SDU Centre for Teaching and Learning

Proceedings from the conference

TAL2024

Teaching for Active Learning

7 November 2024, SDU

ISBN: 978-87-85268-58-7

SDU
University of
Southern Denmark

Content

TAL2024 – Teaching for Active Learning

Special focus: Supervision

In November 2024, SDU's Centre for Teaching and Learning (SDU UP) hosted its 12th Teaching for Active Learning conference. The main theme of the conference was active teaching and learning, which is the underlying principle for teaching at SDU. The aims of the annual TAL conference are to provide opportunities for teachers, developers, and others with a special interest in teaching to:

- share, demonstrate, reason, and analyze their own examples of active teaching and learning
- be inspired to develop one's own active teaching practice for students to learn actively.

The TAL conference provides an annual space for teachers and consultants to share their pedagogic discoveries, which in turn can inspire conference delegates' future practices. In addition to a variety of pedagogic discoveries, which activated students' learning and teachers' teaching, TAL2024 had a special focus on Supervision.

The theme was introduced by the keynote speaker, Gitte Wichmann-Hansen, Senior Researcher at DPU, Aarhus University, and owner of the consultancy Academic Supervision who addressed the central challenge of authority and autonomy in supervision of students' academic work. Gitte delivered a very interesting presentation, based on new world-class supervision research, much of which was also her own research. New research has, for example, shown that the most independent students are those who receive guidance that is very advisory and less controlling. Conversely, the most satisfied students are those who receive guidance that is both very advisory and very controlling! In her presentation, Gitte also described concrete strategies and techniques, which supervisors can use to develop students' independence. She also raised an important caveat about how external pressures could work against supervision for student autonomy.

The topic of the afternoon keynote was collective supervision, which, in addition to making supervision more efficient, also has the potential to promote student progression, active participation, and learning, while also being more enjoyable and less stressful for supervisors. Here, Gitte gave several examples of how supervisors can solve some of the challenges inherent in this form of supervision. She also gave us several concrete tools and resources for planning and implementing collective supervision, such as tips on how to organize supervision meetings with peer feedback, and how to align expectations with students in connection with collective supervision via a 'supervisor letter'.

Between the morning and afternoon keynotes, the conference participants themselves contributed with very fine presentations. Among other things, there were inspiring experiences with a current theme, namely AI in supervision here from presenters from SDU. The morning keynote ended by speculating on whether the emergence of AI will require autonomy from our students now and in the future. Fortunately, the uplifting answer came from several of the participant presenters who had tried AI in supervision in practice. They showed how supervision can be organized so that AI becomes a constructive co-player in supervision through the incorporation of tailored learning activities which ensure students' independent and critical use of AI.

In this conference publication, you have a chance to explore some of the participant contributions in further detail in written or video format.

Happy reading!

On behalf of the conference organizers

Lotte Dyhrberg O'Neill and Rie Troelsen

SDU Centre for Teaching and Learning

Situationel Dialektisk Vejledning - Hvad, hvorfor og hvordan?

Flemming Smedegaard, lektor og studieleder for International Virksomhedskommunikation, SDU

Introduktion
Situationel Dialektisk Vejledning (SDVEJ) er udviklet på baggrund af Situationel Dialektisk Ledelse (SDL), som er ny teori om ledelse, som jeg har arbejdet med at udvikle sammen med kolleger gennem de sidste 10 år (Dakwar et al. 2015 og Smedegaard og Lidsmoes (red.) (2023)).

I SDL ses ledelse som et valg mellem alternativer, og hvor valget mellem forskellige alternativer skal afgøres af den specifikke situation. I SDL gives ingen universalløsninger. Der vil altid være en risiko forbundet med enhver ledelsesbeslutning. SDL er ikke en opskrift, men et mindset, der skal læres gennem både teori og praksis. En vigtig antagelse i den situationelle dialektiske tankegang er, at teori og praksis fordrer hinanden frem for at være hinandens modsætninger, som det ofte gøres til.

Tanken bag SDVEJ er, at vejledning også er en slags ledelse, og at SDL vil kunne bruges som afsæt for at udvikle en teori om Situationel Dialektisk Vejledning (SDVEJ). Jeg kan se, at det, SDVEJ beskriver, langt hen ad vejen, er den praksis, jeg selv har udviklet som universitetsvejleder på alle niveauer gennem de sidste 37 år, men dette er det første forsøg på at sætte begreber på og formulere en teori, der beskriver den vejledningspraksis, jeg selv har haft succes med.

Hvorfor situationel og dialektisk?
De to kodeord i SDVEJ er situationel og dialektisk.

Med begrebet situationel ønsker vi at understrege, at der ikke er nogen onesize løsninger eller specifikke opskrifter på, hvordan en vejledningsopgave kan gribes an. Der er ikke nogen trylleformular, der én gang for alle løser alle vejledningsudfordringer, og man kan ikke entydigt definere de egenskaber, som en vejleder bør have. Alle løsninger bør være situationsspecifikke og nøje tilpasset den enkelte studerende samt de specifikke vejledningsudfordringer, man står med. Studerende er forskellige, så for at behandle studerende ens, må man behandle dem forskelligt. Situationer er også forskellige. For at handle konsistent som vejleder, må man derfor agere forskelligt, da alle situationer er specifikke og kræver en dyb situationsspecifik indlevelse. Studerende kan ikke reduceres til arketyper. Studerende er hele mennesker med erfaringer,

ideer, ambitioner, agendaer, sympatier (og antipatier) og i det hele taget alle mulige komplekse følelser og holdninger, som udvikler og ændrer sig.

Med begrebet dialektisk ønsker vi at understrege, at der ikke findes universalløsninger i vejledning, og at der altid kan træffes andre valg. Der findes ikke et nødvendighedens valg. Ordet dialektik kommer fra det græske ord *dialegesthai,* som betyder at føre samtale. Inden for filosofi og retorik kendes dialektik som en erkendelsesmetode, der består i at fremsætte en tese (påstand), der medfører en antitese (modpåstand), som fører videre til en syntese, som væver de to påstande sammen, så de ellers modsigende påstande bliver afsløret som sammenhængende, og der kan derved igennem samtalen og refleksionen opstå nye erkendelser. Ordet dialektisk medfører derfor en forpligtelse til at overveje alternative løsninger og så vidt muligt afprøve løsningerne i dialog med andre. Ved en dialektisk tilgang forstås altså et både-og-syn frem for et enten-eller-syn, idet dialektisk tænkning grundlæggende handler om, at alle fænomener kun eksisterer i kraft af deres modsætning, og at der til enhver tese svarer en antitese. Modsætninger er gensidige forudsætninger for hinanden. Dialektiske modsætninger er en vigtig del af menneskelivet – og af vejledningslivet. At anerkende og reflektere over dialektiske modsætninger er en væsentlig del af at forstå – og agere i – livet.

I SDL sammenligner vi god ledelse med et blandingsbatteri i en vandhane. Nogle gange har vi brug for det varmeste vand, andre gange det koldeste og mange gange forskellige grader midtimellem. Det samme gælder ledelse. Vi har brug for situationstilpassede løsninger. Ethvert ledelsesvalg rummer også en risiko, idet hvert valg er et valg mellem forskellige muligheder, hvor man altid kunne have truffet et andet valg. På samme måde er vejledning som et blandingsbatteri. Vi har brug for både den kolde og den varme hane og alt midtimellem – alt afhængig af situationen.

Grundtanken i SDVEJ er, at for at behandle studerende ens, må man behandle dem forskelligt, da de er forskellige. For at handle konsistent som vejleder, må man agere forskelligt, da alle situationer er specifikke og kræver særegen sensibilitet.

Paradokser i vejledning

I SDVEJ er der ingen trylleformular, der én gang for alle løser vejledningsproblemerne. Man kan ikke uden modsigelse definere de nødvendige og tilstrækkelige egenskaber, som en vejleder bør have. Den "gyldne" middelvej er ikke altid vejen. Man skal kunne bruge både den varme og den kolde hane. Nedenfor viser jeg 10 eksempler på sådanne paradokser, som man skal agere i som vejleder. Men det er eksempler, antallet af paradokser er ikke afgrænset, så det er meningen, at man selv skal føje til.

Jeg har valgt uendelighedstegnet som symbol til at vise, hvordan det er en uendelig og integreret proces at navigere i og mellem paradokser.

Paradoks 1: Faglig vs. personlig vejledning
Det er vigtigt for en vejleder:

- Både at kunne give faglig vejledning, for det er kernen i, hvad relationen handler om,
- og at kunne give personlig vejledning, for det faglige og personlige hænger sammen, og en studerende, der ikke har det personligt godt, har også svært ved at præstere fagligt.

Faglig vejledning		Personlig vejledning

Paradoks 2: Nært forhold vs. afstand
Det er vigtigt for en vejleder:

- Både at kunne etablere et nært forhold til sine studerende, fordi nærhed er hensigtsmæssigt for fortrolighed, tillid, en åben kommunikation og for at kunne inspirere og motivere,
- og at holde afstand, fordi afstand er en betingelse for at kunne vurdere og bedømme eksaminer.

Nært forhold		Afstand

Paradoks 3: Faciliterende vs. styrende
Det er vigtigt for en vejleder:

- Både at kunne facilitere ved at hjælpe og inspirere den studerende til selv at finde løsninger og give den studerende en udstrakt grad af frihed hertil,
- og at kunne tage styring, udstikke en klar retning, opstille konkrete og detaljerede krav og planer, give lektier for o.l.

Faciliterende		Styrende

Paradoks 4: Pensumorienteret vs. nyskabende
Det er vigtigt for en vejleder:

- Både at kunne holde fokus på pensum og sørge for, at den studerende får fokuseret herpå og lært det obligatoriske, der kræves i det pågældende fag,
- og at opmuntre den studerende til at være kritisk, udfordre eksisterende teorier og metoder og at turde være kreativ og nyskabende

Pensumorienteret		Nyskabende

Paradoks 5: Faglig fordybelse vs. karrierefokus
Det er vigtigt for en vejleder:

- Både at kunne vejlede studerende, der kan lide fagligt at fordybe sig for at blive klogere, og hvor uddannelse og faglig viden er et mål i sig selv uden at have det store fokus på, hvad den pågældende viden senere kan bruges til,
- og at kunne vejlede studerende, der ikke hurtigt nok kan komme igennem uddannelsen, og som er fokuseret på at komme ud at arbejde.

Faglig fordybelse		Karrierefokus

Paradoks 6: Fagligt fokus vs. identitetsfokus
Det er vigtigt for en vejleder:

- Både at kunne fastholde et fagligt fokus i vejledningen,
- og at give plads til og støtte, at den studerende også fagligt kan arbejde, der bidrager til vedkommendes egen identitetsforståelse, selvudvikling og selvrealisering.

Fagligt fokus		Identitetsfokus

Paradoks 7: Visionær vs. jordnær
Det er vigtigt for en vejleder:

- Både at være visionær, hvilket indebærer, at vejleder giver sig selv lov til sammen med den studerende at tænke utraditionelt og langsigtet,
- og at holde begge ben ved jorden, for ikke at tabe de umiddelbare problemer og den forestående eksamen af syne.

Visionær		Jordnær

Paradoks 8: Tillid vs. kontrol
Det er vigtigt for en vejleder:

- Både at vise de studerende tillid, fordi tillid fremmer ansvarlighed og loyalitet,
- og at følge med i, hvad der sker, fordi kontrol bl.a. er forudsætning for en feedback, der demonstrerer interesse for den enkeltes præstationer.

Tillid		Kontrol

Paradoks 9: Tolerance vs. principfasthed
Det er vigtigt for en vejleder:

- Både at være tolerant, fordi tolerance indebærer, at man erkender, at mennesker er forskellige, og at der er flere måder at opnå resultater på,
- og at vide, hvordan man vil have tingene til at fungere, fordi principfasthed forhindrer forvirring og utryghed.

Tolerance		Principfasthed

Paradoks 10: Produktfokus vs. procesfokus
Det er vigtigt for en vejleder:

- Både at kunne vejlede i produktet i form af opgaven,
- Og at kunne vejlede i og understøtte arbejdsprocesser – ikke mindst i forbindelse med gruppearbejde, da der er en tæt sammenhæng mellem proces og resultat.

Selvsikkerhed		Ydmyghed

Hvordan kan man komme i gang med at praktisere SDVEJ?
I SDVEJ findes der ingen "rigtige løsninger". En af hjørnestenene i SDVEJ er, at der ofte er mange handlemuligheder, som tilgodeser noget forskelligt, fordi der er mange forskellige studerende med forskellige behov og samme studerende med forskellige

behov på forskellige tidspunkter. Vi skal bevæge os væk fra at gøre, som vi plejer – og i stedet trække på hele det repertoire, vi har – ligesom vi udvikler og udvider det eksisterende repertoire gennem litteratur, erfaringer, andres erfaringer o.l., og dermed trænes til at kunne identificere flere handlemuligheder som vejledere.

I stedet for at genbruge handlemønstre foreslår jeg med SDVEJ at lære at analysere situationen med henblik på at navigere i den og have blik for forskellige alternative løsningsmuligheder – og uden at ty til autopiloten. Selv om der i SDVEJ ikke kan gives entydige vejledningsopskrifter, så kan nuværende og kommende vejledere med fordel træne vejledningssituationer. Jo flere situationer og paradokser, man har øvet sig på, jo større er chancen for, at man, når det gælder i praksis, kan træffe et plausibelt valg.

Der kan tænkes mange forskellige træningsmetoder. Der eksisterer ikke idealløsninger, når vi kommer til træningsmetoder. Man skal selv finde de træningsmetoder, der fungerer bedst for en selv.

Eksempler på træningsmetoder, som har fungeret godt for mig selv, er fx:

Case-arbejde som er en god metode til at udvikle og træne sit SDVEJ-mindset, og som både er velegnet, når man i skal træne og styrke evnen til at arbejde situationelt og dialektisk på et overordnet plan, og til at øve sig på mange forskellige konkrete og realistiske situationer.

Narrativer er en metode til at bearbejde og lære af egne erfaringer som vejleder gennem sparring med andre.

Aktionsvejledning er en metode, hvor man arbejder med at udvikle og tilpasse sin vejledning i et tæt samarbejde med den studerende. Vejleder og studerende aftaler en vejledningsform. Man afprøver denne, evaluerer, justerer gennem flere runde, hvorigennem begge parter lærer gennem praktisk vejledning.

Bibliografi

Dakwar, Julia et. al. (2015): *En ansats til en teori om Situationel, Dialektisk Ledelse*. In: Det Ny Merino nr. 1. Syddansk Universitet: Institut for Sprog og Kommunikation.

Dakwar, Julia et al. (2017): *Ni antagelser om Situationel, Dialektisk Videnskabsteori*. In: Det Ny Merino nr. 15. Syddansk Universitet: Institut for Sprog og Kommunikation.

Smedegaard, Flemming (2021): *"Jeg går selvfølgelig også med SDV og SDD" – om potentialer i et situationelt dialektisk mindset*. In: Det Ny Merino nr. 55. Syddansk Universitet: Institut for Sprog og Kommunikation.

Smedegaard, Flemming og Maria Mejnborg Lidsmoes (2023): *Både-og-ledelse. En introduktion til Situationel Dialektisk Ledelse*. København: Samfundslitteratur.

Vejledning med Kunstig Intelligens

Anna Spon Stecher, lektor, Danmarks Medie- og Journalisthøjskole
Clara Juncker, lektor emerita, Institut for Kultur- og Sprogvidenskaber, SDU

Introduktion

Eksperterne er enige: Vi skal i gang! Ethan Mollick skriver i *Co-Intelligence: Living and Working with AI* (2024), at vi nu uigenkaldeligt lever i en verden med kunstig intelligens (AI), og at vi derfor er nødt til at forstå, hvordan vi kan arbejde med dette værktøj. Det første grundprincip, han identificerer, er, at vi altid bør invitere AI med til bords. Kun ved at eksperimentere bliver det klart, i hvilke sammenhænge AI kan synes henholdsvis frustrerende eller inspirerende. Gennem eksperimenter med AI finder vi ud af, hvorledes AI kan hjælpe os i vores arbejde—eller true vores jobs.[1] Også Jan Damsgaard argumenterer i *AI—Mellem Fornuft og Følelse* (2023) for, at det haster. Han mener, at en hurtig indsats vil forhindre en hierarkisk, udemokratisk anvendelse af AI: "Vi kan vælge at overlade initiativet til andre, eller vi kan selv bemægtige os teknologien og være med til at beslutte de værdi- og normsæt der skal drive udviklingen de kommende år."[2] I "Instructors as Innovators: A Future-Focused Approach to New AI Learning Opportunities, with Prompts" (2024) sætter Ethan Mollick og Lilach Mollick kursen. Her konkluderer de, at undervisere kan demokratisere ny uddannelsesteknologi ved at skabe AI øvelser og værktøjer, der passer til individuelle studerendes behov. Ai kan således skabe nye muligheder i vejledning og undervisning.[3]

Vi besluttede derfor ved semesterstart i september 2024 at samarbejde på tværs af vores institutioner—Danmarks Journalist- og Mediehøjskole (DMJX) og Syddansk Universitet (SDU)—for gensidigt at inspirere hinanden i vores bestræbelser på at inddrage AI i vejledningsprocessen. Vi delte opfattelsen af, at mange studerende allerede bruger kunstig intelligens til projekter, BA-opgaver og specialeskrivning, så vejledningssituationen nu har fået en tredje, usynlig partner, som vejlederen ikke nødvendigvis kender og som ofte betragtes som "snyd." Vi havde dog den hypotese, at sparring med en AI-sprogmodel (f.eks. Chat GPT, Copilot, Gemini mfl.) inden et vejledningsmøde kunne føre til en mere avanceret og kritisk dialog mellem vejleder og studerende, også fordi der fortsat afsættes mindre tid til personlig vejledning på danske uddannelsesinstitutioner. Vi ønskede at udvikle en vejledningsmodel, der inddrager

[1] Ethan Mollick, *Co-Intelligence: Living and Working with AI* (New York: Portfolio/Penguin, 2024), s. 46-47.
[2] Jan Damsgaard, AI—*Mellem Fornuft og Følelse* (*København*: Djøfs Forlag, 2023), s. 149.
[3] Ethan Mollich og Lilach Mollick, "Instructors as Innovators: A Future-Focused Approach to New AI Learning Opportunities, with Prompts" (2024). https://dx.doi.org/10.2139/ssrn.4802463

AI-værktøjer, for derved at tilpasse vejledningen til de studerendes individuelle behov. Vi ville derefter evaluere AI's indvirkning på de studerendes læringsudbytte gennem spørgeskemaer, så vi kunne justere vejledningsmetoderne baseret på feedback og analyse og derved styrke læringsindsatsen fremadrettet.

Læringsmål

Overordnet set tilstræbte vi, at en vejleder ved at invitere AI ombord kan lære de studerende at tilpasse fx ChatGPT eller Copilot til deres eget niveau og opgavens særlige fokus. De studerende skulle derfor lære at introducere sig selv til deres valgte AI-værktøj og ligeledes klart instruere deres AI i den funktion, som AI skulle udfylde—f.eks. en mentor, der taler et direkte, men venligt sprog. De studerende skulle dermed, sideløbende med den øvrige læring i undervisningsforløbet, kunne tillære sig prompt-teknikker på en hensigtsmæssig måde, via prompt engineering. De skulle derved finde et skarpere, indsnævret fokus på en opgave, ligesom de skulle kunne foreslå en struktur på større opgaver som BA-projekter eller specialer, der ofte kan virke afskrækkende på studerende. Samtidig skulle de lære at forholde sig kritisk til AI's svar og lære at bruge dem som inspiration i stedet for en blind accept, eller endda plagiering.

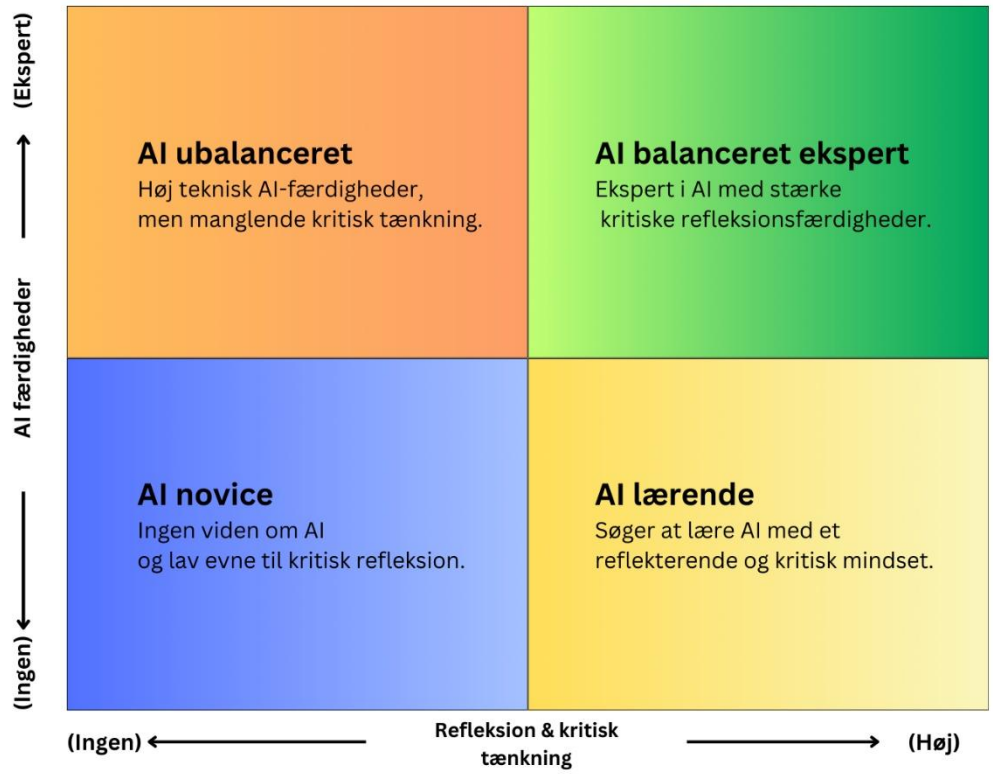
Den svære balance

Som Ted Ladd skriver i "Cultivating Self-Worth in the Age of AI" (2024), er balancen mellem refleksion og kritisk tænkning samt AI-kompetencer essentiel, da både overforbrug af AI og frygt for AI begge er uproduktive tilgange. Han begrunder det således: "Students who fear AI will fail to learn about the opportunities it offers, increasing the likelihood that AI will eventually damage both their dignity and their job prospects. Meanwhile, AI overuse removes opportunities for students to cultivate the non-technical skills—such as **communication and critical thinking**—that will help them stand out to future employers."[4] For at få de studerende til at forstå balancen mellem frygt og overforbrug udviklede Anna Spon Stecher denne model (Figur 1).

[4] Ted Ladd, T, "Cultivating Self-Worth in the Age of AI." Harvard Business Publishing (Education), 2024. https://hbsp.harvard.edu/inspiring-minds/cultivating-self-worth-in-the-age-of-ai

Figur 1

Balancen mellem AI-færdigheder og kritisk refleksion



Modellens to akser angiver balanceforholdet, og kvadranterne giver anledning til at diskutere, hvor man som studerende befinder sig og kan stræbe imod. I takt med kompetenceudviklingen indenfor AI er målet i denne model at blive en "AI balanceret ekspert," som har store AI-tekniske færdigheder kombineret med et højt niveau af refleksion og kritisk tænkning. Som modpol står positionen "AI ubalanceret," hvor man afgiver magten over beslutninger, kreativitet og holdninger til AI og selv ender med ikke at have nogen værdi på arbejdsmarkedet.

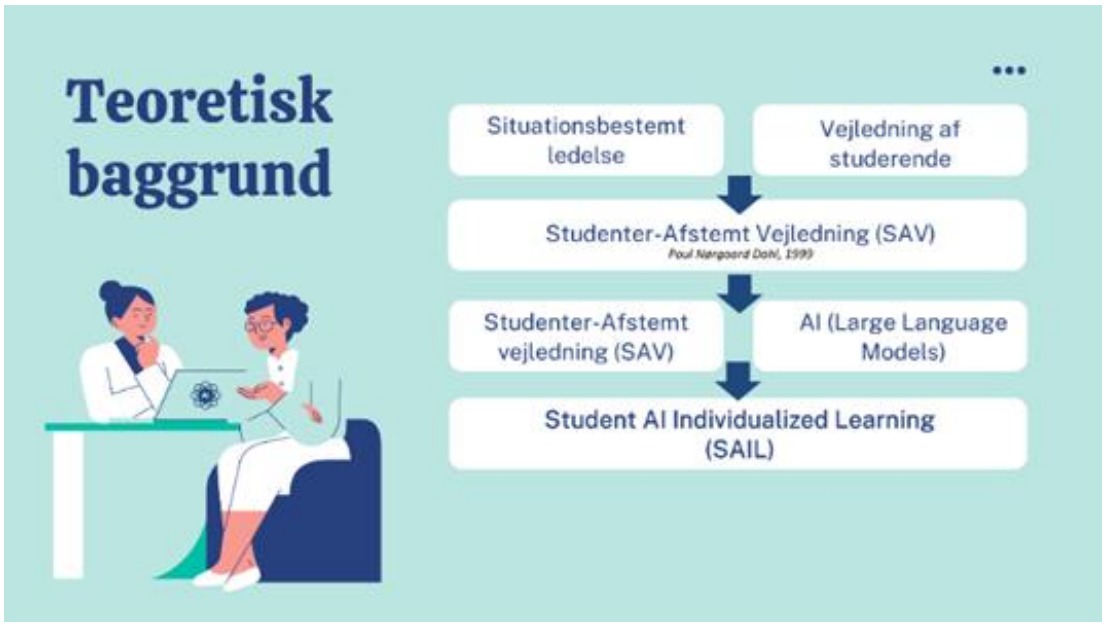
Teoretisk inspiration

På baggrund af vores læringsmål kan inddragelsen af AI give mulighed for, hvad Poul Nørgaard Dahl betegner "studenter-afstemt vejledning," hvad enten der er tale om produkt- eller procesvejledning. Hans bud er, at projekter er forskellige, vejledere og studerende ligeså, og at kravene og rollerne, en vejleder skal udfylde, ændrer sig i selve uddannelsesforløbet. Han argumenterer for, at "vejlederen skal tage udgangspunkt i de studerendes aktuelle zone for udvikling og stimulere den nærmeste udviklingszone."[5] Han omdefinerer den teori om "situationsbestemt ledelse," som K. Blanchard og P. Hersey fremsatte i 1982, til en vejledningssituation.[6] Lidt enkelt fremsat

[5] Poul Nørgaard Dahl, "Studenter-afstemt Vejledning." *Nordisk Pædagogik* 19:4 (1999): 256.
[6] K. Blanchard og P. Hersey, *Management of Organizational Behavior: Utilizing Human Resources*. 4. Udgave. Hoboken, New Jersey: Prentice.Hall, 1982.

går ledelsesteorien situationsbestemt ledelse ud på, at man styrker medarbejderes motivation, kvalitet, og produkter, hvis ledelsesstilen tilpasses den individuelle medarbejder og den specifikke opgave, medarbejderen står over for.
Nørgaard Dahl finder, at lige som en leder kan en vejleder kommunikere forskelligt, i forskellige stilarter.[7] Den teoretiske baggrund for vores egen vejledning med AI er illustreret her (Figur 2).

Figur 2
Fra Teori til Praksis

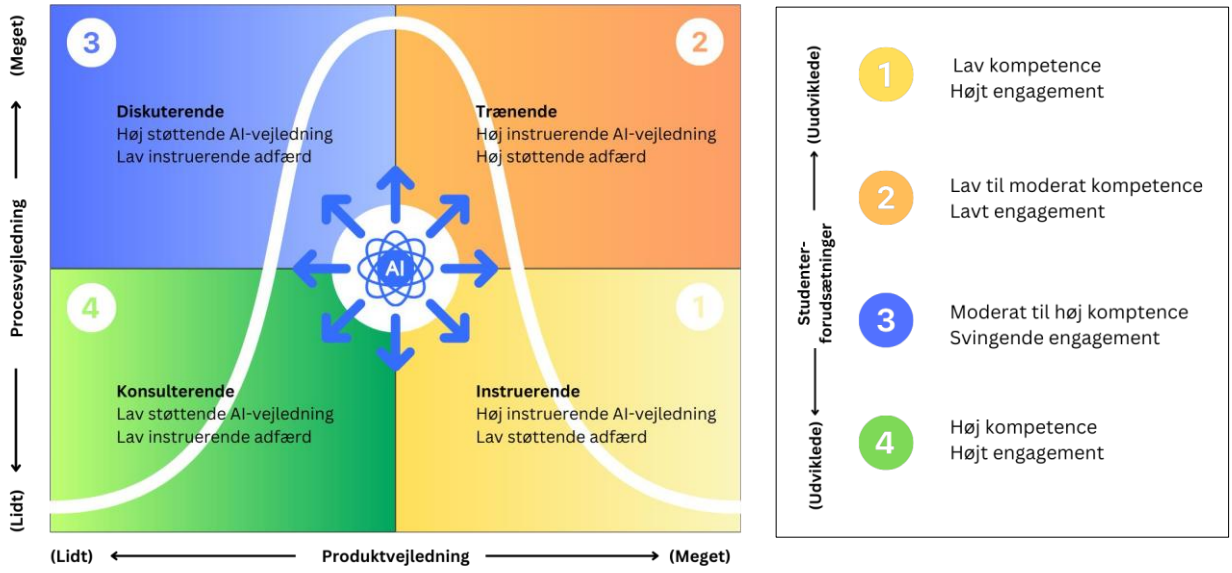


Afprøvning i praksis
Vi søsatte vores vejledningsmodel SAIL ved at kombinere en studenterafstemt vejledning, der tog hensyn til studerendes individuelle læringsbehov, med AI. Vi valgte at afprøve modellen i efteråret 2024 på et hold BA-studerende i Amerikanske Studier på SDU, hvoraf halvdelen ingen erfaring havde overhovedet med brug af kunstig intelligens. Derfor valgte vi at bruge ChatGPT i en gratis udgave, så alle hurtigt kunne være med. Vi valgte derudover at afprøve AI i vejledning til opgaveskrivning med særligt fokus på struktur og problemformulering, som erfaringsmæssigt volder problemer på dette niveau. Undervisningen og vejledningen på Amerikanske Studier foregår på engelsk, men tilsvarende udfordringer optræder også i dansksprogede sammenhænge, herunder en række undervisingsforløb på DJMX.

[7] Nørgaard Dahl, s. 270, note 6.

Ud fra Nørgård Dahls forskellige situationsbestemte ledelsestypologier identificerede vi fire forskellige vejledningsindsatser: 1. instruerende, 2. trænende, 3. diskuterende, og 4. konsulterende, som vi samlede i et skema over Student AI Individualized Learning (SAIL) (Figur 3).

Figur 3
Studenterafstemt vejledning efter SAIL-Modellen.



De studerendes forudsætninger i kvadranterne er, som vist her: 1) højt engagement, men lave AI-kompetencer, 2) lave-moderate AI-kompetencer og lavt engagement, 3) moderate-høje AI-kompetencer men svingende engagement, og 4) høje AI-kompetencer og højt engagement.

Vi definerede vejlederens overordnede handling for hver kategori, med inddragelse af AI, og vi trak derefter vores SAIl-model ind på landjorden med helt konkrete eksempler på vejlederens og den studerendes interaktion, ligesom vi forberedte feedback-spørgsmål til de studerende ved eksperimentets afslutning. Som det fremgår af vores model i figur 4, drejer vejledningssituationerne sig stadig om struktur og problemformulering i en skriftlig opgave.

Figur 4

Eksempler på individualiseret læring i studenterafstemt vejledning

Emner for vejledning	Ledelsesstil	Overordnet handling	Konkrete eksempler	Spørgsmål til studerende
1. Strukturering af en opgave	Instruerende	Vejlederen giver klare og detaljerede instruktioner om, hvordan opgaven kan struktureres ved hjælp af AI som støtteværktøj.	Vejlederen bruger AI til at demonstrere, hvordan en typisk BA- opgave kan opdeles i afsnit. Vejlederen instruerer den studerende i at bruge AI til at generere et udkast til en indholdsfortegnelse baseret på opgavekravene.	• Hvordan har AI hjulpet dig med at organisere din opgave? • Er der nogle dele, hvor AI ikke levede op til dine forventninger?
	Trænende	Vejlederen hjælper den studerende med at udvikle strukturen ved at diskutere deres forslag og justere dem sammen med AI.	Den studerende præsenterer en AI- genereret struktur, og vejlederen faciliterer en diskussion af mulige forbedringer. Vejlederen guider den studerende gennem en proces, hvor de bruger AI til at justere og forbedre strukturen.	• Hvilke ændringer har du foretaget efter at have brugt AI, og hvordan har det påvirket din opgaves struktur?
	Diskuterende	Vejlederen tilbyder feedback og diskuterer mulighederne for strukturering uden at give direkte instruktioner, så den studerende kan bruge AI til at eksperimentere.	Den studerende præsenterer en AI- genereret struktur, og vejlederen stiller spørgsmål for at fremme refleksion. Vejlederen faciliterer en diskussion af fordele og ulemper ved forskellige AI- genererede strukturer uden at give endelige anbefalinger.	• Hvilke strukturer foreslog AI, og hvordan valgte du den, du arbejder med? • Hvilke overvejelser har du gjort dig?
	Konsulterende	Den studerende arbejder selvstændigt med at anvende AI til at udvikle strukturen og konsulterer vejlederen kun, hvis det er nødvendigt.	Den studerende bruger AI til at skabe en struktur og diskuterer kun problemer eller usikkerheder med vejlederen. Vejlederen lader den studerende udforske AI-værktøjer selvstændigt og giver minimal feedback.	• Hvordan har du brugt AI til at strukturere din opgave, og hvilke udfordringer har du selvstændigt løst ved hjælp af AI?
2. Problemformulering	Instruerende	Vejlederen giver klare retningslinjer for, hvordan en problemformulering skal udformes ved hjælp af AI som støtte.	Vejlederen instruerer den studerende i at bruge AI til at generere mulige problemstillinger baseret på emnet. Vejlederen hjælper med at evaluere og udvælge den bedste problemformulering ved hjælp af AI.	• Hvordan har AI påvirket din problemformulering? • Hvilke alternativer overvejede du, og hvordan besluttede du dig?
	Trænende	Vejlederen guider den studerende gennem en refleksiv proces ved at diskutere AI-genererede forslag til problemformuleringer og justere dem.	Vejlederen spørger ind til den studerendes valg af problemformulering. Den studerende eksperimenterer med AI for at finjustere problemformuleringen under vejlederens vejledning.	• Hvad har du lært af at justere din problemformulering ved hjælp af AI? • Hvordan har det påvirket dit fokus?

	Diskuterende	Vejlederen diskuterer den studerendes AI- genererede problemformuleringer uden at give direkte instruktioner, for at fremme selvstændig refleksion.	Vejlederen stiller spørgsmål til AI- genererede forslag for at fremme refleksion over forskellige formuleringer. Den studerende diskuterer sine AI- genererede forslag med vejlederen, som hjælper med at udforske forskellige perspektiver.	• Hvordan har dine refleksioner ændret sig efter at have brugt AI? • Hvilke overvejelser har du gjort omkring dine valg af problemformulering?
	Konsulterende[8]	Den studerende arbejder selvstændigt med at udvikle og justere problemformuleringen ved hjælp af AI og konsulterer vejlederen kun lejlighedsvis.	Den studerende bruger AI til at formulere problemstillinger og diskuterer kun vanskeligheder med vejlederen. Vejlederen giver minimal feedback, mens den studerende selvstændigt evaluerer og justerer AI- genererede forslag.	• Hvordan har du brugt AI til at raffinere din problemformulering, og hvordan har det forbedret din tilgang til emnet?

Vores Erfaringer

Vi fik i løbet af semesteret bekræftet, at der var stor spredning i de studerendes AI-kompetenceniveauer—nogle studerende var begyndere og en enkelt havde tidligere rådgivet politikere på Christiansborg om brug af AI. Derfor blev vi bestyrket i, at valget af ChatGPT var rigtigt, netop for at få forskellene i kompetenceniveauer udlignet. Vi blev dog også opmærksomme på, at der af forskellige årsager var spredning i de studerendes motivation for at bruge AI. Her dominerede frygten for at blive anklaget for snyd, en følelse vi sporede tilbage til de studerendes gymnasietid. Herfra tog de dog også en grundig indføring i AI-etik med sig. De studerende var meget opmærksomme på etikken ved brugen af AI, som de tog meget alvorligt. Selv erfarede vi, at man trods manglende fastsatte rammer for AI kan arbejde med AI i sin undervisning.

Der er dog tiltag, som vil kunne fremme SAIL-modellens præmisser. Disse tiltag er:

- **Tydelig struktur og rammer**: Klare retningslinjer for, hvordan AI kan bruges i specifikke vejledningssituationer hjælper både vejledere og studerende.
- **Individuel tilpasning**: AI gør det muligt at skræddersy vejledningen til de studerendes niveau og behov, hvilket øger relevansen af læringsforløbet.
- **Kritisk refleksion og dialog**: AI kan fungere som en katalysator for kritisk refleksion, hvor studerende diskuterer deres AI-resultater med vejlederen for at styrke læringen.
- **Støtte til svagere studerende**: AI hjælper med at udligne forskelle i kompetenceniveau, hvilket øger fastholdelsen og fremmer læring.
- **Etisk brug**: Integrationen af AI skaber muligheder for at undervise i ansvarlig

[8] Kategorierne i kolonnen 'Ledelsesstil' er inspireret af Nørgaard Dahls (1999) arbejde – jævnfør figur 2 og 3. Ved gengivelse af ovenstående tabel skal der refereres til: Stecher, A. S., Juncker, C. (2024, November 7). Vejledning med Kunstig Intelligens. Teaching for Active Learning Conference 2024, Odense. https://www.sdu.dk/da/om-sdu/institutter-centre/c_unipaedagogik/tal_konferencen/tal_konference_2024

brug, hvilket styrker både færdigheder og forståelse for teknologiens begrænsninger.
- **Motivation og engagement**: Studerende, der ser AI som en nyttig ressource, oplever øget motivation og engagement i læringsprocessen.

De Studerendes Feedback

Generelt var de studerende positive omkring deres erfaringer med AI. Vi bad dem om feedback både på deres brug af AI ved arbejdet med at finde en egnet struktur og med at udfærdige en problemformulering. Vi spurgte først ind til strukturen: *Did AI (ChatGBT or other tools) help you organize your paper?*[9] De følgende eksempler angiver spændvidden i de studerendes svar:

- *"It was a good sparring partner in terms of ideas, and proposed an overall fine structure, but only with the prompts I had given it."*
- *"Not as much as it could have. Cuz in highschool using ChatGPT No matter what it was used for, wasen't something many from my old class did, since it wasen't really recommanded by the teachers. Quite the opposite actually."*
- *"Yes, the structure it gave me helped me getting a more clear overview of a paper that I was lost in."*
- *"Yes i had, so the paper made sense and had a red thread"*

Den svære problemformulering (eng. thesis statement) blev også kommenteret efter spørgsmålet "*Did you ask AI to suggest a thesis statement?*" Her var følgende svar typisk for de studerende:

- *"Yes I think you need to have the ideas yourself, if you are going to write a good paper. But of course you can get help with the wording for your thesis statement, or structure, but the core of the thesis statement, and the main ideas should be your own."*

I deres konklusion på brug af AI i vejledning og opgaveskrivning var de studerende forsigtigt positive.

- *"A good sparring tool, to people who would ask for reassurance or creative help in terms of their own thoughts. Not a bullet proof writer, or something that can make your paper for you. But if you use chat GPT for an hour or 2 for each of your papers, it can probably help you with your overview and streamlining your ideas."*
- *"I think it is a fantastic tool, definitely here to stay. There is no stopping this tool, and it is better to get on board, than not. Refusing to use it, is in my opinion, like shooting yourself in the foot. Humans have always used tools, and this*

[9] Undervisningssproget på Amerikanske Studier er engelsk. Vi har bibeholdt de studerendes svar uden at rette grammatiske svagheder.

is a tool for elevating human creativity and thought. As with all tools, there is a darker side to the equation. It is up to the individual and institutions how they view and use this tool."

- *"Its a good idea. You Can use it for a lot of things. Such as asking for background information. And it takes a lot less time than if u would have to find it yourself in books for an example. But again woulden't over-use it."*
- *"It is helpfull if used in the right way."*

Konklusion

I kølvandet på vores brug af kunstig intelligens i vejledningen af BA-studerende på Amerikanske Studier, SDU, fandt vi ud af, at vores eksperiment havde en række positive effekter. Først og fremmest er AI-værktøjet kommet op over bordet, så brug af kunstig intelligens ikke længere skræmmer med anklager om snyd og plagiering. For den digitale generation, vi arbejder med, løfter AI desuden motivationen—det er sjovt at forsøge sig med AI og også at presse den kunstige intelligens til at yde de mest relevante informationer for de studerendes individuelle projekter. Som Cremin and Chappell viser, øger noget, der er sjovt, de studerendes indlæring, særligt for corona-generationen.[10] Samtidig får de studerende hjælp til at strukturere et materiale og finde en interessant vinkel ved at få AI til at fungere som en mentor, der kan validere deres egne ideer og forslag. AI kan øge de svagere studerendes selvtillid, så de ikke opgiver. Til trods for den "ensidigt negative diskurs," som Damsgaard mener har domineret diskussionen om AI i Danmark,[11] fandt vi et højt etisk niveau blandt de studerende i vores eksperiment, hvor vi ikke mødte tegn på bevidstløs plagiering. Faktisk fandt vi, at AI skaber et højere reflektionsniveau om opgaven og dens indhold hos vores studerende. Selv følte vi os også godt tilpas i arbejdet med pædagogisk design og innovation. Som vejledere stod vi selv for brugen af AI i pædagogiske sammenhænge og bidrog derved til den demokratisering af kunstig intelligens, som Mollick og Mollick ønsker at katalysere.[12] Denne tilgang tog hensyn til individuelle niveauer og behov, for vejledere og ikke mindst for vores studerende.

[10] Teresa Cremin og Kerry Chappell, "Creative Pedagogies: A Systematic Review." *Research Papers in Education* 36.3 (2021): 299-331. https://doi.org/10.1080/02671522.2019.167775

[11] Damsgaard, s. 8.

[12] Se Mollick og Mollick, s. 43.

Stilladseret vejledning af præ-ph.d.-studerende via en virtuel platform

Lisbeth Hybholt, adjunkt, Institut for Regional Sundhedsforskning, SDU

Den pædagogiske udfordring

Dette udviklingsprojekt er baseret på mine erfarede udfordringer med at vejlede ph.d. studerende, så de oplever, at de bliver vejledt, samtidig med at de både udvikler selvstændighed i forhold til at træffe velargumenterede valg og formår at levere de forventede produkter inden for den afsatte tidshorisont.

Udfordringen er baseret på, at jeg er medvejleder for flere ph.d.-studerende og sammen med en kollega er ph.d. koordinator for alle de ph.d.-studerende tilknyttet Psykiatrien Region Sjælland. I de funktioner har jeg erfaret, hvordan vejledere og ph.d.-studerende kan gå skævt af hinanden. De ph.d.-studerende har fortalt, hvordan de har oplevet at være alene og uden tilstrækkelig vejledning. Vejlederne kan opleve, at de studerende ikke tager ejerskab og fremstår uselvstændige. Det efterlader både vejledere og studerende i en frustrerende situation, der kan gå ud over både processen og produktet og i sidste ende kan det betyde, at de studerende ikke gennemføre uddannelsen. En ældre undersøgelse fra Universitets- og Bygningsstyrelsen viser, at 15 % af de ph.d.-studerende frafalder og at den næst vigtigste årsag er svag eller utilstrækkelig vejledning (Epinion Capacent (2007). En undersøgelse blandt ph.d.-studerende på Aarhus Universitet påpeger, at ph.d.-vejledningen er en vigtig faktor for både trivsel og faglige præstationer og at de studerende, der er tilfredse med kvaliteten af vejledningen, oplever større selvstændighed. Selvom hovedparten er tilfredse med den vejledning, de får til deres forskning, er hver ottende ikke tilfreds og hver sjette oplever ofte, at de står helt alene med deres projekt (Hermann, Wichmann-Hansen & Jensen, 2013)

Parner og Wichmann-Hansen (2015) skriver at vejledning af ph.d.-studerende er en opgave der kræver et bredt repertoire af strategier der både favner proces, produkt og håndtering af fx personlige udfordringer der opstår i ph.d.-forløbet. Vejledning kan opdeles i tre former:

1) Produktvejledning, der har fokus på det færdige produkt
2) Procesvejledning, der har fokus på processen og på at vejlederen stiller spørgsmål, der hjælper den studerende til at tænke, skrive og reflektere og dermed bemyndiger den studerende til at træffe vel-argumenterede valg
3) Ad hoc vejledning, hvor vejleder og studerende mødes spontant om diverse udfordringer

Jf. Ph.d.-bekendtgørelsen § 1 skal uddannelsen kvalificerer den ph.d.-studerende til selvstændigt at varetage forsknings, udviklings- og undervisningsopgaver og at uddannelsen hovedsageligt gennemføres ved udøvelse af forskning under vejledning (Uddannelses- og Forskningsministeriet, 2013). Det er vigtigt at rekruttere de rigtige personer til ph.d.-studiet og det er en god ide at vejleder og studerende samarbejder inden selve ph.d.-forløbet (Parner og Wichmann-Hansen, 2015). I Region Sjællands Psykiatri har vi løbende præ-ph.d. Studerende, hvilket vil sige kandidater, der har et ønske om at blive ph.d. studerende, som fx har en bevilling svarende til tre-fire måneders løn, som de kan anvende til at udarbejde en projektbeskrivelse til deres ph.d.-forløb i samarbejde med den kommende hovedvejleder og med-vejleder(e). Allerede her har jeg mødt potentielle ph.d.-studerende, der har været i vildrede i forhold til både proces og produkt. Der er den særlige udfordring, at vi sidder på forskellige matrikler og dermed ikke har en dagligdag med hinanden. Jeg mener, det er vigtigt at understøtte de studerendes selvstændighed i det arbejde der ligger forud for selve i ph.d.-forløbet, når de studerende skriver projektbeskrivelsen, således de tager og føler ejerskab for projektet og træffer selvstændige valg, velvidende om de muligheder og begrænsninger, valgene giver, således de kan argumentere for deres valg. Desuden giver det en mulighed for tidligt i forløbet at få afklaret gensidige forventninger og få afklaret hvordan samarbejdsrelationen mellem vejledere og den studerende kan fungere.

Wichmann-Hansen & Jensen (2015) beskriver hvordan vejledere ofte synes det er vanskeligt at finde en passende balance mellem støtte og styring i forhold til den studerendes arbejdsproces og at de kan være frustrerede når de oplever at en studerende ikke tager ansvar. De peger på, at man som vejleder har mange forskellige handlemuligheder. Jeg ønsker at undersøge hvilke udfordringer og muligheder der opstår hvis jeg stilladserer vejledningen gennem fælles virtuelt site, med henblik på at understøtte et fællesskab mellem vejledere og ph.d.-studerende, samt at vejledningen aktiverer og støtter præ-ph.d.-studerende i at tage ansvar og arbejde selvstændigt med at udarbejde en ph.d.-projektbeskrivelse inden for den afsatte tid og på et niveau, hvor projektbeskrivelsen formodes at kunne godkendes af SDU. Idéen om et stilladseret læringsforløb er egentligt udviklet til børn, men kan anvendes i didaktiske overvejelser i universitetspædagogik, da det netop handler om at forstå videndeling mellem eksperten (her vejlederen) og den lærende (her den præ-ph.d.studerende) som "*skabt omkring et "skelet" af retningslinjer, regler og kriterier, som kan give den enkelte lærende et ansvar for egen læring inden for fastsatte rammer*" (Bom & Troelsen, 2016, s. 22). For at informere hvad der kan stilladserer læringsforløbet anvendes en kombination af viden på området som fx DUT guide on supervision (Wichmann-Hansen, 2021) og erfaringer fra de ph.d.-studerende i Region Sjælland.

Læringsmål
De intenderede læringsmål for de præ-ph.d.-studerende var:

- At opnå viden om, hvad en ph.d.-projektbeskrivelse skal indeholde.
- At kunne udarbejde projektbeskrivelsen inden for en fast tidsramme.
- At opnå kompetence til selvstændigt at begrunde faglige valg.

Desuden var det et mål at skabe nye vejledningsformer, der understøtter de studerendes selvstændighed, samtidig med at de er en del af et praksisfællesskab og som kan imødekomme de studerendes behov, særligt når vi, som i Psykiatrien Region Sjælland sidder på mange forskellige fysiske lokaliteter.

Læringsaktiviteten: Udvikling og afprøvning af et Teams-site skræddersyet til vejledning
Jeg valgte at udvikle og afprøve et Microsoft Teams-site som fælles platform for tre præ-ph.d.-studerende og deres vejledere. Indholdet i sitet blev baseret på ønsker og behov indsamlet fra tidligere studerende i en brugerdeltagende tilgang. Sitet består af fire centrale elementer:

1. **En velkomstside**: Der indeholder en personlig hilsen og en kort video (kan ses via QR kode på poster), hvor jeg forklarer konceptet, strukturen og den tiltænkte anvendelse af Teams-sitet. Velkomstsiden rummer også en chatfunktion, som gør det nemt at komme i kontakt med hele gruppen.
2. **Mapper med forskelligt indhold**: Mapperne indeholder materialer, som de studerende har efterspurgt, og dækker både processen og det endelige produkt. Indholdet inkluderer desuden nyttige værktøjer: fx eksempler på godkende projektbeskrivelser på SDU, Rammer for projektbeskrivelsen, projektstyringsredskaber inkl. et Gantt diagram skræddersyet til præ-ph.d.-studerende, samt en instruktions PowerPoint med tale, der viser hvordan Gantt diagram kan anvendes (Link til: Videointro til brug af gantt-diagram.ppsx (sharepoint.com), inspireret af Flipped learning, da de studerende efterfølgende kunne arbejde med redskabet selv og bede om vejledning, hvis de havde behov for det. skabeloner til vejledersamarbejde og aftaler inspireret af Parner & Wichmann-Hansen (2015), men tilpasset præ-ph.d.-forløbet.
3. **Sporing af arbejdsfremdrift:** Et værktøj til opgavestyring, tilpasset præ-ph.d.-perioden med fokus på både proces og produkt.
4. **Delt adgang til projektbeskrivelsen**: Både studerende og vejledere har adgang til den opdaterede projektbeskrivelse og mulighed for at bidrage aktivt i udarbejdelsen.

Læringsudbytte
Teamsitet blev evalueret af tre præ-ph.d.-studerende og deres tre tilknyttede vejledere, der alle er blevet tilknyttet et team-site.

Indholdets relevans og anvendelighed:
Studerende og vejledere var enige om, at indholdet på Teams-sitet er relevant og informativt. De studerende fremhævede især værdien af godkendte protokoller, eksempler på projektplaner og skabeloner, som hjalp dem med at forstå krav og forventninger i deres præ-ph.d.-forløb. Det gav dem tryghed i processen og fungerede som et støttende værktøj til at komme videre i deres arbejde. Vejlederne værdsatte også, at alt er samlet ét sted, hvilket hjalp dem med at få overblik over kravene fra ph.d.-skolen, rollerne i projektet og arbejdsgange. Det blev fremhævet, at links og fælles dokumenter på sitet er særligt nyttige for begge parter, så der ikke opstår unødig ventetid eller forvirring om, hvor materialer findes.

Brug af Teams-sitet:
Der var dog en fælles erkendelse af, at sitet bliver brugt sporadisk. For de studerende har Teams-sitet især været anvendt til at søge information og eksempler i starten af deres forløb, men de oplever, at de hurtigt vender tilbage til at bruge e-mails og egne dokumenter frem for at opdatere og bruge sitet aktivt. Vejlederne oplevede lignende udfordringer, hvor platformen blev brugt aktivt i begyndelsen af samarbejdet, men at brugen svandt ind og at kommunikationen begyndte at foregå via e-mails i stedet. Det forpurrede ideen om at alle skal kunne følge med i processen, da der opstod eksklusive dialoger mellem den studerende og en enkelt vejleder. Både studerende og vejledere var enige om, at det kræver en aktiv og konsekvent indsats fra alle parter, at opnå det fulde potentiale af platformen. Hvis Teams-sitet ikke bruges regelmæssigt, risikerer det at blive en opbevaringsplatform, som falder i baggrunden.

Betydning for vejledning:
Der var enighed om, at Teams-sitet kan understøtte vejledningsprocessen, hvis det bruges konsekvent. Studerende satte pris på, at Teams gør det muligt at få vejledning og feedback uden nødvendigvis at skulle koordinere fysiske møder, hvilket skaber større fleksibilitet. Vejlederne ser også potentialet i forhold til at undgå modsatrettet vejledning ved at samle al kommunikation og feedback ét sted, hvilket kan skabe en mere gennemsigtig og effektiv proces. De understreger dog, at en "både-og"-tilgang, hvor der skiftes mellem Teams og andre kommunikationskanaler som e-mails, kan skabe forvirring og gøre det sværere at holde styr på vejledningsforløbet. Hvis Teams bruges konsekvent, kan det hjælpe med at strukturere arbejdet, skabe fælles overblik og fremme samarbejde mellem studerende og vejledere.

Kombination af e-læring og vejledningsmøder:
Både vejledere og studerende så fordele ved at kombinere brugen af Teams-sitet med vejledningsmøder. E-læringsredskaber som skabeloner og eksempler på godkendte projektbeskrivelser giver de studerende en stærk base at arbejde ud fra, og vejledningsmøderne kan derefter bruges til mere detaljeret feedback og diskussion, hvilket er en pointe i flipped learning, der kan understøtte højere orden tænkningsevne, såsom analyse, vurdering og skabe (Estes, Ingram, & Liu, 2014). De studerende skriver dog, at de ofte ikke har brugt alle de funktioner, der er tilgængelige, såsom sporingsfunktioner, hvilket kan have reduceret deres effektivitet. Vejlederne fremhæver, at Teams kan bidrage til at skabe en mere struktureret vejledning, men understreger også, at det kræver engagement og regelmæssig brug for at være virkningsfuldt.

Konklusion
Indholdet i teams fungerer godt i forhold til de mapper der har en oplysende karakter, i det de giver et overblik, gør det tydeligt, hvad slutproduktet skal være og støtter processen. Men de mere aktive elementer, "sporing af arbejdsfremdrift" og word-dokumentet med "Work in Progress" ikke blev anvendt som tiltænkt. Dg er der enighed i at de kunne fungere, hvis de blev anvendt, men der mangler en yderligere belysning af hvad der sker, siden medlemmerne vender tilbage til andre kommunikationsformer.

Både vejledere og studerende er enige om, at Teams-sitet kan være et værdifuldt værktøj der kan støtte både processen og produktet. Men det kræver en større stringens i deling af dokumenter og koordinering af feedback, på den måde det var tiltænkt. Det har vist sig, at der er udfordringer med inkonsekvent brug, der førte til at sitet ikke nåede sit fulde potentiale. For at få mest muligt ud af platformen kræves der en fælles indsats fra både vejledere og studerende til at bruge sitet regelmæssigt og konsekvent, så det kan fungere som en fælles online platform i vejledningsprocessen.

De inkluderede forløb viste sig at forløbe med obstruktioner og der var ikke nogen af de tre studerende der nående i mål med at udarbejde deres projektbeskrivelse inden for den angivne tidsperiode. En ting, der kan have betydning, udover udefrakommende forstyrrelser, kunne være at sporing af arbejdsfremdrift enten ikke blev anvendt eller blev anvendt inkonsekvent. Hvis vejlederne havde været mere opmærksomme og fx havde taget dette redskab op til alle vejledningsmøder eller lavet en note i teamsitet, så kunne det have styrket fremdriften. Desuden skal det tages i betragtning, at teams ikke blev anvendt som det var tiltænkt.

Videre udvikling

På baggrund af erfaringerne blev der i samarbejde med ph.d.-studerende oprettet et SharePoint-site, hvor relevante dokumenter er gjort tilgængelige for alle. Det opdateres løbende og er nu integreret i de faste koordinatormøder. Der er desuden oprettet en "krise-hotline" via Teams, hvor både jeg og de studerende kan søge hjælp på tværs.

Projektet har givet indsigt i, hvordan digitale platforme kan stilladsere vejledning – men også hvor let de falder i baggrunden, hvis de ikke forankres i praksis. Der er behov for yderligere pædagogisk udvikling, der fokuserer på, hvordan digitale løsninger kan blive et reelt fælles rum – og ikke blot en teknisk mulighed.

Referencer

Atkinson, C., & Mayer, R. E. (2004). Five ways to reduce PowerPoint overload. https://www.hetl.org

Bom, A. K., & Troelsen, R. (2016). Stilladsering i praksis – mellem ramme og læringsfællesskab. Dansk Universitetspædagogisk Tidsskrift, 21, 21–30.

DeBell, A. (2024). How to use Mayer's 12 principles of multimedia learning [Examples included]. WaterBear Learning. https://www.waterbearlearning.com

Epinion Capacent. (2007). Undersøgelse af årsager til frafald blandt ph.d.-studerende. Universitets- og Bygningsstyrelsen.

Estes, M. D., Ingram, R., & Liu, J. C. (2014). A review of flipped classroom research, practice, and technologies. International HETL Review, 4(7). https://www.hetl.org

Hermann, K. J., Wichmann-Hansen, G., & Jensen, T. K. (2013). Kvalitet i ph.d.-forløb. Aarhus Universitet.

Parner, E., & Wichmann-Hansen, G. (2015). Ph.d.-vejledning er mere end faglig vejledning. I L. Riencker & M. Jørgensen (Red.), Universitetspædagogiske praksisser (s. 257–279). Samfundslitteratur.

Uddannelses- og Forskningsministeriet. (2013). Bekendtgørelse om ph.d.-uddannelsen ved universiteterne (BEK nr. 1039 af 27/08/2013).

Wichmann-Hansen, G. (2021). Faglig vejledning i forandring. Dansk Universitetspædagogisk Tidsskrift, 16(31).

Wichmann-Hansen, G., & Jensen, T. W. (2015). Processtyring og kommunikation i vejledning. I Rienecker et al. (Red.), Universitetspædagogik (kap. 5.1, s. 329–350). Samfundslitteratur.

Scaffolded Supervision of Pre-PhD Students via a Microsoft Teams site?

Lisbeth Hybholt

Background

In Psychiatry in Region Zealand, we regularly engage pre-PhD students to prepare a project proposal for PhD enrollment at SDU within a set deadline. Students have expressed feelings of bewilderment, being alone, and inadequate supervision. As a supervisor I expect Pre-PhD students to take ownership and demonstrate some degree of independence.

Our research sites are geographically dispersed, which means that supervisors and students may not share the same physical workplace. Consequently, Pre-PhD students may lack opportunities for ad hoc supervision and informal learning possibilities occurring in research communities. It may affect the students' sense of support, their possibilities to develop research competencies, and their ability to complete a project proposal that meets the expectations within the timeframe.

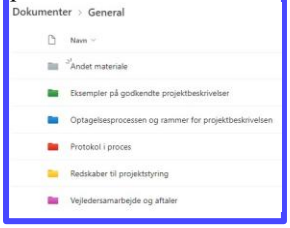
To address these challenges, I experimented with building and testing a Microsoft Teams site to foster closer contact between Pre-PhD students and their supervisors despite diverse physical workplaces and to scaffold both the process and the product for a Pre-PhD period to enable the students' responsibility, ownership and independence as outlined in the PhD regulations.

Content on the customized Microsoft Teams – tested on three students and their three supervisors

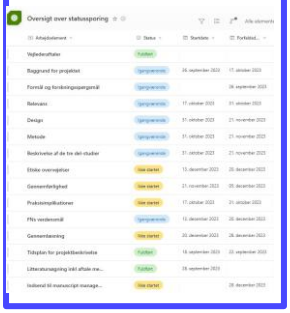
A personalized, friendly welcome message featuring a video introducing the concept, structure, and intended use of Teams

QR code for the video

Folders with content requested and suggested by former Pre-PhD students e.g. tools for supervision, project management, previously approved projects, and information about procedures



Customized task progress tracking tailored to the pre-PhD period, encompassing both process-related milestones and specific tasks



Shared access to the current project proposal as a work in progress, enabling everyone to contribute, comment, and stay updated

Evaluation

Both students and supervisors responded positively to the concept and appreciated the video. They found the content on Teams relevant and helpful. Students noted that the platform provided reassurance throughout the process and helped clarify the requirements and expectations for the product.

However, the platform's process-oriented features were primarily used at the outset, after which collaboration reverted to email. Consequently, the platform did not foster a sustained online community.

New initiative

Together with Pre-PhD and PhD students, I have created a new site on SharePoint where the requested documents have been transferred.

We have also set up a "crisis hotline" on Teams where group members can seek immediate help from one another, leveraging each other's experience.

As coordinator, I hold four meetings a year with all the students, and it's now a fixed agenda item to evaluate the content and functionality of the sites.

Contact:
Lisbeth Hybholt, RN, MScN, PhD.
Tel.: +45 2960 5218
Mail: Lihy@regionsjaelland.dk

1) Senior Researcher at Research Unit. Mental Health Services East. Psychiatry Region Zealand, Denmark
2) Senior Researcher at Psychiatric Research Unit, Slagelse. Psychiatry Region Zealand, Denmark
3) Assistant professor at the Institute of Regional Health Research, University of Southern Denmark

Vejledning som samskabende læringsmiljø: med afsæt i projektsessions + ph.d.seminar

Connie Svabo, professor, Institut for Matematik og Datalogi, SDU
Katrine Bergkvist Borch, ph.d.-studerende, Institut for Matematik og Datalogi, SDU
Maiken Westen Holm Svendsen, ph.d.-studerende, Institut for Matematik og Datalogi, SDU

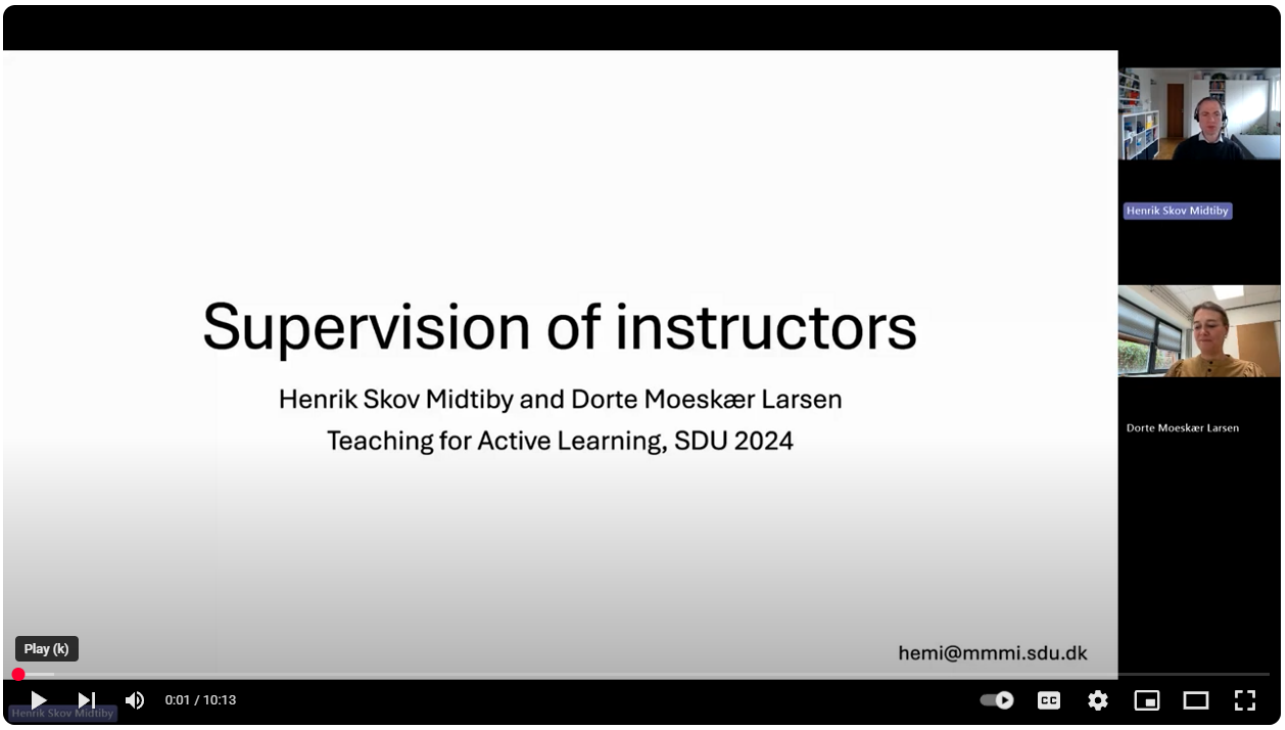
Videoen præsenterer erfaringer med studentersessioner og ph.d.-seminarer som samskabende læringsmiljøer, hvor deltagere både bidrager til og former indhold og struktur. Med inspiration fra æstetiske læringsformater og co-design såsom Creative Pragmatics (Svabo, et al., 2025) blev der arbejdet med åbne, producerende og fællesskabsorienterede vejledningspraksisser, hvor deltagerne indtager aktive, medskabende roller.

Supervision of Instructors Implementing "The Building Thinking Classrooms" Approach

Dorte Moeskær Larsen, lektor, Institut for Matematik og Datalogi, SDU
Henrik Skov Midtiby, lektor, Mærsk Mc-Kinney Møller Instituttet, SDU

In 2024, a novel teaching approach was implemented in the Mathematics 1 course at the Technical Faculty of the University of Southern Denmark. During the TA-sessions students were grouped into teams of three, formed by drawing lots, and worked collaboratively on problem-solving tasks at whiteboards.

This presentation outlines the details of this teaching method and describes how we supervised a group of student instructors to facilitate the exercise classes.



Interdisciplinary Learning in Engineering Education through Problem- and Project-Based Learning, Design Thinking, and the Double Diamond Model

Su-Hyun Berg, postdoc, Department of Technology and Innovation, SDU
Matthias König, associate professor, Department of Technology and Innovation, SDU

Learning Objective

The objective of the collaboration between Semester Project 3 (SP3) and Technology Management (TEMA) is to develop the students' ability for interdisciplinary collaboration by bridging technical problem-solving with business and market-oriented thinking. This activity aims at developing for Bachelor of Engineering, Innovation and Business (EIB) students' ability to integrate technical and managerial skills by connecting engineering solutions, such as prototypes, with viable business strategies, including market analyses. By applying PBL, students are encouraged to enhance their critical thinking and self-directed learning skills by identifying and solving real-life problems (Barrows, 1996; Savery, 2006). Moreover, Design Thinking (Brown, 2009; Liedtka & Ogilvie, 2011) and the Double Diamond Model by Design Council, 2005, introduce structured creative frameworks to the students for going through problem-solving processes. Another key objective is market awareness, in which students will be able to perceive market dynamics and customer needs. By connecting the technical focus of SP3 with the strategic and analytical focus of TEMA, students experience the interdisciplinarity of engineering practice-interconnecting innovation, technical development, and market integration. Lattuca et al. (2013) state that interdisciplinary learning is essential for preparing students to address complex societal and technological challenges. According to Lattuca et al. (2013), promoting interdisciplinarity enhances the students' ability to synthesize knowledge between disciplines, be a valuable team member within a diverse group, and solve problems holistically. This cooperation between SP3 and TEMA not only reflects industrial reality but also prepares students for the different challenges that the contemporary industry faces, whereby technical capabilities must be supplemented by strategic enterprise skills and market responsiveness. This integrated approach helps the students understand how to align technical innovation with market viability, which has become a critical skill set in today's rapidly changing global economy.

Context

SP3 and TEMA are integrated classes, helping the student to tackle a problem-solving approach in depth: merging technological innovation with market-oriented ideas. Students learn through projects that simulate an enterprise setup-in SP3, in groups, identify real-world problems and, using technical ideas, create their prototype. Emphasis will be put on developing this prototype with implementations in engineering principles related to technologies like microcontrollers, Bluetooth, and 3D printing. The technical aspect of SP3 focuses on the building of a working model to demonstrate the feasibility of the proposed solution.

TEMA, therefore, complements the technical focus of SP3 by exploring user identification and market validation for the group projects. This involves conducting detailed market analyses, including identifying market trends, understanding customer needs, and assessing potential barriers to entry (Liedtka & Ogilvie, 2011). Students also conduct competitor analyses, determining the competitive landscape and strategies to gain differentiation while mapping out target markets and growth opportunities. With integrated TEMA, students of EIB move beyond purely technical development toward the positioning and scaling of prototypes in a greater market. The integration described here is facilitated through methodological frameworks such as PBL, Design Thinking, and the Double Diamond Model. The PBL approach encourages students to collaboratively define problems, explore solutions, and apply learning in a real-world context (Barrows, 1996). For instance, the "Five Whys" method was used by students in the identification of root causes for challenges they were facing in their projects. That way, they were able to find solutions to their problems at deeper levels. Design Thinking provides a human-centered methodology that fosters iterative problem-solving with a focus on stakeholder needs. Students navigate the stages of empathizing, ideating, prototyping, and testing, refining both their prototypes and business strategies based on user feedback (Brown, 2009). Meanwhile, the Double Diamond Model offers a structured framework comprising the phases of Discover, Define, Develop, and Deliver, helping students align their technical and managerial efforts (Design Council, 2005). For example, in the Discover phase, students conduct deep research on industry trends and user needs, while in the Define phase, framing the problem into specific issues like sustainability or user adoption challenges is emphasized.

What we learned as teachers

The integration of SP3 and TEMA created a dynamic learning environment that encouraged students to think across disciplines. By linking technical problem-solving with market analysis, students gained a broader understanding of how engineering

solutions are implemented in real-world settings. The activity allowed students to demonstrate enhanced collaboration between technical and business-oriented team members, reflecting the interdisciplinary nature of modern engineering practice (Lattuca et al., 2013).

However, initially, students had difficulties in balancing the technical and managerial aspects of the project. Some groups focused more on technical prototyping, while others focused on market analysis. Through guidance and iterative feedback, students were able to align their efforts to address both SP3 and TEMA's dual objectives. A second challenge was in defining the "problem" in a real-world setting; students had to overcome ambiguities in doing so. This difficulty overall enhanced their critical thinking and problem-definition skills as they worked at finding the root causes and framing their solutions effectively.

SP3 and TEMA were appropriately interconnected to provide a structured yet flexible framework for interdisciplinary learning, according to the instructor. The students could merge engineering with entrepreneurship by building a prototype while simultaneously doing the market viability analysis of that prototype. Assignments such as the "Five Whys" analysis and competitor benchmarking proved instrumental in helping students refine problem-solving approaches and connect technical outputs with broader strategic objectives.

This comprehensive approach is transferable to other contexts in which technical and managerial disciplines overlap. The model can be adopted by institutions for developing interdisciplinary collaboration and active learning in engineering studies, underlining how strongly technical development and market strategy are interconnected.

Reflections and Inspirations for Others

This activity brings out the potential of linking technical and managerial courses to provide a rich interdisciplinary learning experience. In integrating SP3 and TEMA, students will be exposed to the full innovation process, from technical prototype development through market analysis, mirroring industry practice.

The integration of technical and business perspectives in engineering education prepares students for the complexities of professional practice, equipping them with skills that are essential in today's rapidly evolving industries. Besides, frameworks such as PBL (Barrows, 1996; Savery, 2006), Design Thinking (Brown, 2009), and the Double Diamond Model (Design Council, 2005) provide further valuable structures for interdisciplinary projects. This activity should inspire educators in course design to balance technical rigor with market relevance, thus enabling students to address real-world challenges through innovation and collaboration.

References

Barrows, H. S. (1996). *Problem-based learning in medicine and beyond: A brief overview*. New Directions for Teaching and Learning, 1996(68), 3-12.

Brown, T. (2009). *Change by design: How design thinking creates new alternatives for business and society*. Harper Business.

Design Council. (2005). *The Double Diamond: A universally accepted depiction of the design process*. Retrieved from https://www.designcouncil.org.uk.

Lattuca, L. R., Knight, D. B., & Bergom, I. (2013). Developing interdisciplinary competence in engineering students: An analysis of learning activities. *European Journal of Engineering Education*, 38(4), 383-399.

Liedtka, J., & Ogilvie, T. (2011). *Designing for growth: A design thinking toolkit for managers*. Columbia University Press.

Savery, J. R. (2006). Overview of problem-based learning: Definitions and distinctions. *Interdisciplinary Journal of Problem-Based Learning*, 1(1), 9-20.

En simpel metode til facilitering af emnevalg og -afgrænsning i starten af vejledningsforløbet

Vitus Vestergaard, lektor, Institut for Design, Medier og Uddannelsesvidenskab, SDU

Baggrund

Som vejleder møder man af og til studerende, som har behov for facilitering af emnevalg og -afgrænsning i starten af et vejledningsforløb. I mange frie opgaver og projekter ligger emnevalget i høj grad hos den studerende, og til tider bliver det motiverede valg af emne ligefrem formuleret som et fagligt kompetencemål. På medievidenskab ved SDU står der fx i målbeskrivelsen for bachelorprojektet, at den studerende skal kunne "afgrænse og definere et emne for bachelorprojektet". I målbeskrivelsen for specialet hedder det tilsvarende, at den studerende skal "kunne styre specialeprocessen, herunder kunne afgrænse og definere et emne for specialet". Emnevalg og -afgrænsning kan altså betragtes som en potentielt vejledningskrævende aktivitet, hvor den studerende skal træffe motiverede valg, ligesom som i valget af anvendt teori, metode m.m.

Som vejleder på medievidenskab igennem 16 år er jeg gået fra at betragte emnevalget næsten som et studentergode til at betragte det som en reel, faglig og kreativ udfordring. Der findes mange studerende, som har et godt bud på emne, problemformulering, teori og metode allerede inden første vejledningsmøde, men der findes også studerende, som sidder fast i processen med emnevalg og -afgrænsning. I flere år har jeg anvendt en simpel og effektiv metode til at facilitere denne proces i skriftlige hjemmeopgaver, bachelorprojekter, specialer, praktik- og ph.d.-forløb.

Det gode emne og den gode afgrænsning

Studerende kan have forskellige udfordringer i forbindelse med emnevalg og -afgrænsning. En typisk udfordring er, at der findes et væld af forskellige relevante og interessante emner. Jeg har ofte mødt medievidenskabsstuderende, som overvejer to ret forskellige emner såsom "reklamefilm" og "podcasting". Begge emner ligger helt inden for den faglige ramme, så langt hen ad vejen er det smag og behag, om det ene emne er at foretrække frem for det andet. Hvis den studerende synes, at flere emner er lige spændende, ender det nogle gange i handlingslammelse og et ønske om at vejlederen træffer valget.

En anden typisk udfordring er, at emner er alt for brede og overordnede. Det er umuligt at vejlede i emnet "reklamefilm", for drejer det sig om reklamefilmproduktion, dansk reklamefilmhistorie eller måske effektmåling af reklamefilm? Det er tre meget forskellige emner.

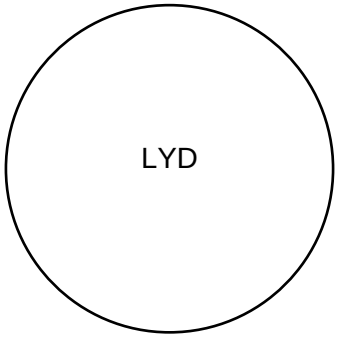
De to udfordringer hænger imidlertid sammen, og hvis den studerende arbejder med at indsnævre, afgrænse og konkretisere emner, bliver det meget lettere at se, hvad emnerne har at byde på. Sagt lidt firkantet: Den gode afgrænsning bidrager til at skabe eller synliggøre det gode emne.

Metodens teoretiske inspiration

Når et emne som "reklamefilmproduktion" er mere håndterbart end "reklamefilm", er det selvfølgelig fordi der er foretaget en indsnævring og konkretisering. Metoden sigter dog imod at gå skridtet videre til et emne såsom "bæredygtig reklamefilmproduktion". Her blander man to tilsyneladende ubeslægtede emner, bæredygtighed og reklamefilmproduktion, og som resultat får man et nyt, mere unikt og forhåbentligt interessant emne. Denne kombinationsbevægelse er inspireret af kreativitetsteori, og den måske mest berømte udlægning findes hos Arthur Koestler, som kalder sådanne kombinationer for *bisociation* (Koestler, 1964). Koestlers udlægning af bisociation kan ses som forløberen for begrebet *conceptual blending* i nyere, kognitiv lingvistik (Turner & Fauconnier 2002). Man finder en analog tanke i konstruktivistisk læringsteori, fx i Piagets beskrivelse af *akkomodation*, hvor den lærende danner nye, reviderede skemaer for at integrere idéer, som ikke umiddelbart passer ind i de gamle (Piaget, 1952). Udover sådanne teorier om blanding og kombination af idéer er metoden også inspireret af teorier om *ekstern kognition*, altså anvendelsen af fx grafiske repræsentationer og visualisering af ellers mentale repræsentationer (Scaife & Rogers, 1996). Den teoretiske antagelse bag metoden er kort sagt, at både studerende og vejleder har lettere ved at overskue og drøfte forskellige kombinationer af emner, hvis emnerne bliver konkretiseret visuelt.

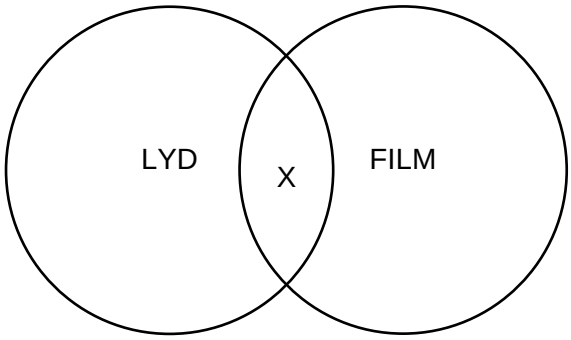
Metodens to bevægelser

Metoden starter rent praktisk med et stykke papir, hvor der er tegnet en cirkel. Inde i cirklen skriver den studerende et forslag til et emneord. Det kunne være en studerende på medievidenskab, som gerne vil arbejde med lyd:



Dette emne er naturligvis alt for bredt, så der skal arbejdes med emnet. Metoden rummer to bevægelser: *Kobling* og *indsnævring*.

Den første mulighed er at foretage en *kobling*. Så tegner man en delvist overlappende cirkel på papiret, som skal rumme endnu et emneord:



I dette tilfælde skrev den studerende "film". Så fra at projektet blot handlede om "lyd", handler projektet nu om "lyd i film".

Eksempler på kobling:

Biodiversitet ∩ Forurening
Religion ∩ Sport
Folketingsvalg ∩ Radioavisen
Kunstig Intelligens ∩ Videregående Uddannelse

Vejlederen kan hjælpe den studerende til at tænke i mulige koblinger ved at stille spørgsmål som "med hensyn til hvad?" eller "i hvilken sammenhæng?".

Den anden mulighed er at foretage en *indsnævring*. Så gør man emneordet i en cirkel mere specifikt:

I dette tilfælde skrev den studerende "lydeffekter og musik". Så projektet handler ikke om al slags lyd men specifikt om lydeffekter og musik.

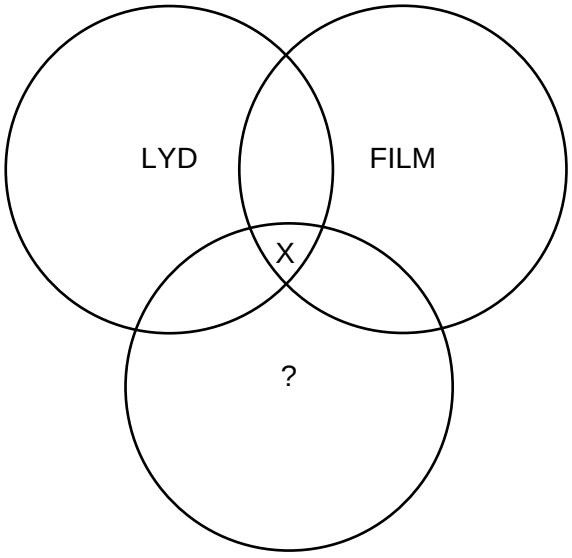
Eksempler på indsnævring:

Computerspil ⊃ First Person Shooters
Strafferet ⊃ Straffelovens § 152
Algebra ⊃ Abstrakt algebra
Infektionssygdomme ⊃ Luftvejsinfektion

Vejlederen kan hjælpe den studerende til at tænke i indsnævring ved at stille spørgsmål som "hvilken slags…?" eller "er det en bestemt form for…?".

Hvornår der er tale om en kobling, og hvornår der er tale om en indsnævring er en vurderingssag. Man kunne fx have valgt at indsnævre "lyd" til "filmlyd", men når man har at gøre med to ontologisk meget forskellige emneord ("lyd" og "film") er det oftest mere oplagt at foretage en kobling. Vejlederen bør dog ikke se det som et problem, hvis den studerende foretager overraskende koblinger eller indsnævringer: dette giver tværtimod anledning til at drøfte forskellige forståelser af emnet.

Metoden i anvendelse
Metoden består kort og godt af at tegne og drøfte cirkler med emneord, som bliver hhv. koblet og indsnævret. I princippet kan man tegne så mange eller så få cirkler, man ønsker, men i praksis har det vist sig, at tre cirkler med et par indsnævringer i hver fungerer godt. Dette er et rent heuristisk fund.
Ofte vil to cirkler illustrere en relativt åbenlys kobling, og her giver den tredje cirkel en mulighed for at eksperimentere med nye koblinger – som regel med markant effekt. For med tre cirkler ligger projektet i et meget snævert koblingspunkt inde i midten af visualiseringen.



Hvis den studerende er tilfreds med emnerne "lyd" og "film", kan den studerende nu eksperimentere, og vejlederen kan stille spørgsmål og endda deltage i en brainstorm om emneordet i den tredje cirkel. Det kan resultere i radikalt forskellige bud på projekter:

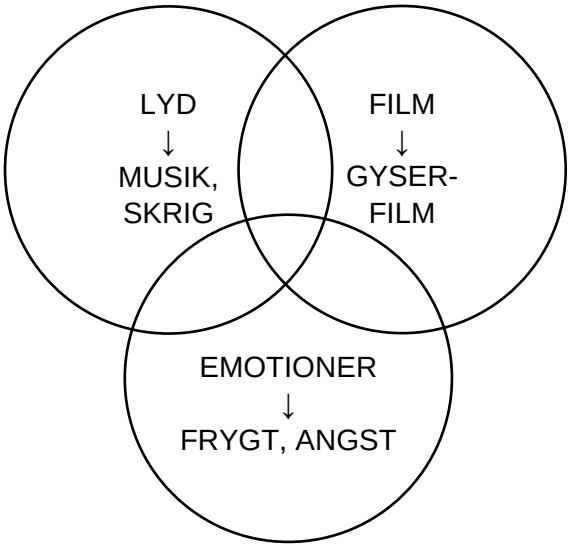
Lyd ∩ Film ∩ Produktion (om lydproduktion til film)
Lyd ∩ Film ∩ David Lynch (om David Lynchs brug af lyd i film)
Lyd ∩ Film ∩ Emotioner (om relationen mellem lyd og emotioner i film)
Lyd ∩ Film ∩ Biografer (om biografflyd)
Lyd ∩ Film ∩ Hørehandicap (om tekstning af film el. lignende)

Den studerende skriver blot sine forslag inde i den tredje cirkel, streger ud, retter eller tager et helt nyt stykke papir efter behov. Nogle gange bliver emneordet i den tredje cirkel så interessant, at det giver anledning til at holde fast i dén cirkel og i stedet eksperimentere med en af de to første. Så kan projektet tage et spring i en helt ny retning:

Lyd ∩ Film ∩ Biografer
Farver ∩ Film ∩ Biografer
Reklamer ∩ Film ∩ Biografer

Undervejs eller efterfølgende lægger vejlederen op til passende indsnævring med spørgsmål som "hvilken slags…?" eller "er det en bestemt form for…?".

Hvis den studerende kom frem til, at cirklerne skulle rumme emnekombinationen *Lyd ∩ Film ∩ Emotioner*, kunne det efter indsnævring se ud som følgende eksempel:



Den studerende kan måske indsnævre endnu mere. Måske handler det ikke blot om "gyserfilm" men "amerikanske gyserfilm fra 1990'erne" eller måske endda om tre

konkrete filmtitler. Her bør vejlederen vurdere, om sådanne indsnævringer er gavnlige på det givne tidspunkt i processen, eller om det hellere bør vente.

I alle tilfælde kan man nu gå til den sidste del af metoden, som kort sagt handler om at læse cirklerne højt. Vejlederen kan med fordel bede den studerende prøve at formulere det som et spørgsmål. I ovenstående eksempel kunne dette fx lyde: "Hvordan medvirker lyd i form af musik og skrig i gyserfilm til dannelsen af emotioner såsom frygt og afsky?".

Dette spørgsmål kan fungere som en indledningsvis problemformulering.

Jeg har ofte oplevet både forbavsede og lettede studerende efter sådan en oplæsning. Den studerende er – med hjælp fra vejlederen og metoden – gået fra en situation, hvor emnevalg og -afgrænsning virkede ganske uoverskueligt til en situation, hvor den studerende selv er i stand til at give et første bud på en problemformulering. Og hele processen har måske taget et kvarters tid.

Fordi metoden er så simpel og hurtig betyder det også, at der bør være plads til, at den studerende tænker, eksperimenterer og arbejder videre på egen hånd. Pointen med metoden er netop, at "bordet ikke fanger", så det er helt fint, hvis den studerende går hjem og laver nye cirkler på nye papirer og kommer frem til et andet bud på emne og indledningsvis problemformulering. Jeg har aldrig oplevet metoden føre til ny ubeslutsomhed hos den studerende, og hvis det skulle opstå, vil det trods alt være ubeslutsomhed om nogle ret udkrystalliserede emner, som vejlederen konkret kan forholde sig til.

Praktiske tips til vejlederen

- Brug papir, whiteboard eller en tablet med mulighed for at tegne. Et Word-dokument eller lignende er for besværligt at skrive i, og man mangler fleksibiliteten til hurtigt at kunne strege over, tegne pile og lignende.
- Start med at tegne enten en cirkel eller tre tomme cirkler, som overlapper. Cirklerne skal være store, så i udgangspunktet bør der kun være én model med tre cirkler pr. side.
- Søg en passende balance mellem studenterautonomi og vejlederautoritet. Vejlederen kan godt komme med enkelte forslag og idéer til emneord, men metoden handler mest om at få den studerendes egne idéer og interesser formuleret og visualiseret. Så vejlederen bør i højere grad stille spørgsmål.
- Hvis den studerende ikke er klar til at komme med idéer til emneord, eller hvis der er dårlig tid, kan vejlederen i stedet demonstrere metoden og give den studerende metoden med hjem som opgave.
- Hvis vejlederen står for gruppevejledning, en specialeforberedende workshop eller andre gruppeaktiviteter, kan metoden også demonstreres, hvorpå de studerende kan anvende den på egen hånd i lokalet eller hjemme.

- Metoden kan også af og til være nyttig for studerende, som er godt i gang med et projekt. Nogle gange ender studerende så dybt nede i detaljen, at overblikket mistes. Andre gange ændrer et projekt fokus undervejs. I begge tilfælde kan metoden bruges til at komme op i fugleperspektiv og spørge "hvad handler mit projekt egentlig om?".

Litteratur

Fauconnier, G., & Turner, M. (2002). *The way we think: Conceptual blending and the mind's hidden complexities*. New York: Basic Books.

Koestler, A. (1964). *The Act of Creation*. London: Hutchinson & Co. Ltd.

Piaget, J. (1952). *Origins of Intelligence in the Child*. New York: International Universities Press, Inc.

Scaife, M., & Rogers, Y. (1996). External cognition: How do graphical representations work? *International Journal of Human-Computer Studies, 45*, 185-213.

Generative AI in Career Counselling and Teaching

Fleur Bernburg, karriere- og employabilitetskonsulent, SDU RIO, SDU

The focus of my short presentation at TAL2024 and this article is to share real life examples of incorporation of GenAI in student-oriented activities. My hope is to inspire colleagues to test the tool for themselves, hopefully aided by my initial experiences and reflections shared here.

Students Struggle to Transfer Their Competences

It is a general challenge for students to identify, communicate, and transfer their competences in the transitions between student life and work life. This applies all the way through their studies, e.g. when they look for:

- **student jobs** and **internships** (project-oriented courses and in company projects),
- **project collaborations** such as master's thesis written in collaboration with a company,
- and **first jobs** after graduation.

Me and my career counselling colleagues in SDU RIO know this from our interactions with students, teachers, companies and other external organizations as well as from the literature and job market reports (Uddannelses- og Forskningsministeriet 2022; Ballisager 2023; Ballisager 2024). It is a problem both for the individual and for society when students have difficulty converting their competences from their studies into value in the labor market. Therefore, we work to support students in practicing competency transfer throughout their studies (Jensen et al. 2021). We do this in many ways and at many levels, and our offerings to students are continuously developing.

GenAI can be a powerful tool

Currently, part of this development focuses on how we meaningfully incorporate generative AI (hereafter: GenAI) into our different student-oriented activities such as workshops and counselling. We have chosen to do so, because we acknowledge that when it comes to career development and job search, GenAI can be a powerful tool. Especially when it comes to translation, communication and transfer of competences, augmentation of existing tools such as job databases, and boost of student independence both in counselling and learning situations as well as outside of them. Thus, we do not work to incorporate GenAI to save our own resources and time. Sometimes, that is also a consequence, but it is not the main goal. The main goal is to

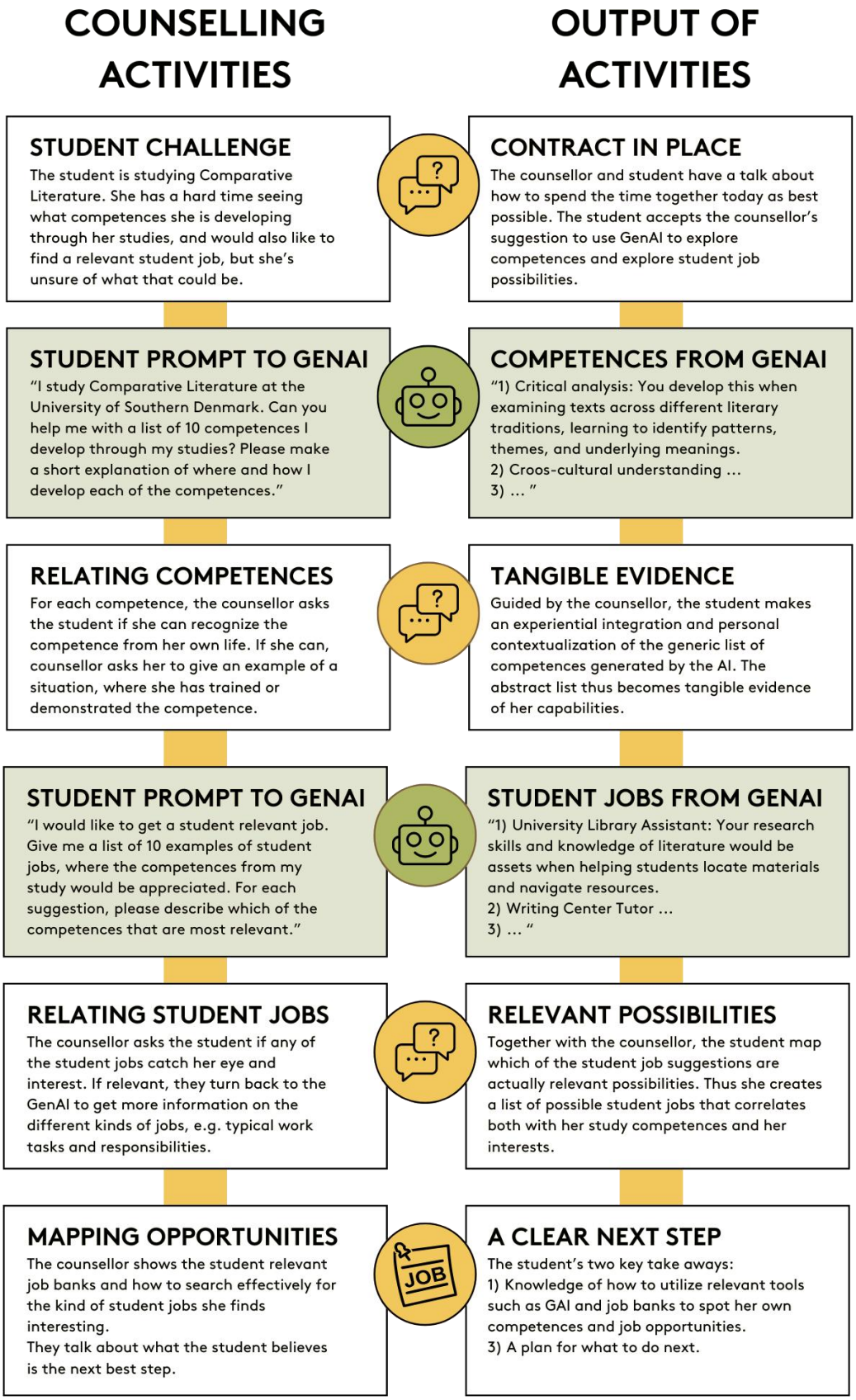
teach students how to use it to save time and get more out of their career development endeavors.

Augmentation, Not Replacement: Examples from Our Career Counselling and Workshops

This article is based on our work of exploring and testing GenAI in our student-oriented career services. We have worked with the generic versions of different GenAI's, primarily Copilot, because this is the officially recommended GenAI at SDU. Our incorporation of GenAI into our career development activities for students is not about replacing part of our work. It is about supplementing and augmenting what we know works, both from our own experience and research within the field (Capinding et al. 2025; Gedrimiene et al. 2024; Moran et al. 2024).

In the first example, I go through a guidance situation. Here, I have illustrated the example by focusing on the counselling activities, including the incorporation of GenAI, and the output of the various activities. In doing so, I zoom in on the benefits of each individual prompt and how the GenAI integration is closely coupled with dialogue and classic career counselling techniques. The second and third examples are based on workshops I have conducted for students at SDU. The first workshop was for biology students in their 4th semester. The second workshop was an open event for all thesis students at SDU. In the workshop examples I focus on showing how we interweave GenAI with other digital tools, as well as interaction with fellow students and us, the facilitators.

1:1 Career Counselling | Competency Clarification and Job Opportunities
This example shows how we typically incorporate GenAI in a career counselling situation. In the example, the student needs help articulating her competences and finding a relevant student job.



Workshop | Study Competences in a Job Context | Biology Students
This example shows how I have integrated GenAI in a two-hour workshop for Biology students at their 4th semester. In the example, we utilize GenAI to translate work tasks to competences and competences to value. The exercise excerpt unfolds part of the workshop activities, not all of them.

WORKSHOP ELEMENTS

WORKSHOP TOPICS
- Exploration of what jobs alumni from Biology at SDU obtain after graduation.
- Reflection on the connection between competences, work tasks and value.
- Exploration of opportunities for job-oriented competence development during studies.

WORKSHOP ACTIVITIES
- Presentation by the facilitator.
- Ongoing plenary discussions and summaries of exercises.
- LinkedIn exercise with subsequent plenary discussion.
- GenAI exercises with subsequent discussions with a fellow student.

HANDOUT
- The presentation.
- File with:
  - Prompts for GenAI
  - Links for LinkedIn and Copilot

EXERCISE EXCERPT

FACILITATOR PRESENTS
The facilitator demonstrates how to conduct an alumni search on LinkedIn.

EXERCISE AT LINKEDIN
The students find alumni on LinkedIn who have studied Biology at SDU. They note the tasks that people describe they do as part of their jobs as employed biologists. They write them down on post-its and place them on the blackboard.

PLENARY DISCUSSION
Together with the facilitator the students assess the tasks they have found on various LinkedIn profiles. They choose 1 of the tasks from the blackboard, e.g. "Assessment of protected species, habitats, and water areas". They explore the task with GenAI.

STUDENT PROMPT TO GENAI
"I study Biology at SDU. What competences do I practice and develop, when I do the following task: assessment of protected species, habitats, and water areas?"

STUDENT DISCUSSIONS
The students discuss in pairs where in their studies they already practice the competences that GenAI listed. They choose 1 of the competences the GenAI suggested, e.g. "collaboration". They explore the chosen competence further with GenAI.

STUDENT PROMPT TO GENAI
"I study Biology. How is it valuable for an employer that I am good at collaboration?"

STUDENT DISCUSSIONS
The students discuss in pairs how they create value with the chosen competence, e.g. "collaboration," in their studies and in other contexts – for example, volunteer work or student jobs.

Workshop | Utilizing the Thesis in the Job Search Process | Master Students
This example shows how I have integrated GenAI in a two-hour workshop open for all master students at SDU. In the example, we utilize GenAI to identify relevant keywords for the database Infomedia. The exercise excerpt unfolds part of the workshop activities, not all of them.

WORKSHOP ELEMENTS

WORKSHOP TOPICS

- Reflection on the thesis's relevance.
- Analysis of the thesis's relevance.
- Network oriented communication of the thesis.
- Targeted communication of the thesis in the CV.
- How to utilize different data bases and GenAI in relation to the above mentioned themes.

WORKSHOP ACTIVITIES

- Presentation by the facilitator.
- Ongoing plenary discussions and summaries of exercises.
- Brainstorming exercise including supplementary exercises in GenAI and subsequent discussion with a fellow student.
- Job bank exercise including supplementary exercises in GenAI.
- Database exercises (Infomedia and Navne & Numre Erhverv) including supplementary exercises in GenAI.

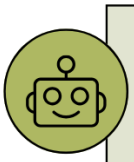
HANDOUT

- The presentation
- File with:
  - Prompts for GenAI.
  - Links for relevant databases and Copilot.
  - Examples of GenAI generated content for the CV.

EXERCISE EXCERPT

FACILITATOR PRESENTS

The facilitator gives a brief presentation about the opportunities to communicate one's thesis in various contexts. For example, by offering presentations about the entire thesis or parts of it at libraries, in associations, or in companies/organizations that could be potential employers. Then, the facilitator introduces an exercise with GenAI and Infomedia, that can help the students identify how their thesis relates to relevant and current trends.



STUDENT PROMPT TO GENAI

"I would like to investigate whether parts of what I'm writing my thesis about have been discussed in newspapers and magazines. I'm writing my thesis about [insert topic] with the following problem statement [insert problem statement]. I need to do a search in Infomedia, which is a database of all Danish newspapers and magazines. Do you have suggestions for keywords I can search for?"

SEARCH ON INFOMEDIA

The students conduct a search in Infomedia with the keywords they received from their GenAI.

PLENARY DISCUSSION

The facilitator leads a joint summary, where the students share what they gained from the exercise, and what they think about using GenAI and Infomedia in this way.

PROMPT EXAMPLES FORM HANDOUT

EXTRACTION OF COMPETENCES

"I am studying [insert program] and have written a thesis about [insert topic]. I would like to actively use it in my job search - meaning I want to be able to use what I've written about in a future job. Can you help me with ideas for industries and organizations in Denmark that I could look more closely at? Below you have a description of my thesis. [insert abstract from the thesis]."

COMPETENCE TRANSFER AND ALTERNATIVE JOBS

"I would also like to see if there are any fundamental transferable skills hidden in my thesis that could become selling points for industries and organizations that have nothing to do with [insert thesis topic]. First, give me a list of transferable skills, then a list of possible industries and types of organizations I could advantageously apply to based on these skills."

Advantages and Pitfalls of the Integration of GenAI in Career Counselling and Teaching

Through my testing of GenAI in various career-oriented activities for students, I have spotted many advantages as well as pitfalls when it comes to the integration of GenAI in career counselling and teaching. These are for the most part present in both counselling and workshop situations, and so I have accumulated and listed them collectively for both below here.

The Quick Overview

I have outlined the advantages and pitfalls under five topics. Additionally, I have highlighted when it is generally advantageous to incorporate GenAI and when it should be done cautiously.

Knowledge and Information Processing

- **Advantage**: Expanding beyond counselor's knowledge limitations, providing information, inspiration and new perspectives.
- **Pitfall**: Removing productive friction that challenges assumptions, missing the critical human element.

Competence Translation

- **Advantage**: Spotting connections between curriculum, competences, jobs, tasks and value and translating competences between them.
- **Pitfall**: Potential superficial understanding of competence transfer, bypassing the deep learning process that lies within the translation process.

Student Independence and Agency

- **Advantage**: Supporting the students' independent work with identifying competences and relevant job possibilities both during and after a counselling session or workshop as they have full accessibility for continued exploration.
- **Pitfall**: Risk of the "blind leading the blind" phenomenon with poor-quality content from the GenAI and uncritical, naïve acceptance from the student.

Tool Integration and Methodology

- **Advantage**: Enhancing the use of other digital tools in career development and job search by boosting the use of them.
- **Pitfall**: Effectively leveraging GenAI for career development and job seach requires foundational understanding of these areas as well as knowledge of what other digital tools are available and how to use them.

Output Convenience

- **Advantage**: Delivering quick, tailored outputs that offer students intuitive examples and guidance in unfamiliar areas.
- **Pitfall**: Risk of using GenAI as a one-stop solution rather than as part of a blended approach.

When to Use GenAI?

Scenarios where GenAI offers significant advantages:

- Knowledge expansion scenarios
- Time-saving applications
- Student empowerment opportunities

When to Exercise Caution?

Scenarios where facilitation by a counsellor or other competent staff is of great importance:

- Deep learning requirements
- Need for challenging assumptions
- Complex competency transfer situations

Moreover, the general pitfalls of using GenAI also apply here, and therefore the counselor/facilitator must be aware of and draw students' attention to:

- Think carefully before uploading information to a GenAI
- That the output is only as good as the input provided
- GenAI is challenged by hidden biases
- GenAI does not always provide correct answers

An elaboration on the greatest advantages

GenAI helps students draw connections between curriculum, competences, jobs, tasks, and value, making it easier and faster to translate academic learning into practical experiences – and thereby to spot and communicate the value they can contribute with in a job. Within this field, that is the first truly great GenAI advantage. The second is the way GenAI can augment other digital tools, helping the students to achieve better results faster. That is why both uses of GenAI are present in all three examples. The third advantage is the empowerment of independence in students' work with career development.

Empowering Student Independence
Our career development approach prioritizes students developing their own insights rather than receiving ready-made answers because:

It creates personalized solutions that reflect each student's unique strengths and interests, even within the same field of study

It builds essential career management skills for both present and future needs (Hirschi 2012)

In today's rapidly changing job market, students must learn the ongoing process of competence transfer, not just a one-time application (McGowan 2020; World Economic Forum 2025)

GenAI enhances student independence in self-discovery by simplifying career development tasks and allowing counselors to focus on facilitation rather than information provision. As demonstrated in all three examples, GenAI empowers students to independently identify competencies and job opportunities more efficiently. Coupled with the user-friendly nature of GenAI, it elevates the chances of students continuing the exercises introduced in a counselling session or workshop.

An Elaboration on the Greatest Pitfalls

GenAI fundamentally responds with the most prevalent content, which often includes poor-quality career materials such as generic job applications and CV's. Therefore, it takes a certain experience within career development and job search to get GenAI to create quality content. Students, being inexperienced within this field, face significant challenges in all crucial steps, and they fall prey to poor outputs as the result of:

- ineffective prompting,
- not knowing what source materials to select
- and not knowing what criteria to use in the assessment of the outputs.

The risk is that GenAI can blind students with impressive, quick results that superficially appear professional. Moreover, to guard against misinformation and transform GenAI's output into something actionable in the real world, you must combine it with other digital tools and human interaction – the trick is knowing what to combine it with, and students generally lack this knowledge.

Why Are You Asking That? Said No GenAI Ever
Traditional career counselling involves challenging students' assumptions and creating productive friction in dialogue (Hirschi 2020, Milot-Lapointe et al. 2023). GenAI lacks this nuanced approach, as it uncritically answers questions and removes the discomfort of the friction that follows disagreements and friction in human interaction.

The student can, of course, prompt the GenAI to challenge his or her perspectives – but the problem with assumptions and prejudices is that we are often unaware that they are in play. So how should the student know to do so? On top of that, being challenged and met with friction can be hard and result in giving up on the topic. Shutting down a GenAI tab on the computer is much easier than leaving a counselling session with a real person.

GenAI Should Not Replace Experience and Networks

From studies on job searching and career development, we know that networks are a crucial component of career development, both when searching for and working in a job (Ballisager 2023; Ballisager 2024; Hirschi 2012). The same applies to gaining experience in applying competences in new contexts, such as using study-acquired skills in practice through a student job or internship (Jensen et al. 2021; Matthiessen 2017; Wahlgren et al. 2012).

The danger is that students suffering from anxiety about networking will replace human interaction with GenAI. E.g. getting GenAI to give feedback on a job application instead of a career counsellor or a representative from a relevant company (Moran et al. 2024, 110). It is not a problem when a student uses GenAI for feedback – it becomes a problem when it replaces experience and networking instead of enabling it.

Does It Really Help with Competency Transfer or Is It Actually Doing the Student a Disservice?

GenAI presents a potential disservice by solving tasks that would typically require significant student effort. While it can help students articulate competences and spot job opportunities, it may prevent deep understanding of the translation of competences across contexts.

Imagine a student uses GenAI to write a student job application. GenAI suggests that the student can use communication competences built through their studies to solve written communication tasks in the company. But would the student ...

- understand why and how this competence is valuable in a context different from where it was originally developed?
- be able to answer reasonably if the company asks about this in a job interview?
- be able to activate their competences in the task solving?

The pragmatic answer to these questions is, that it depends on how reflected the student has been in the process of writing the application together with the GenAI – and thereby also on how we teach them to use GenAI in the work with career development and job search.

The importance of being mindful of this pitfall is supported in current research. Similar concerns are for example raised in the 2024 article "Artificial Intelligence (AI)-Enhanced Learning Analytics (LA) for Supporting Career Decisions: Advantages and Challenges from User Perspective". They conclude that a problematic aspect of the software they tested is that it hides parts of the translation process from the user (students provide the tool with information about themselves, which it then uses to suggest programs), which might interfere with "[...] the purpose of users understanding and learning how to make career decisions – one of the key goals of using career decision-making models in career guidance." (Gedrimiene et al. 2024, 316).

Concerns are also raised in the 2025 article "Transformative Pedagogy in The Digital Age: Unraveling the Impact of Artificial Intelligence on Higher Education Students", where the authors suggest, that even though students are overall positive towards using GenAI in career, it should be used with caution and a special attention to maintaining the students' learning and active engagement with their own experiences, competences and job requirements (Capinding et al. 2025, 644).

Conclusion

To guard against the above-mentioned disadvantages and pitfalls, and to strengthen the advantages in using GenAI, we have set up some principles for how we work with it in our department.

We incorporate GenAI activities:

- not as a replacement for experiences and network,
- but as a warmup activity or steppingstone towards actions in real life,
- always coupled with other activities and resources,
- and thoroughly facilitated and framed by you.

If these principles are enforced, it is our experience that we can strengthen the support of students' work to identify, communicate, transfer and convert their competences in the transitions between student life and work life both during their studies and up to their graduation.

How can you use GenAI in your own counselling or teaching?

I hope that you have found this article inspiring even though you might work with students in a different context from mine. In my (maybe naïve?) opinion, I believe anyone working with students in counselling and learning situations might consider incorporating GenAI. Here are two suggestions for how you use this article as inspiration for your own work.

- **If you are a lecturer**: Consider if you can introduce small career development activities with GenAI exercises into your course. This could be simple exercises, where the students use GenAI to translate curriculum and experience from your course into competences, work tasks and value at the job market – or use it to see what kind of student jobs lets them develop the competences from your course further.
- **If you are a counsellor**: Consider how GenAI can be helpful for the student or potential student within the topic you are counselling on. How could they use it on their own – and how can you introduce them to using it in a counselling session?

Literature

Ballisager, Morten, et al. "Rekrutteringsanalysen 2023." Konsulenthuset Ballisager, 2023, www.ballisager.com. ISSN: 2596-4968, ISBN 978-87-996896-1-3.

Ballisager, Morten, et al. "Rekrutteringsanalysen 2024." Konsulenthuset Ballisager, 2024, www.ballisager.com. ISSN: 2596-4976, ISBN 978-87-996896-1-3.

Capinding, Andie Tangonan, and Franklin Tubeje Dumayas. "Transformative Pedagogy in the Digital Age: Unraveling the Impact of Artificial Intelligence on Higher Education Students." *Problems of Education in the 21st Century*, vol. 82, no. 5, 2024, pp. 630–57, https://doi.org/10.33225/pec/24.82.630.

Gedrimiene, Egle, et al. "Artificial Intelligence (AI)-Enhanced Learning Analytics (LA) for Supporting Career Decisions: Advantages and Challenges from User Perspective." *Education and Information Technologies*, vol. 29, no. 1, 2024, pp. 297–322, https://doi.org/10.1007/s10639-023-12277-4.

Hirschi, Andreas, et al. "Achieving Work-Family Balance: An Action Regulation Model." *The Academy of Management Review*, vol. 44, no. 1, 2019, pp. 150–71, https://doi.org/10.5465/amr.2016.0409.

Hirschi, Andreas. "The Career Resources Model: An Integrative Framework for Career Counsellors." *British Journal of Guidance & Counselling*, vol. 40, no. 4, 2012, pp. 369–83, https://doi.org/10.1080/03069885.2012.700506.

Hirschi, Andreas. "Whole-Life Career Management: A Counseling Intervention Framework." *The Career Development Quarterly*, vol. 68, no. 1, 2020, pp. 2–17, https://doi.org/10.1002/cdq.12209.

Jensen, Tine Lynfort, et al. "Learner for Life modellen – et kompetence-baseret værktøj til studerende, vejledere og undervisere." Teaching for Active Learning TAL2021, edited by Christopher Kjær et al., Syddansk Universitet, 2021, pp. 20-26. ISBN 978-87-94345-22-4.

Matthiessen, A. “Transfer - Hvad Snakker Vi Om? Og Hvad gør Vi?”. *Arbejdspapirer, Professionshøjskolen Metropol*, bd. 2, nr. 1, februar 2017, doi:10.7146/map.v2i1.27288.

McGowan, Heather, and Chris Shipley. *The Adaptation Advantage: Let Go, Learn Fast, and Thrive in the Future of Work*. 1st edition, John Wiley & Sons, 2020.

Milot-Lapointe, Francis, et al. "Longitudinal effects of two individual career counseling interventions on clients' career decision-making during the covid-19 pandemic over a 1-year follow-up". Journal of Employment Counseling, vol. 61, no. 1, 2023, p. 46-58. https://doi.org/10.1002/joec.12215.

Moran, Nora, and David Ackerman. “‘Can AI Really Help Me Land a Job?’ Student Reactions to the Use of Artificial Intelligence in Career Preparation.” *Journal of Education for Business*, vol. 99, no. 2, 2024, pp. 103–12, https://doi.org/10.1080/08832323.2023.2275205.

Uddannelses- og Forskningsministeriet. "Overgangen til arbejdsmarkedet er svær for mange nyuddannede akademikere." Uddannelses- og Forskningsministeriet, 2022, ufm.dk/aktuelt/pressemeddelelser/2022/filer/overgangen-til-arbejdsmarkedet-er-svaer-for-mange-nyuddannede-akademikere. Accessed 27 Mar. 2025.

Wahlgren, Bjarne, et al. *Transfer: Kompetence i en professionel sammenhæng /*. Aarhus Universitetsforlag, 2012.

World Economic Forum. "Future of Jobs Report 2025." World Economic Forum, Jan. 2025, www.weforum.org/reports/the-future-of-jobs-report-2025. ISBN 978-2-940631-90-2.

Use of GenAI in This Article

I have used Copilot and Claude to translate and abridge the text and as sparring partners on the visual presentation of the three examples.

I have used Scite AI for literature search and review.

Can higher education institutions create an effective course for teaching far-future foresight to SME managers – The case of MEGASTRAT

Patricia Wolf, professor, Department of Business & Management, SDU
Szabolcs Dezso Fabian, PhD student, Department of Business & Management, SDU
Jonas Toftgaard, student, Department of Business & Management, SDU
Rune Baier Lindholm Nielsen, Research Assistant, Department of Business & Management, SDU

What is MegaStrat?

MegaStrat stands for *Making Megatrends Applicable for Individual Opportunity Forecasts and Strategic Development*. It is an Erasmus+ funded project with the goal of enabling strategic foresight and innovation professionals, particularly those in high-tech Small to Medium-sized Enterprises (SMEs), to effectively facilitate the development of innovation and long-term opportunity foresight (LTOF) for the far future (10-20 years ahead). This has been achieved through the development of a fully asynchronous online self-learning course which teaches essential knowledge, skills, and competencies.

The course was developed based on the needs of SME managers and identified success factors (see Wolf et al., 2024). The consortium consisted of three pairs, each including a member of a Higher Education (HEI) and a member of a Vocational Education and Training (VET) Institution. Each of the pairs being formed in Denmark, Germany, and Spain. This allowed the consortium to access knowledge created in both the academic and professional fields. Through co-creation workshops with professionals in all three partner countries, the consortium gained insights into what tools could best empower SMEs and their requirements for the contents of the course. These insights were gathered at a consortium workshop in Copenhagen, resulting in a curriculum fitting the needs of SME managers and innovation professionals (Appendix A).

The developed course is, furthermore, intended to serve as an educational resource for innovation hubs, VETs, and HEIs to educate both current and future strategists on LTOFs for strategic decision-making.

The MegaStrat Course

The consortium identified that engaging in a self-determined learning pace was one of the most important needs for the course content to be adopted by the target

groups. The course was, therefore, developed to be a fully asynchronous online self-learning experience. To accommodate the different needs of SME managers, the consortium adopted two different approaches to the course material. The learners can approach the material in a linear successive progression for foundational knowledge, or by accessing material of interest, building knowledge in areas where they are lacking. The course additionally allows for revisitation of all material, enabling enhanced retention of the content.

The course is built around several key components: theory, inspiration through real-life examples, tools, resources and references, and implementation guides such as the Train-the-Trainer manual. It consists of four modules with the following course content:

Table 1 Module overview and active learning activities

Module	Course Content	Active Learning Activities
1 - Future Literacy	This module consists of the fundamental concepts of LTOF and its related applications. Additionally, the module describes short-, medium-, and long-term perspectives and how organisations applying LTOF principles successfully are characterised.	Learners are tasked to reflect on how they would initiate planning for the future in the specific case of the European transport industry. The task is completely voluntary and self-regulated.
2 - Future Potentials	Module 2 introduces different foresight approaches, providing a basis for how and when each method should be applied. Furthermore, the learner will gain knowledge of the benefits of applying foresight methods and evaluating emerging technologies.	Learners are asked to consider which foresight methods they might consider utilising in three proposed fictional scenarios. In the final module video, learners are asked to pause and reflect after each task is presented. The three presenters then shared the methods they would choose and explained their reasoning, allowing learners to compare and reflect on their own thought process.
3 - Create Good Scenarios	Scenario creation is essential to developing LTOF skills. Therefore, Module 3 consists of an in-depth look at scenario construction, providing the learner with the necessary skills to make coherent foresight scenarios based on identified trends. Additionally, the learner will acquire knowledge on how to apply scenarios in a real-life setting.	Learners are provided with questions to use and reflect on when constructing their own scenarios. These are self-regulated tasks and intended to be used every time a new scenario is needed.
4 - Derive Strategic Options	Module 4 pertains to the integration of LTOF principles in alignment with organisational goals and strategic planning, detailing how LTOF principles can be used to inform innovation strategy and resource allocation.	Learners are tasked with applying the curriculum theory to a real-world scenario relevant to their organisation or industry. Furthermore, they are asked to develop a strategy to address a specific foresight scenario in their organisation. These two tasks are self-regulated.

Active Learning Online

Inherently, turning an online asynchronous learning experience into active learning presents a few hurdles. To make the content applicable, engaging and interesting, active learning elements were incorporated into the presentation of the curriculum as can be seen in Table 1.

To further encourage active reflection on the material, learners are prompted to actively reflect on the material throughout the course. The course has the learners navigate through the course by clicking interactive elements, they choose their own path of learning. The intention of this implementation is for the learners to be more actively engaged with the content, rather than having them follow a strict linear pathway.

One may question whether participants will adhere to the course instructions, but as the course is entirely voluntary, it is assumed plausible that the learners would actively engage with the content and exercises to maximise their learning outcomes.

Feedback From Users

To gauge the effectiveness of the MegaStrat course and to identify areas of improvement, an extensive pilot testing phase was utilised. Consisting of a survey with 87 participants and informal interviews and events with the target groups and stakeholders. The effectiveness of the MegaStrat course was evaluated by participants grading their answer to the question "to what extent has the MegaStrat training program contributed to improving your skills and competences for the application of long-term strategic foresight" on a 10-point scale (10 being best). With an average result of 8/10, the course is deemed to have successfully taught participants about the use of LTOF. Additional feedback from participants indicated that interactive parts of the course were appreciated, and that more elements of this sort may be considered. The plethora of examples used in the course were found to make participants connect better with the course material, making it easier to relate the theory to their specific needs.

Multiple participants emphasised that the course could benefit from a more graphical approach and more videos, to reduce the number of text-heavy modules. Another result of the pilot tests was the need for more material supporting the integration of the MegaStrat curriculum into the teaching of LTOF principles in both HEIs and VETs. The piloting phase concluded before the aforementioned implementation guides had been finished, but with the produced material, it is expected that the need will be sufficiently covered. Further testing of implementation guides remains relevant.

Reflections

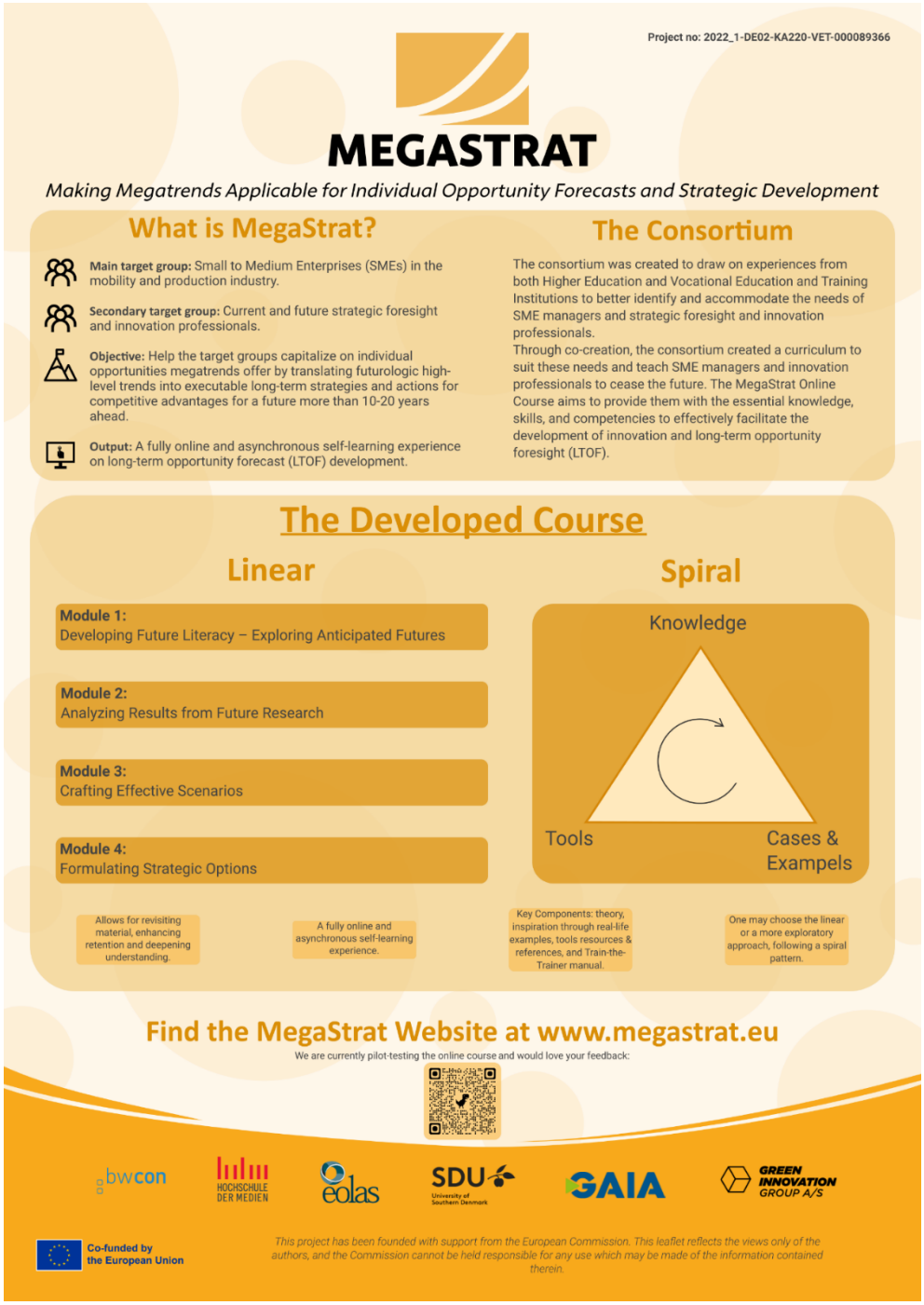
The MegaStrat project has presented a myriad of learning opportunities, the biggest hurdle of which was found to be the difficulty of creating an active learning experience online. This hindrance was alleviated by incorporating tasks for the learner in relation to the specific module to keep them engaged with the content (see Table 1). An example of a task which was found to benefit learners in the MegaStrat course was the use of cases, encouraging learners to apply theory to specific scenarios.

From the feedback gathered, it can be concluded that MegaStrat should have had more interactive elements, videos, and graphical representations of information. Furthermore, the participants had differing opinions on the visuals and navigability of the website, highlighting its importance.

An element that might have improved the interactivity of the MegaStrat website is quizzes with automated feedback. In the feedback, some participants indicated a wish to test themselves on the material presented. They argued that this would improve their confidence, since they would be certain they had gained the necessary knowledge. Another idea that the consortium had was implementing a sharing space for the learners' solutions to the tasks presented in the modules, thereby minimising the reliance on self-regulated tasks. This could have further enhanced the learning outcomes by allowing learners to review others' answers and reflect on their own in the context of others' answers. However, due to resource constraints and the target groups' culture, this was never implemented.

Having the two approaches and the asynchronous nature of the course was highly appreciated by the target groups. The accommodation of the different learning paths in the online course could become an integral part of life-long learning in the future and be transferable to other teaching contexts, particularly in Higher Education vocational training courses. The approach of MegaStrat might help identify effective teaching formats that Danish universities can offer after the master reform.

Appendix A. The poster for the MegaStrat presentation at TAL 2024



References

Find the MegaStrat website here: https://www.megastrat.eu/

Wolf, P., Fabian, S.D., Baier, R. (2024). Key success factors in sensing long-term innovation opportunities: A literature review. In: Proceedings of the 25th CINet Conference. Continuous Innovation Network.

Collaborating on Taking Notes. Takeaways from two experiments with collaborative note-taking during a first-semester BA course

Mia Høj Mathiasson, Assistant Professor, Department of Design, Media, and Educational Science, SDU

---

1. Introduction

For many, notetaking might be considered an individual and somewhat hidden part of the learning process. In this paper, I argue for casting light on note-taking practices in class and making students collaborate on them to increase consciousness and reflexiveness around this part of academic study practice, increase collaboration and, ultimately, student learning. For this, I used "collaborative note-taking" (CNT). CNT is "a pedagogical technique that asks students to rotate note-taking responsibilities during class meetings in a shared document" (Harbin, 2020, p. 214). By placing the primary responsibility for knowledge creation and sharing among the students, CNT is a rather radical cooperative learning activity that requires active student participation, openness, trust and a willingness to share. In this report, I will share my experiences from experimenting with CNT activities.

2. Setting

The experiments presented here took place in the spring of 2023 and were part of my Lecture Training Programme (LTP) Development Project at SDU. The course is called Biblioteket som videns- og kulturinstitution (H800006201), a first-semester course on the BA education in Library Science, IT and Communication at SDU Kolding, with 25 registered students. The course is valued at 10 ECTS and is based on individual preparation and classroom teaching, and active learning activities such as group work, student presentations and discussions play a key role in supporting the course's learning goals and examination format.

3. The pedagogical challenge

Starting university can be an overwhelming transition (Harbin, 2020), both for students and teachers. As a new teacher at SDU doing the LTP, I sympathized with the first-year students. I wanted the students to learn not only about the course's subject matter but also about how to be a student and part of an active learning community at the university. To support the course description and exam form, I wanted to strengthen the social relations in the class while introducing the students to academic practices. Therefore, I looked to methods of cooperative learning, inspired by Johnson, Johnson & Smith (2014) and Slavin (1996; 2014), explicitly focussing on a

high degree of collaboration and group work, both ad-hoc, formalised, and binding (Johnson, Johnson & Smith, 2014) (see also Gillies, 2003; Barkley, Major & Cross, 2014). By viewing the classroom as "a community of peers" (Tinto, 1997), cooperative learning promotes socialization (Gillies, 2003) and opportunities for students to familiarize themselves with the academic work culture. Above all, I wanted to genuinely cooperate with students on knowledge creation and share responsibility for in-class activities. This ambition led me to experiment with CNT activities, which can encourage students to view each other as resources in their learning process, increasing student collaboration and a higher level of understanding (Costley & Fanguy, 2021), potentially fostering "a more democratic and inclusive classroom climate" (Harbin, 2020, 215).

4. Aim

The overall Learning Goal of the LTP Development Project was, through CNT activities, to facilitate cooperative learning and introduce the students to academic life by taking responsibility for their learning and that of their peers. As a preparation for the oral exam, where we encourage students to form groups, the learning goals for the CNT activities were designed to engage students in the course material, explicitly addressing the skills related to analyzing and discussing course topics. The project aimed to experiment with and reflect on the effect of incorporating CNT activities in class by answering the following questions:

- How can CNT be incorporated into in-class activities supporting the course learning goals?
- How are the CNT activities experienced from the point of view of the students and the teacher?
- What are the potential benefits and barriers of CNT activities identified in these experiments?

In this paper, I report on the results of two experiments with CNT activities, reflect on what we can learn from them and suggest possible solutions to the barriers identified.

5. The initiatives

The planned initiatives incorporate CNT into in-class activities to engage the students in active group collaboration around course material. The intention was to make the students' independent study between classes an integral part of the in-class activities, making their work visible. Therefore, both experiments were designed as group work around texts on a central theme and handouts with questions about those texts. During both experiments, I took on the role of facilitator, orchestrating the activity and keeping time (Schwarz, 2017). The table below (Table 1)

describes each experiment's design, including its content and scope, the use of e-learning tools, duration, and group formation.

	Experiment 1	**Experiment 2**
Content and scope	Group work with questions related to a book chapter that the students had been asked to read as preparation. The groups were given a handout with four identical questions and assigned one question to start with.	Group work with questions for three individual texts, all journal articles, instead of one longer text, as in experiment 1. I prepared a handout for each text with open and closed questions.
The use of e-learning tools	In itslearning, I prepared a page for each question where students could write notes.	In itslearning, I prepared individual pages for each group to write notes.
Duration	The activity was structured in three rounds: 30 minutes for working with the questions, 30 minutes for writing notes on the different questions in a rotation system, and 20 minutes for the reporting-out process.	The activity was structured in three rounds: 30 minutes for the first set of questions, including writing notes; 30 minutes to discuss and write notes on the second set of questions; and 20 minutes for the reporting-out process.
Group formation	Thirteen students were present. Four groups of 3-4 students were formed randomly.	Eleven students were present. The groups were made based on students' choice of text.

Table 1. The design of the two CNT experiments.

6. Results and evaluation

In the following, I will reflect on and evaluate the two CNT activities, considering the focal areas presage, what students and teachers bring into the teaching situation, process, factors in the teaching situation, and product, the learning acquired by students and teachers (Sølberg, 2015, 423-426). To evaluate the students' engagement and experiences from the two experiments, I built on qualitative data consisting of collective feedback from the students after the two experiments and informal conversations with the students during and after the sessions. The experiments were evaluated orally amongst the students during and immediately after the experiments. The teacher's perspective is based on my immediate experiences and hindsight reflections on the experiments. The results of the evaluation are presented in Table 2, structured according to the student's perspective, the teacher's perspective, and the overall assessment.

Experiment 1

Presage: The first experiment was arranged as group work, with questions related to a longer text that the students had been asked to read as preparation. In hindsight,

these questions were perhaps too broad. A page for each question was set up in itslearning, the e-learning tool used at SDU, for the students to write and share notes.

Process: The groups were put together randomly, resulting in an uneven level of preparation in advance. The groups were given a handout with four identical questions. Then, each group was assigned one out of four questions to begin with. The intention was to do rotation rounds until all groups had been through all the questions and added to the notes for each question; however, as half of the students came unprepared, the group work slowed down, and most of the groups were only working with one of the four questions. This caused frustration among all students, both the ones who had read the text and those who had not, as they felt irritation and a bad conscience for slowing down their classmates. This was the students' account, as shared with the class in the verbal evaluation after the experiment. The groups that collaborated well were those where the students were equally prepared and/or motivated. From the teacher's perspective, the situation was unfulfilling and a bit stressful, as I could see and feel the frustration among the students. Also, the time for the group work was insufficient, as several students were reading alone instead of working together.

Product: The outcome was diverse notes with a varying degree of completeness. These notes were not, as intended, a result of collective effort and, therefore, lacked the quality check and validation by peers. Although I was taking the role of facilitator in the background, in the reporting out process, I answered the questions by combining the notes as a form of quality assessment, where I tried to raise the level of completeness of the shared notes. The intended effect of the shared notes functioning as a motivation by promoting a view amongst the students of each other as resources in their learning process was not fully achieved. However, the activity gave the students insight into the importance of preparation and the level of interdependence among them.

Experiment 2

Presage: The second attempt was designed differently and with less dependence on student preparation. For this attempt, I decided that the students should work with one of three texts, which comprised the course material for the day. I prepared a handout with open questions for each text, focusing on a specific analytical model and a practical exercise to test the model. Also, I prepared individual pages in itslearning for each group.

Process: In class, the students had the autonomy to decide which text they wanted to work with; the only criterion was that all texts should be covered, as they each presented an analytical model. The texts were all picked, and the groups were constructed around the text of choice. The groups were then given a handout with three

questions for the chosen text and assigned an individual itslearning page for their notes. This time, the students were more equally prepared, and they generally seemed to enjoy working in groups. The concentration and discussion level were higher, and we stayed on time. Also, the engagement was higher in the reporting-out process and the following discussion. In the subsequent verbal evaluation, the students expressed contentment with the results, as they had time and felt confident working with the text they chose. This time, my role as a teacher was more in the background, as I did not need to raise the level of the result in the end. Instead, I engaged in group discussions and afterward during the plenum discussion.

Product: Compared to experiment 1, the shared notes were more detailed and thus more helpful to others. The downside of this method is that the students do not rotate between the questions and only get to work with one text and model.

	Experiment 1	**Experiment 2**
Student's perspective	Uneven preparation levels and random grouping caused discomfort and irritation, leading to a lack of collaboration and incomplete notes.	The students enjoyed working in groups, as they were now equally prepared. This resulted in higher concentration and more detailed and complete notes.
Teacher's perspective	By combining the notes and raising the level of knowledge and understanding, I took on a much more central role than intended by adding to and partly answering the questions.	This time, my role as a teacher was more in the background, as I did not need to raise the level of the result in the end. Instead, I engaged in the discussions both in the groups and afterward.
Overall evaluation	The collaboration around notetaking failed, as the notes were created by one group each. Also, the intention that CNT would motivate the students by stimulating their view of each other as resources in their learning process was not realized. However, the exercise stressed the importance of preparation and the level of interdependence among students.	The concentration and engagement levels during group work were higher, and, in comparison to experiment 1, the outcome was detailed and helpful to others. Also, the engagement was higher in the "reporting-out process" and the following discussion.

Table 2. The results of the evaluation of the two experiments.

7. Reflections

In the following, I reflect on the potential benefits of CNT activities. I will report on the barriers encountered during the experiments and point to possible solutions.

Potential benefits of CNT activities

From experimenting with CNT activities, I address the potential benefits ascribed to CNT and reflect on my experiences of incorporating CNT activities in class. Moreover, by placing the primary responsibility for knowledge creation and knowledge sharing among the students, collaborative notetaking might foster "a more democratic and inclusive classroom climate" (Harbin, 2020, p. 215). Ideally, this would mean the teacher takes on a more peripheral role, which has not been fully realized in these two experiments. However, I argue that experimenting with CNT activities helps obtain a sense of ownership and active participation among the students as it encourages students to view each other as a resource in their learning process (Harbin, 2020). CNT activities allow first-year students to familiarize themselves with the academic work culture (Costley & Fanguy, 2021). Incorporating CNT activities in class is a great way to introduce and experiment with different types of notetaking practices, which are a central part of academic work culture, potentially improving independent learning (Hockings et al., 2018). Moreover, CNT activities are a great way to increase peer collaboration and might lead to a higher level of understanding, especially for more experienced students (Costley & Fanguy, 2021). For teachers, CNT is helpful as a timesaving means of checking in on students' comprehension (Harbin, 2020). In this case, the CNT activities helped me quickly gauge students' understanding of the texts and central concepts and, unintentionally, allowed me to check in on students' level of preparation.

Barriers to CNT activities

During the two experiments, I identified three main barriers: a lack of student preparation in advance, the individual laptop use of students, and the use of itslearning in CNT activities. In the following, I will describe these barriers in more detail and point to possible solutions.

Barrier 1: Lack of student preparation in advance: In experiment 1, almost half of the class had not read the text in advance and, therefore, had trouble engaging with the questions and the discussions with the group members. This slowed down the group work, as several students had to read the text in class, and the students who were, in fact, prepared found this frustrating and hindering to their work. Possible solutions to barrier 1 include scaffolding the CNT activities more, e.g., structuring the preparation by dividing the reading between the students or using a jigsaw approach to get students to share their preparation in advance or during class. Another solution would be to divide the students into groups based on who has read in advance and who has not prepared. The groups that have not prepared could be asked to read and provide a summary in the shared notes. A third option would be to co-create the questions for the CNT activities (see Zeegers & Elliott, 2019); in this way, everyone would be involved, and students who had not read the material would still get a sense of the content from the discussion.

Barrier 2: The individual laptop use of students: During classes, the students use their laptops for notetaking almost exclusively. This is not a problem per se; however, there are several issues concerning individual laptop use during group work, including CNT activities. The most visible is that the students do not face each other but their screens when engaged in group work. This results in a lack of overview, as both the texts and their notes are on their screens. Moreover, to work on their notes, the students used a considerable amount of time setting up and inviting each other to a shared document (e.g., in Google Docs), which took time from the actual discussion of the texts and the questions. Possible solutions to barrier 2 include printing the texts or text excerpts in advance and the questions as handouts, rotating the note-taking role between the group members or writing notes by hand. Setting up a folder in itslearning or another e-learning platform for students to access the notes afterward benefits the whole class.

Barrier 3: Using itslearning in CNT activities: During experiment 1, we discovered that working on shared notes in itslearning is problematic, as it does not allow synchronous writing in a document or page. You risk deleting everything if you write synchronously. Itslearning is not designed for student collaboration but for teachers to share and access course material. Possible solutions to barrier 3 include using a rotation system for the questions and having individual pages prepared in advance, or, as in experiment 2, having separate text blocks for each text. Alternatively, notes can be written in other programs (such as Word or PowerPoint) and shared on itslearning or compiled with the PowerPoint for that specific lecture. An alternative to this is asking the students to write their notes on a whiteboard or a large piece of paper (e.g., as a mind map) and then share a picture of their learning with their peers in PowerPoint.

8. Conclusion

CNT activities are usually part of student preparation between classes; however, I argue that CNT can be incorporated into in-class activities as group work around the course material (e.g., in discussions of texts) and designed to consider specific questions or concepts. In this paper, I report on two experiments with CNT activities and evaluate how they were experienced from the point of view of the students and the teacher. Building on these insights, I argue that there is potential for incorporating CNT activities in class to facilitate cooperative learning and introduce students to academic work culture. This includes an increased awareness of how to collaborate and a reflexivity around note-taking practices. Moreover, the activities cast light on the interdependence of the students and their shared responsibility for their learning. Importantly, succeeding with CNT activities in class requires active student participation, openness, trust and a willingness to share.

References

Barkley, E.F., C.H. Major & K.P. Cross (2014): Collaborative Learning Techniques. A Handbook for College Faculty. 2nd ed. San Francisco: Jossey-Bass. / John Wiley & Sons, Incorporated.

Costley, J., & Fanguy, M. (2021). "Collaborative note-taking affects cognitive load: The interplay of completeness and interaction". Educational Technology Research and Development, 69(2), 655–671. https://doi.org/10.1007/s11423-021-09979-2

Gillies, R. M. (2003). "Structuring cooperative group work in classrooms". International Journal of Educational Research, 39(1–2), 35–49. https://doi.org/10.1016/S0883-0355(03)00072-7

Harbin, M. B. (2020). "Collaborative Note-Taking: A Tool for Creating a More Inclusive College Classroom." College Teaching, 68(4), 214–220. https://doi.org/10.1080/87567555.2020.1786664

Hockings, C., Thomas, L., Ottaway, J., & Jones, R. (2018). "Independent learning—What we do when you're not there." Teaching in Higher Education, 23(2), 145–161. https://doi.org/10.1080/13562517.2017.1332031

Johnson, D. W., Johnson, R. T., & Smith, K. A. (2014). "Cooperative learning: Improving university instruction by basing practice on validated theory." Journal on Excellence in College Teaching, 25(3&4), 85-118.

Sølberg, J. (2015). "Developing your own teaching. In Rienecker et al. (2015), University Teaching and Learning (pp. 423-433).

Schwarz, R. (2017). The Skilled Facilitator. 3rd Edition. New and Revised. California: Jossey-Bass.

Slavin, R. E. (1996). Research on Cooperative Learning and Achievement: What We Know, What We Need to Know. Contemporary Educational Psychology, 21(1), 43–69. https://doi.org/10.1006/ceps.1996.0004

Slavin, R.E. (2014). "Cooperative learning and Academic Achievement: why does groupwork work?" Anales de psicologia. 30(3),785-791.

Tinto, V. (1997). "Classrooms as Communities," The Journal of Higher Education, 68(6): 599-623, DOI:10.1080/00221546.1997.11779003

Zeegers, Y & Elliott, K. (2019). "Who's asking the questions in classrooms? Exploring teacher practice and student engagement in generating engaging and intellectually challenging questions", Pedagogies, vol. 14, no. 1, pp. 17–32.

Teacher Authority in the Classroom: Using Metacognitive Tasks and Cultural Probes for Reflective Self-assessment

Jannek K. Sommer, Associate Professor, Department of Business & Management, SDU
Elham Kalhor, Research Assistant, Department of Business & Management, SDU

Teacher authority is a pivotal aspect of higher educational dynamics, essential to managing classroom environments, motivating students, and achieving educational objectives. Effective teacher authority ensures structured learning experiences, fosters respect, and promotes a conducive atmosphere for academic achievement. However, the establishment and perception of teacher authority is influenced by many factors, including the teacher's gender, nationality, age, accent, and physical condition, all of which can have both positive and negative effects(Kocabas, 2009).

Younger teachers may especially struggle to establish authority compared to their older, more experienced colleagues, who often command respect through their extensive knowledge and teaching history (Kocabas, 2009). Similarly, non-native English-speaking teachers may encounter bias due to their accents, even if their instructional clarity remains high (Lippi-Green, 2012). In multicultural classrooms, differing cultural norms, values, and expectations further complicate the establishment of authority (Parrish & Linder-VanBerschot, 2010).

Understanding and addressing such factors are crucial for developing an equitable and effective educational environment. In this study, we address the problem of establishing authority in the classroom by applying principles from participatory action research (Lewin, 1946; Leitch & Day, 2000). We aim to reduce resistance from predetermined biases among students and increase solidarity towards teachers (and other students). From the vantage point of teachersas-researchers, we develop and employ an interventionist task-regime that incorporates metacognitive tasks (Ghanizadeh, 2017; Di Stefano et al., 2015) and cultural probes (Gaver, Dunne & Pacenti, 1999).

Teacher authority

The influence that a teacher holds in a classroom allows them to guide, manage, and direct student learning and behavior. Authority can be derived from several sources, including the teacher's role as an expert, their formal position within the educational institution, and the respect they command from students. While the teacher traditionally holds authority in guiding, managing, and instructing, students also contribute to the authority structure through active participation, peer influence, and collaboration in the learning process. Authority may thus also refer to the shared

influence that both the teacher and students hold in shaping the learning environment, decision-making, and classroom interactions.

Studies show that physical attributes or conditions can impact perceived authority (Puhl & Heuer, 2009), research from diverse fields have shown that male and female teachers experience different levels of authority based on their gender alone. For instance, Eagly & Karau (2002) find that while female teachers may be perceived as more nurturing, they are also seen as less authoritative compared to their male counterparts. Such differences not only impact the teacher's ability to manage classrooms effectively, but they may also influence which teaching methods are experienced as appropriate.

Nationality and cultural background also affect teacher authority. Teachers from different nationalities may bring diverse educational philosophies and practices to the classroom, enhancing or hindering their authority depending on the cultural alignment with students' expectations. Teaching in multicultural environments face challenges in establishing authority if their cultural norms differ significantly from their students (Parrish & Linder-VanBerschot, 2010), and even identical teaching performances may be appreciated differently (Arnold & Versluis, 2019). Indeed, the potential of bias against women and teachers with non-English speaking backgrounds is well-established (see Eagly & Karau, 2002), with wide implications, particularly for early career female academics.

In multilingual contexts such as Denmark, where English is a second language, the influence of accent and linguistic proficiency on teacher authority becomes particularly relevant. Danish students typically have a good but not perfect command of English, making them more critical of non-native English-speaking teachers whose accents differ from the norm. This can affect the teacher's authority, where linguistic precision and clarity are crucial for effective instruction and student comprehension, despite student's own English proficiency not being at a native level (Jenkins, 2014).

Methodology

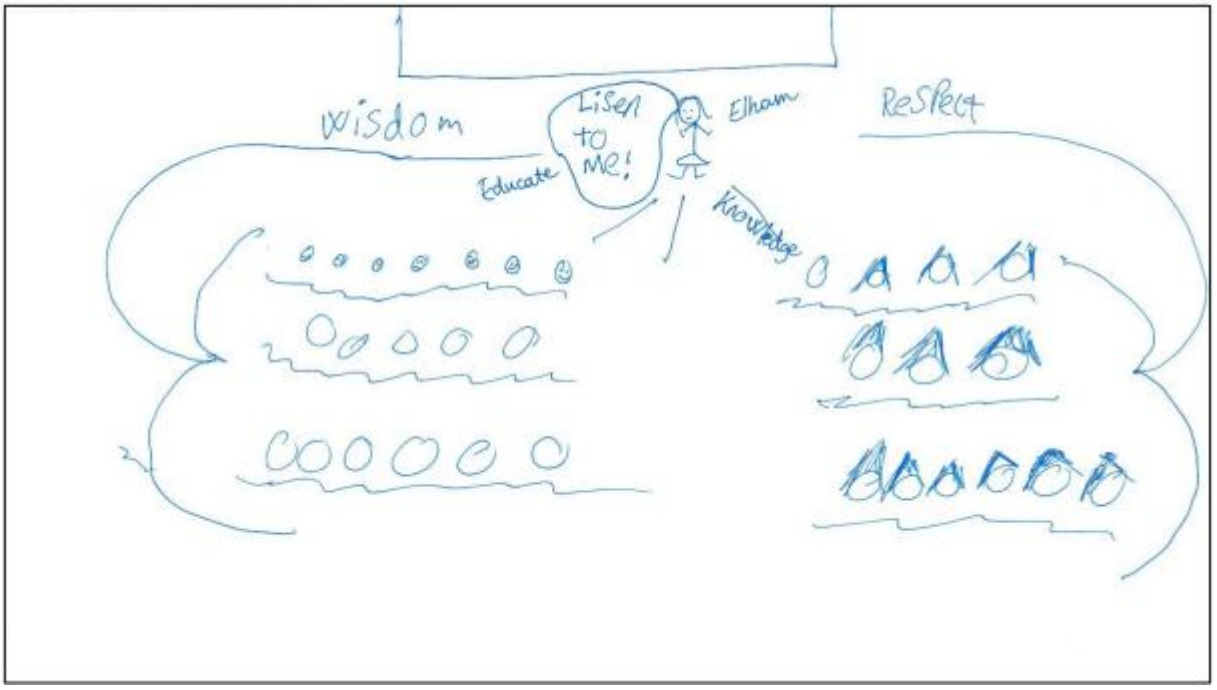
Participatory action research is a process for facilitating reflective and improved educational practice, commonly conducted to the pursuit of health equity. Knowledge is created through action and application, often in relation to specific problem-solving contexts. Findings emerge as action develops and takes place, as part of an ongoing and iterative process of reflection and revision. The specific methods utilized in action research vary due to contextual circumstances and the variety of complex issues that may be required to be taken into account (Christens, Faust, Gaddis, Traninzeo, Sarmiento et. al., 2016, p. 243).

We base our approach on Elliott's (1991) four-step process of observe-reflect-plan-actevaluate. The purpose is to initiate reflection through action, stimulate learning,

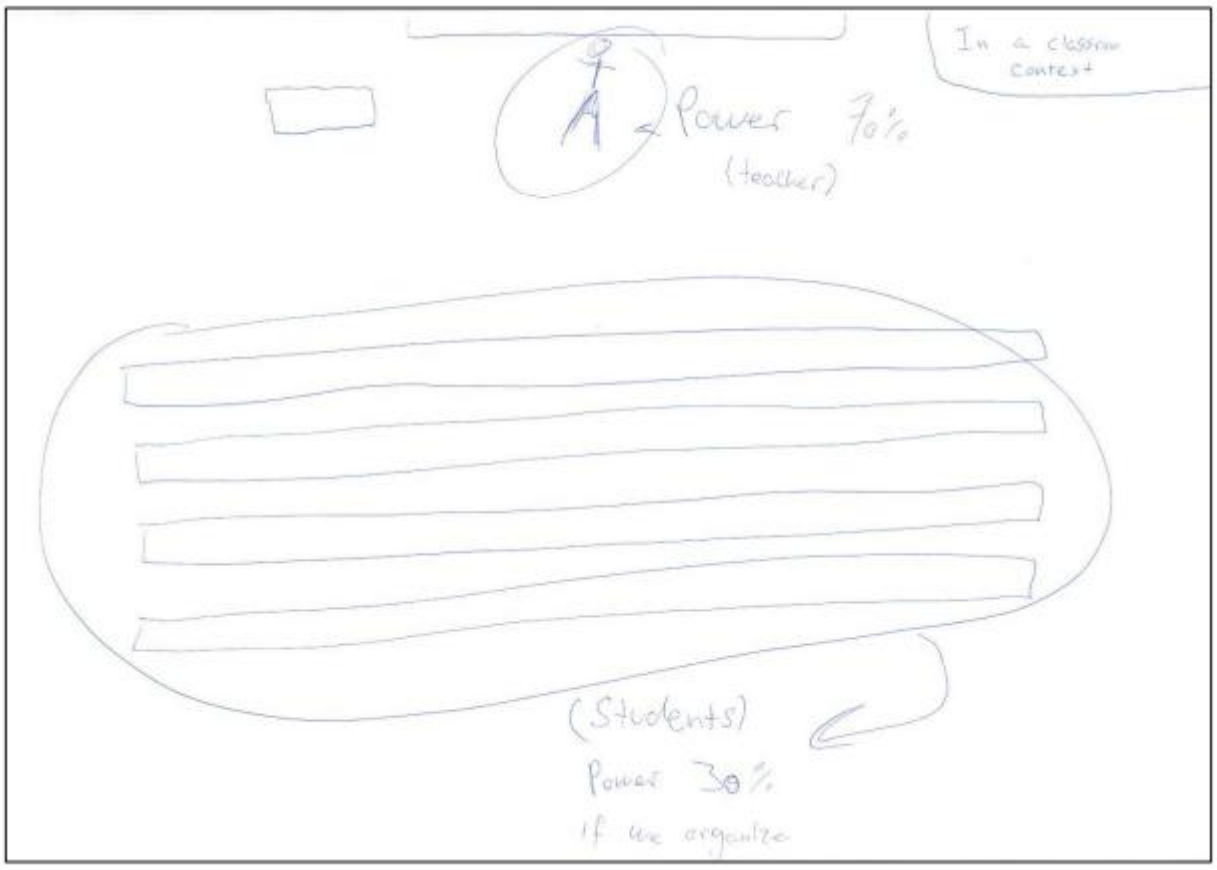
and facilitate introspective, self-reflexive kinds of analysis. First, we begin by a series of tasks in the classroom during the first session. Students begin by articulating and observing their own and their peers' perceptions on authority by sharing them on an online board.

Picture 1. Thoughts on authority shared on online board.

Then, we instruct them to reflect on this data by drawing a map of how authority manifests in the classroom. This visual map-task encourages students to move beyond surface-level observations and critically analyze power dynamics, interactions, and structures that may otherwise go unnoticed. The technique encourages participants to trace how authority flows between teachers, students, and rules, highlighting both overt and subtle forms of control or influence. This process not only deepens their understanding of classroom dynamics but also fosters self-awareness and prompts them to consider how their own actions and beliefs may reinforce or challenge these patterns. The following two examples demonstrate the reflective richness that emerge.



Picture 2. Map drawing example (note the explicit form of authority)



Picture 3. Map drawing example (note how authority is distributed)

To stimulate further critical analysis, we instruct them to pay attention to aspects of authority for a week and to take notes by doodling, to promote reflection on non-rational processes(Korthagen, 1993) and self-assessment (Ghanizadeh, 2017). As a non-verbal, low-pressure outlet for processing (subconscious) emotions and thoughts, the free expressive form of doodling is a well-known reflective technique for articulating complex internal states of stress, fear, or tension. Finally, after a week, we ask our students to reflect on the entire process in a second session. Students are asked to revisit comments on the online board and the classroom maps, and to reflect on any shifts in their perceptions. The process is illustrated in Figure 1.

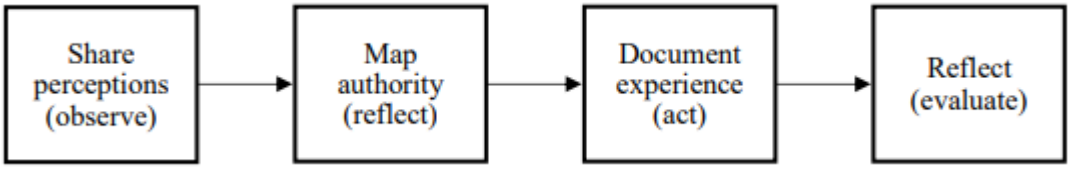


Figure 1. Process of self-reflective task regime

Findings

Our observations suggest that structured reflection exercises helped students to recognize their own biases regarding teacher authority, develop greater awareness of external factors (such as age, accent, gender) influencing their perceptions and express the need for more structured guidance in reflective activities. The online board and classroom maps seemed to be particularly helpful in creating a sense of reflective and transitional change.

Various logistical challenges emerged, such as a need to extend the allocated time for completing classroom tasks effectively – especially for first-rear undergraduate students. In general, task time did not always allow for interrogating deeper insight. The need to access previous materials to track their development, also prolonged task-time, while contextual factors such as space, course level, and semester timing also influenced participation.

Some students mapped authority to specific classroom areas, placing the teacher's authority at the front of the room, whereas others marked zones of disengagement typically toward the back or in corners. This suggest that classroom layout impacts perceived control and student participation and confirms that authority is not only personal but also spatial, reinforcing the idea that seating arrangements and teacher movement may affect engagement.

Drawings illustrate that some students idealize teachers as benevolent, guiding figures – either as a sign of deep respect or as an indication of unrealistic expectations. Doodles point to an experience of hierarchical structures, with teachers elevated above students, reinforcing traditional notions of power and distance. Some

drawings contrasted different types of teachers, reflecting perceptions that teacher authority varies based on personality, communication style, and approachability.

Some students visually represented teachers with distinctive accents, nationalities, or genders, suggesting that unconscious biases affect authority perception, while others depicted frustrated or confused student expressions, highlighting challenges in communication and authority acceptance. Speech bubbles and written notes emphasized the importance of clarity in communication, reinforcing that students value precise explanations over superficial markers of authority like age or accent.

Conclusion

Our findings unveil the layered, often unconscious nature of how students perceive authority in the classroom. While students tend to associate authority with hierarchical power, spatial positioning, and linguistic norms, the task-regime we present here, demonstrate how reflective exercises can disrupt these assumptions, encourage more inclusive perspectives, and pave the way for more equitable classroom dynamics. Our proposed design requires further refinement and experimentation, with emphasis on assigning adequate time for individual tasks. Authority might be a delicate or even contentious topic in some contexts, but we believe our approach offers an important step towards establishing a practical space for dialogue.

References

Arnold, I. J., & Versluis, I. (2019). The influence of cultural values and nationality on student evaluation of teaching. International Journal of Educational Research, 98, 13-24.

Christens, B. D., Faust, V., Gaddis, J., Traninzeo, P., Sarmiento, C. S., & Sparks, S. M. (2016). Action research. In Handbook of methodological approaches to communitybased research: Qualitative, quantitative, and mixed methods (pp. 243-251). Oxford University Press.

Di Stefano, G., Gino, F., Pisano, G. P., & Staats, B. (2015). Learning by thinking: Overcoming the bias for action through reflection. Cambridge, MA, USA: Harvard Business School.

Eagly, A. H., & Karau, S. J. (2002). Role Congruity Theory of Prejudice Toward Female

Elliott, J. (1991) Action Research for Educational Change. Buckingham: Open University Press.

Fan, Y., Shepherd, L. J., Slavich, E., Waters, D., Stone, M., Abel, R., & Johnston, E. L. (2019). Gender and cultural bias in student evaluations: Why representation matters. PloS one, 14(2).

Gaver, B., Dunne, T., & Pacenti, E. (1999). Design: cultural probes. interactions, 6(1), 21-29.Ghanizadeh,

A. (2017). The interplay between reflective thinking, critical thinking, selfmonitoring, and academic achievement in higher education. Higher Education, 74, 101-114.

Korthagen, F. A. (1993). Two modes of reflection. Teaching and Teacher Education, 9(3), 317-326.

Jenkins, J. (2014). Global Englishes: A resource book for students. Routledge.

Kocabas, I. (2009). The effects of sources of motivation on teachers' motivation levels. Education, 129(4), 724-733.

Leitch, R., & Day, C. (2000). Action research and reflective practice: Towards a holistic view. Educational action research, 8(1), 179-193.

Lewin, K. (1946). Action research and minority problems. Journal of social issues, 2(4), 34-46.

Lippi-Green, R. (2012). English with an Accent: Language, Ideology, and Discrimination in the United States. Routledge.

Parrish, P., & Linder-VanBerschot, J. (2010). Cultural dimensions of learning: Addressing the challenges of multicultural instruction. The International Review of Research in Open and Distributed Learning, 11(2), 1-19.

Puhl, R. M., & Heuer, C. A. (2009). The Stigma of Obesity: A Review and Update. Obesity, 17(5), 941-964

Exploring new learning and teaching opportunities through a European University Alliance

Steffi Klose, EPICUR Project Manager, University of Freiburg
Donna Hurford, senior educational consultant, SDU Centre for Teaching and Learning, SDU

SDU, is one of the nine European universities which have formed the EU Alliance EPICUR. EPICUR's educational aim is to enable all its universities' students to benefit from intercultural, interdisciplinary and international learning experiences which are accessible online or via blended, hybrid or short intensive in-person courses. Drawing on the examples of EPICUR learning experiences and inter-university collaborations, the slideshare introduces delegates to open educational resources available to all interested in developing and teaching intercultural, interdisciplinary and international learning experiences.