hinanden med henblik på at blive bedre til at facilitere og udvikle de studerendes samarbejdskompetencer med henblik på at kunne opfylde aftagernes ønske om, at unikke samarbejdsevner i international sammenhæng skal være en dansk konkurrencefordel.

Short communication 10:

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

Authors:

- Mikala Hansbøl, Educational Adviser, TEACH, University of Copenhagen

Intended outcomes

Participants are university teachers (Humanities, Theology, Law, Social Sciences) exploring how to integrate Generative AI (GAI) in teaching. The course, *AI literacy and digital literacy pedagogy*, spans three months with three seminars. Each teacher designs and tests a teaching activity with students. At UCPH, all courses must choose an approach to GAI in exams, and students must submit AI declarations. Teachers need to support students' learning with/without GAI and help them make conscious choices fostering independence, critical thinking, and sustainable practices.

The course begins by addressing foundational questions: *What kinds of students, education, and world are we aiming for?* We focus on teachers' understandings of technology and technological literacy as rhetorical literacy before moving to activity design.

Features to share at TAL2025

We present a simple model for integrative understandings of technology (Hansbøl, 2014; Gupta et al., 2024; Dagstuhl triangle) as a basis for a multiliteracy approach. Inspired by Selber (2004), we frame technological literacy as rhetorical literacy (critical + functional). Critical literacy includes understanding technologies (e.g., what is an LLM?) and sociocultural/material implications (e.g., how does using an open LLM affect learning, subject matter, climate?).

This approach scaffolds students to make informed choices about GAI in their learning, supporting expansive learning, critical thinking, and academic independence. We also introduce six imaginary student profiles (GAI users, critics, makers, experts, eco-sophs, social designers) to help teachers position their courses and programs in relation to GAI and broader educational aims.

Impact on teachers and students

The course has run twice and is now in its third iteration. Teachers report gaining nuanced understandings of technology and its co-constructive role 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.

Transferability

Our approach argues that understandings of technology are as fundamental as concepts of learning and knowledge in higher education. This makes the practice relevant for other pedagogical development initiatives and for any HE teacher engaging with students' technological literacy.

Primary literature:

Gupta, A., Atef, Y., Mills, A., & Bali, M. (2024). Assistant, parrot, or colonizing loud-speaker? 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](#)

Selber, Stuart A. 2004. *Multiliteracies for a Digital Age* (Carbondale: Southern Illinois U.P.)

Short communication 11:

AI i projektledelse – erfaringer med at lede AI-integrationsprojekter i undervisning

Authors:

- Anna Spon Stecher, Lektor og Uddannelseskoordinator, Institut for Medier, Kommunikation og Design, Danmarks Medie- og Journalisthøjskole

What did you intend the students to achieve from this teaching and learning activity/curriculum intervention?

I efteråret 2024 og foråret 2025 har jeg arbejdet med en fuld integration af AI i undervisningsforløbene *"Projektledelse 1"* og *"Produktionsledelse af TV"*. Formålet var at styrke de studerendes forståelse af projektledelse samtidig med, at de opbyggede færdigheder i at bruge AI som et praktisk redskab i deres arbejde. Læringsmålene omfattede 1) at fremme aktiv deltagelse gennem hands-on øvelser med AI, 2) styrke evnen til at anvende AI i konkrete projekter og 3) træne kritisk refleksion over teknologiens muligheder og begrænsninger. Et centralt mål var at få de studerende til at se AI som en aktiv samarbejdspartner frem for en passiv genvej.

Which general features of the teaching and learning activity will you share at TAL2025?

Oplægget deler erfaringer med undervisningsaktiviteter, hvor AI blev integreret i workshops, case-øvelser og projektarbejde. De studerende brugte AI til at opdele opgaver, planlægge tidsforløb, vurdere risici og udvikle kreative løsninger. Desuden præsenteres de ændringer i studieordningen, der har åbnet for en ny eksamensform i Projektledelse 1. Her kombineres skriftlige produkter med mundtlige præsentationer, så bedømmelsen afspejler de studerendes selvstændige faglige niveau, også når AI har indgået i processen. Dette viser, hvordan AI kan tænkes ind i både undervisningsaktiviteter og formel evaluering.

According to you and the students, what was the impact of the intervention on student learning/engagement/ development of competences?

De studerende har oplevet, at AI bidrager til øget engagement og ejerskab i undervisningen. Flere beskrev en bevægelse fra pligt til nysgerrighed, fordi AI gjorde det muligt at afprøve idéer hurtigt og i større skala. Nogle studerende fremhævede, at de oplevede AI som en "ekstra projektmedarbejder", hvilket gjorde deres læringsproces mere motiverende og praksisnær. Samtidig blev de udfordret til at reflektere kritisk over AI's begrænsninger og på den måde udvikle både faglige og etiske kompetencer.

How could your practice be inspirational/transferable to other teaching contexts?

Erfaringerne kan ses som et meta-projekt i projektledelse: et eksempel på, hvordan undervisere kan lede et AI-integrationsprojekt i deres egen undervisning. Ved at behandle AI-implementering som et projekt med mål, plan, evaluering og justeringer bliver det lettere at overføre modellen til andre fag og institutioner. Dette perspektiv peger ud over enkelttimer og aktiviteter, idet AI her indgår i både eksamensformer og studieordning. På den måde giver projektet inspiration til, hvordan man kan forankre AI mere langsigtet i uddannelse og dermed bidrage til kompetenceudvikling hos både studerende og undervisere.

Session 7

Short communication 12:

New technology in the classroom. Why scaffolding matters

Authors:

- Lise Stenbæk, Teaching and Learning Consultant, TEACH, University of Copenhagen

In the landscape of higher education, scaffolding in teaching remains a cornerstone for effective integration of teaching technologies and the development of digital literacy. As universities increasingly adopt Generative AI (GenAI) tools in the classroom, the need for intentional and structured support becomes even more critical. To harness the full potential of GenAI in teaching and learning, it makes a difference when students are clearly guided on what tasks they are expected to perform, why these tasks matter, and how to approach them effectively (Armellini et al). This presentation explores the role of scaffolding in fostering meaningful engagement with GenAI.

What did you intend the students to achieve from this teaching and learning activity/curriculum intervention?

It has been crucial to meet the consequences of GenAI for teachers and students at the University of Copenhagen and one of the initiatives for doing so was to test a specific GenAI tool in teaching practices across different courses at the university. The intervention described here aimed to foster academic engagement, individual teaching effort and critical thinking among university students. The tool was introduced in varied forms throughout the semester, with the intention of supporting student learning through feedback, assisted homework, idea development, and collaborative exploration of course content.

Which general features of the teaching and learning activity will you share at TAL2025?

The study presents insights into how the GenAI tool was introduced and utilized by students and instructors, based on observations of engagement patterns, the impact of structured versus unstructured implementation, and comparisons with more familiar tools such as ChatGPT. The specific tool is not named in this session, as the focus is on the process and how it was implemented rather than which tool was used, and the findings could easily be transferred to other teaching technologies as well.

According to you and the students, what was the impact of the intervention on student learning/engagement/ development of competences?

The results showed key challenges such as limited adoption due to vague scaffolding, lack of familiarity with the software, ethical concerns, and perceptions of lower response quality and usability compared to alternative tools.

A notable exception was observed in one course, where a structured and guided introduction led to scaffolding and significantly higher levels of student engagement and collaborative use of the tool. However, most students were unfamiliar with the tool and thus they preferred familiar tools like ChatGPT which they knew already, or they did not want to use GenAI tools at all due to ethical reasons.

How could your practice be inspirational/transferable to other teaching contexts?

Findings underscore the importance of early, clear, and pedagogically integrated introductions to new teaching technologies. Successful adoption of teaching technology and in particular GenAI tools require dedicated classroom time for exploration, critical reflection on AI-generated content, and transparent communication about the tool's unique value and differentiation from existing technologies.

References

Armellini, A.; Rodrigues, B.C.P. (2021) *Student perspectives on Learning Experiences in a Higher Education Active Blended Learning Context*. TechTrends (2021) Vol 65, No 4.

Kangwa, D., Msafiri, M.M. & Fute, A. Balancing innovation and ethics: promote academic integrity through support and effective use of GenAI tools in higher education. *AI Ethics* 5, 3497–3530 (2025). <https://doi.org/10.1007/s43681-025-00689-6>.

Short communication 13:

Enhancing Student Engagement and Learning Outcomes in Programming Courses using Student-generated Quizzes

Authors:

- Srinivasa Raghavendra Bhuvan Gummidi, Assistant Professor, Department of Green Technology, SDU

What did you intend the students to achieve from this teaching and learning activity/curriculum intervention?

The primary intention was to deepen student engagement and conceptual understanding in a "Programming for Engineering Sustainability" course. The student generated quiz (SGQ) initiative was designed to move beyond traditional assessment by having students actively revise the previous week's lecture content and, using AI for assistance, apply Python fundamentals to create their own quiz questions, which often included code snippets.

This process aimed to foster active learning and critical thinking. The "articulation of learning" was targeted through a subsequent in-class phase where students had to publicly explain the logic of their code, the rationale for the correct answer, and crucially, why their chosen distractors were plausible yet incorrect, thus solidifying their own reasoning.

Which general features of the teaching and learning activity will you share at TAL2025?

At TAL2025, I will share the iterative design and implementation of the SGQ activity across two semesters. This includes:

1. The process of students creating weekly quiz questions, with guidance on using tools like generative AI.
2. The use of an e-learning platform (PollEverywhere) for in-class competitive quizzes based on these student-created questions.
3. The structure of subsequent student-led explanations to reinforce understanding and peer learning.
4. The challenges and outcomes of introducing a peer-grading component in one iteration.
5. Key insights derived from student feedback regarding AI use, question quality, and engagement.

According to you and the students, what was the impact of the intervention on student learning/engagement/ development of competences?

Observations and student surveys revealed positive impacts: students found quiz creation "Moderately" or "Significantly" helpful for understanding lectures, with high engagement in PollEverywhere quizzes and positive feedback on question creation. A key outcome was that the process encouraged students to engage more deeply with theoretical concepts and terminology, as they had to master these principles to design effective questions and distractors.

While our approach—requiring students to justify their AI-assisted questions—positioned AI as a learning aid, feedback revealed its contribution to more profound understanding was not automatic and still required careful guidance. The introduction of summative

peer grading posed challenges and negatively affected the student experience, indicating areas for careful consideration.

How could your practice be inspirational/transferable to other teaching contexts?

This practice provides a transferable model for enhancing active learning in technical disciplines that face challenges with student engagement and the rise of AI. The core transferable element is a pedagogical framework that fosters accountability: by requiring students to explain and justify their creations publicly, they are intrinsically motivated to gain a deep understanding of the material, even when using powerful tools like AI.

This model offers a structured approach for integrating student-generated content and encourages a critical use of AI for inquiry rather than merely completing tasks. The project's cautionary insights on summative peer Side 4 of 4 assessment, combined with its iterative, feedback-driven design, can further inspire educators to adapt the SGQ model to promote student agency and a more dynamic learning environment in their own contexts.

Short communication 14:**Impact of Generative Artificial Intelligence (GAI) in Science Education****Authors:**

- Chunfang Zhou, Associate Professor, Department of Mathematics and Computer Science, SDU
- Serhii Petrovych, Postdoc, Department of Mathematics and Computer Science, SDU

A brief Abstract

This presentation focuses on two questions: 1) How do education program leaders perceive the impact of GAI in science education? And 2) what are the potential directions for the integration of GAI in active science teaching and learning in higher education in the future? Through developing qualitative interviews with 9 study program leaders in Faculty of Science at University of Southern Denmark, this presentation provides practical implications for future directions on AI-assisted teaching and learning and science teacher professional development.

What did you intend the students to achieve from this teaching and learning activity/curriculum intervention?

This presentation shows different opinions and experiences on GAI in science education from an educational leader perspective. The findings indicate future directions on science teaching and learning, by which students may benefit from clearer guidelines on how to use GAI in fostering meaningful learning experiences.

Which general features of the teaching and learning activity will you share at TAL2025?

The interviews were conducted in spring 2025 with nine study program leaders. They are from various disciplines including Biology, AI Science, Mathematics, Biochemistry, Computer Science, Physics, Quantum Science, Pharmacy, and Data Science. All nine participants are also senior researchers and teaching staff; they were invited to be interviewed firstly and thereafter became volunteered to participate in the study.

According to you and the students, what was the impact of the intervention on student learning/engagement/ development of competences?

This presentation will show the impact of GAI in science learning and teaching through a discussion on different opinions of study program leaders. According to the findings, some of study program leaders are positive, some are critical, and some admitted to having limited knowledge about GAI.

It also shows concerns on quality of academic writing, surface-level learning, and development of authentic work among students. However, even though there are challenges, the program leaders agree that student need to learn how to use GAI for their future career development. In addition, there are also needs a holistic approach to develop teacher

professional development as well as efforts on discipline-based science education in the future.

How could your practice be inspirational/transferable to other teaching contexts?

This study was carried out within Faculty of Science. The findings provide practical implications for future integration of GAI in science teaching and learning. It also provides inspirations for other studies in other faculties at SDU and other Danish universities.

Session 8

Short communication 15:

Enhancing engagement in pharmacology through flipped learning: a mixed approach to active learning

Authors:

- Lanfranco Pellesi, Assistant Professor, Department of Public Health, SDU
- Louise Torp Dalgaard, Professor, Science and Environment, Roskilde University

What did you intend the students to achieve from this teaching and learning activity/curriculum intervention?

The primary goal of the intervention was to promote deeper learning and active engagement among postgraduate biomedical students enrolled in a pharmacology course. We shifted part of the content delivery to pre-class activities, such as narrated presentations and self-assessment quizzes. We intended students to arrive better prepared for class, enabling us to dedicate classroom time to interactive, group-based tasks that reinforce critical thinking and collaborative problem-solving.

Which general features of the teaching and learning activity will you share at TAL2025?

At TAL2025, we will share how two flipped learning sessions were implemented in a pharmacology course using pre-class narrated videos, online quizzes, and in-class group activities. Student feedback was collected through evaluation questionnaires administered at the end of the flipped learning activities. We will also present exam performance data, which were compared with the results of previous cohorts who only attended traditional lectures. Finally, we will provide practical insights (namely, that in practice students appear to prefer a combination of traditional lectures and active learning) on how to integrate these approaches to boost engagement and understanding.

According to you and the students, what was the impact of the intervention on student learning/engagement/ development of competences?

According to both student feedback and exam data, the intervention increased engagement and supported active learning. Students found the pre-class materials useful and appreciated the interactive in-class activities. Participation varied and most preferred a mix of flipped and traditional teaching. Competence development was supported through group discussions and applied problem-solving, which also indicated signs of deeper learning, as students were able to connect theoretical knowledge with practical examples. The impact on exam performance was moderate.

How could your practice be inspirational/transferable to other teaching contexts?

This practice is easily transferable to other teaching contexts, especially in content-heavy courses. It shows that even limited flipped learning interventions (using accessible tools like narrated slides and quizzes) can enhance student engagement and encourage active participation. Narrated slides and quizzes mainly help students prepare and consolidate foundational knowledge, and the shift toward student-centered teaching through group discussions and interactive activities appears to be the more significant factor in fostering deeper learning and meaningful understanding. Our findings therefore suggest that the benefits are less a result of the flipped model itself, and more related to the opportunities it creates for student-centred activities during class time. The mixed approach therefore

offers flexibility for educators to gradually integrate more active and student-centered methods without fully replacing traditional lectures.

Short communication 16:

Beyond the Page and Screen: Enhancing Student Engagement and Comprehension through Experiential Learning Modalities

Authors:

- Su-Hyun Berg, Assistant Professor, Department of Technology and Innovation, SDU
- Mia Høj Mathiasson, Assistant Professor, Department of Design, Media and Educational Science, SDU

What did you intend the students to achieve from this teaching and learning activity/curriculum intervention?

The intention was to enhance students' comprehension, engagement, and self-efficacy by exposing them to varied instructional modalities—video, text, and structured discussion—within interdisciplinary undergraduate courses. The goal was to help students reflect on their learning processes and develop strategies for deeper understanding through structured preparation and note-taking.

Which general features of the teaching and learning activity will you share at TAL2025?

We will share insights from three experiments comparing student responses to video-based and text-based instruction, with and without note-taking. The session will highlight the role of pre-reading, facilitated discussion, and multimodal scaffolding in improving learning outcomes. We will also discuss how these strategies were implemented across disciplines and campuses.

According to you and the students, what was the impact of the intervention on student learning/engagement/ development of competences?

Students reported greater emotional engagement with video but demonstrated deeper comprehension and recall when working with printed texts and note-taking. Structured preparation and discussion helped students feel more confident and in control of their learning. The interventions supported the development of metacognitive skills and promoted student agency.

How could your practice be inspirational/transferable to other teaching contexts?

The approach is highly transferable across disciplines and educational levels. By combining media formats with structured learning strategies, educators can create inclusive, active learning environments. The findings offer practical guidance for designing blended instruction that supports diverse learners and fosters self-regulated learning behaviors.

Short communication 17:**Enhancing Student Engagement through AI-Generated Quizzes****Authors:**

- Tove Faber Frandsen, Associate Professor, Department of Design, Media and Educational Science, SDU

What did you intend the students to achieve from this teaching and learning activity/curriculum intervention?

This session shares insights from an exploratory teaching initiative that integrates generative AI to create quizzes to stimulate student engagement, promote self-assessment, and support collaborative learning.

Which general features of the teaching and learning activity will you share at TAL2025?

The study explores how AI-generated quizzes can actively engage students by prompting them to assess their understanding of key lecture topics and identify personal learning gaps. Tested in a course in information studies, the activity was tailored to support students in navigating complex theoretical frameworks and applying them in collaborative settings. Rather than functioning solely as individual review tools, the quizzes are also integrated into group work, where they help structure collaborative discussions and promote active participation. By framing group agendas around quiz content, students are encouraged to engage with the material and with each other. The study also examines the practical aspects of quiz design including prompt formulation, question types, and feedback mechanisms.

According to you and the students, what was the impact of the intervention on student learning/engagement/ development of competences?

Student reflections were gathered through informal oral feedback sessions conducted directly after quiz completion allowing for spontaneous reflections.

Students didn't naturally perceive the quizzes as meaningful homework, often viewing them as more playful than preparatory. However, when used to help shape the agenda for group work, the quizzes became more relevant and engaging, providing structure and focus for discussions. It's worth noting that some of the positive reception may also be attributed to a novelty effect, as students were encountering this approach for the first time.

How could your practice be inspirational/transferable to other teaching contexts?

Participants in this session will experience the method firsthand by completing a short AI-generated quiz, followed by a collaborative analysis of the results. This hands-on activity will mirror the study's methodology, allowing attendees to directly observe and discuss the pedagogical implications, challenges, and opportunities of using AI tools to support active learning. By the end of the session, attendees will leave with inspiration and practical insights for experimenting with AI-generated quizzes in their own teaching. While the method may offer engaging opportunities, its applicability is likely to vary depending on disciplinary context, course structure, and student familiarity with AI tools. These factors will be discussed to support thoughtful adaptation and critical reflection.

Session 9

Workshop 3:

Cultivating a mindset and an approach for experimenting with new technologies

Authors:

- Inger-Marie Falgren Christensen, Assistant Professor, Department of Design, Media and Educational Science, SDU

What do you intend the workshop participants to achieve from this workshop?

The aim of this workshop is to support participants in developing a vocabulary for understanding and talking about AI in the context of digital competences more broadly.

Which activity will you include at the workshop TAL2025?

Workshop program:

1. Welcome and presentation of the DigCompUni framework: Digital competences for university students (15 min.)
The DigCompUni framework consists of the five competence areas: Information and data literacy, Communication and collaboration, Digital content creation, Safety, and Problem solving. The presentation includes examples of specific competences within each area. These examples will refer to digital technologies in general and AI technologies in particular. DigCompUni is an adapted version of EU's Digital competence framework for citizens (DigComp 2.2), fitted to a university context.
2. Group activity (15 min.)
In groups of three, participants study the competence areas of DigCompUni and identify 1-2 areas that they find most relevant for their study programs. They then discuss what specific competences within each area it would be relevant to integrate in the study programmes concerned.
3. Presentation of the concepts *Mindset and approach* (5 min.)
In DigCompUni, the five competence areas are framed by mindset and approach. This framing emphasises that focus on concrete digital tools and AI services is not enough. Instead, an open, curious and experimental mindset and approach is needed to develop resilience and a readiness to face emerging technologies as these become available. Mindset and approach also highlight the importance of being critical, reflected and transparent regarding one's own practice when using digital technologies, including AI. Finally, mindset and approach encourage reflexivity, that is, considerations concerning how digital technologies, including AI, transform job roles, tasks and processes in relevant professions.
4. Group activity (15 min.)
In groups of three, participants discuss how HE stakeholders and institutions can be supported in developing a resilient mindset and approach where digital technologies, including AI, is concerned. How can an open, curious, willing to experiment, critical, reflected, transparent and reflexive mindset and approach be cultivated?
5. Participants share their insights from the workshop (5 min.)

6. Concluding remarks (5 min.)

How do you put digital competences, including AI, on the agenda in your local contexts? Advice and resources.

According to you, what could be the impact for participants participating in the workshop?

The vocabulary and insights from the workshop will support participants in putting AI and digital competences on the agenda in their local contexts and discussing strategies for implementation.

How could this workshop be inspirational/transferrable to other teaching contexts?

The workshop highlights the importance of establishing a shared language in implementation projects to arrive at a common understanding that supports stakeholders in engaging.

Primary literature:

Ng, D. T. K., Leung, J. K. L., Chu, S. K. W., & Qiao, M. S. (2021). Conceptualizing AI literacy: An exploratory review. *Computers and Education: Artificial Intelligence*, 2. <https://doi.org/10.1016/j.caeai.2021.100041>

Vuorikari, R., Kluzer, S. and Punie, Y.. (2022). *DigComp 2.2: The Digital Competence Framework for Citizens - With new examples of knowledge, skills and attitudes*, EUR 31006 EN, Publications Office of the European Union, Luxembourg, 2022. <https://doi.org/10.2760/490274>

Weller, M., & Anderson, T. (2013). Digital resilience in higher education. *European Journal of Open, Distance and E-Learning*, 16(1), 53-66.

Session 10

Workshop 4:

Guided inquiry through small-group work

Authors:

- Siddharth Bhaskar, Assistant Professor, Department of Mathematics and Computer Science, SDU

Background: When we teach, the point is generally not for to impart specific set of facts to our students, but rather to provoke them into seeing things a particular way, to build (or deconstruct) certain frameworks or biases, and to make them aware of their own act of cognition. Somewhat poetically, we may say that all teaching is essentially getting students to teach themselves: we as instructors are there to create an environment that is amenable to students developing their own mental architecture. The guided-inquiry learning philosophy takes this very literally. By guided-inquiry learning I mean the explicit sequencing or structuring of mental processes to prompt students to engage with hard disciplinary questions. The basic idea of this workshop is effecting this through the frame of a small group of people working together through a worksheet.

In response to one reviewer comment: this workshop has nothing in particular to do with AI.

What do you intend the workshop participants to achieve from this workshop?

The aim with this workshop is: to introduce the technique of designing worksheets for groups of 3-4 people consisting of a sequence of questions, problems, or tasks, carefully scaffolded so that the participants are led to the solution to some problem, formulation of some definition or concept, or other pedagogical goal.

The learning outcome for workshop participants is: to get exposure to the basic principles around designing such worksheets, so that they might then go and adapt it to their own disciplines. The intended audience is broad: any instructor or anyone involved in curriculum design.

Which activity will you include at the workshop TAL2025?

After a brief introduction to the general idea, participants will break up into groups themselves along roughly disciplinary lines and spend some time formulating a short guided-inquiry worksheet based on a simple concept or problem in their home discipline that may not be obvious to laypeople. In the next section, participants will work through other groups' worksheets; at least 1, hopefully 2. Time remaining, they will collect the worksheets they made and review them to see what the responses were and whether the questions worked as intended.

In response to reviewer comments, I will come prepared with a list of suggestions (though these of course reflect my own expertise/biases) given that the time is so short. The idea is that participants can take inspiration from these and use them or not as they will.

According to you, what could be the impact for participants participating in the workshop?

Thinking carefully about disciplinary framings, biases, and paradigms in your own core area of expertise, and how to introduce these to laypeople, students, or anyone who is not an expert in the field, in a structured manner. This is relevant not only for guided-inquiry learning but any style of pedagogy. In addition I hope that this workshop serves as a concrete example of one particular flavor of guided-learning pedagogy that many participants won't have previously seen; in that sense it's a very practical "tool in the toolbox."

How could this workshop be inspirational/transferrable to other teaching contexts?

As I mentioned above, I think that the core exercise of a structured introduction to disciplinary thinking is relevant for any sort of pedagogy. I also hope that exposure to genuinely different disciplines, and the brief experience of being a beginner again, allows participants to empathize with their own students.

Primary literature:

This is based on my 2 years of experience teaching mathematics to computer science students at my previous institution largely through these sorts of worksheets. The general culture there was influenced by the POGIL system, which stands for "process-oriented guided inquiry learning." This is guided inquiry learning with specific roles for each of the participants; I omit these from the workshop for the sake of time. It originated in Chemistry in the 1990s and is now common (not ubiquitous, but common amongst teaching-oriented colleges) in undergraduate Computer Science instruction in the US. There is a large body of literature studying it, see <https://cspogil.github.io/research/> for a list of CS-related POGIL literature.