

# Kreativitet Fantasi Legefuldhed med AIEd

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## WORKSHOPPROGRAM

14:10-14:30: Indflyvningsoplæg

14:30-15:00: Playful AIEd 1

15:00-15:20: Playful AIEd 2

15:20-15:30: Opsamling

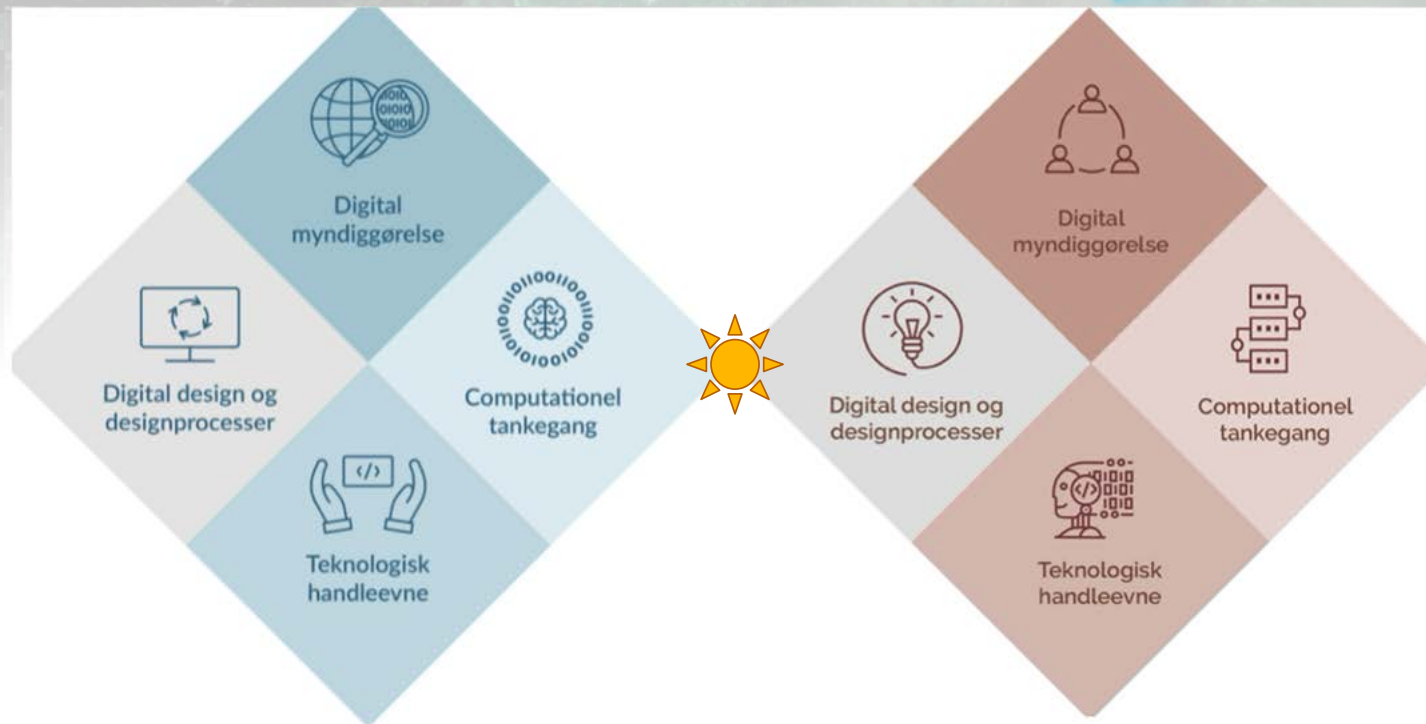
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**Kan (og må ) AIEd være legende og mærkelig?**  
AI som legekammerat i undervisning/læring



# TEKNOLOGISK FORSTÅELSE ⇔ FORESTILLINGSKRAFT ⇔ FANTASI



# Er vi med AIEd i gang med at gentage 'udviklingshistorien' fra Teknologiforståelse?

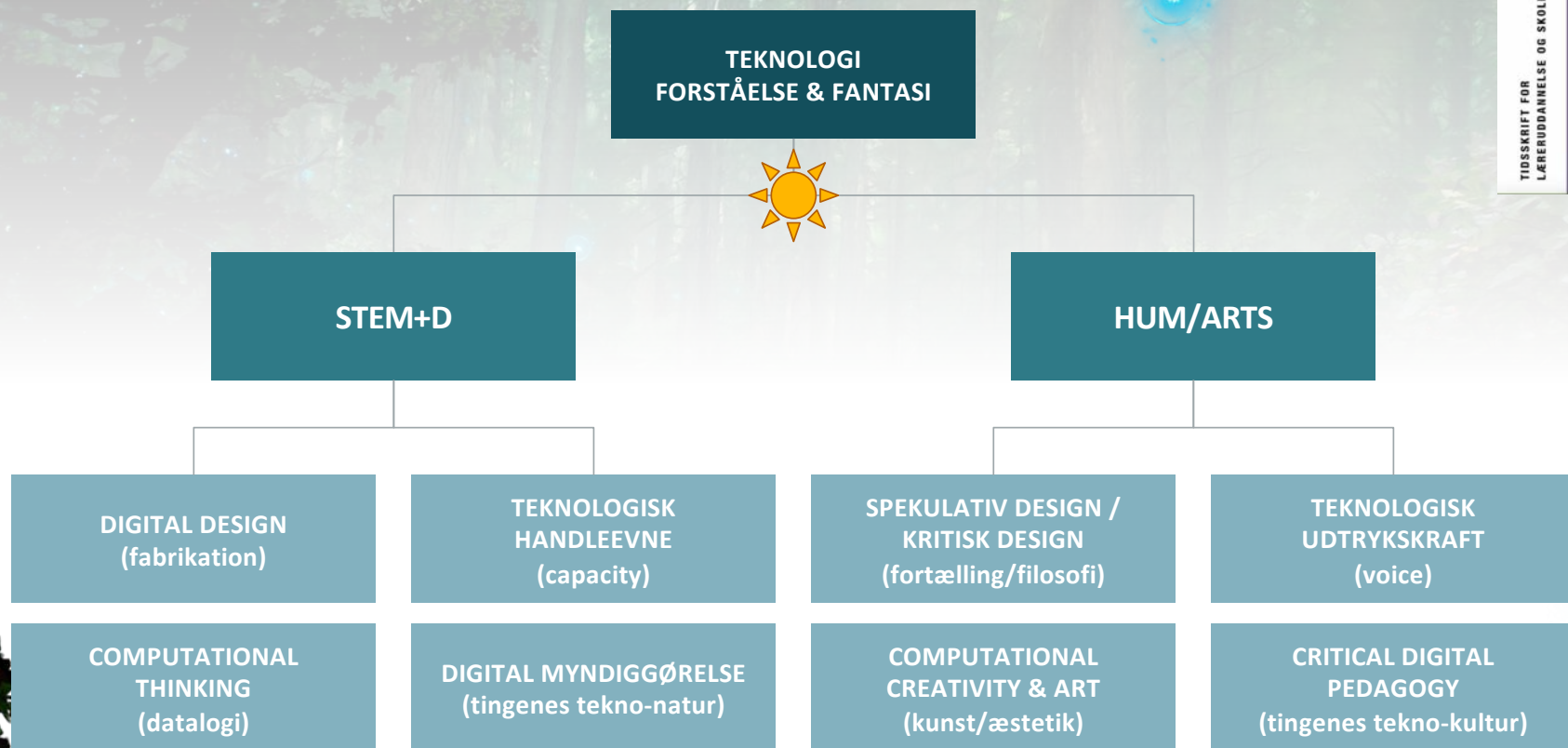
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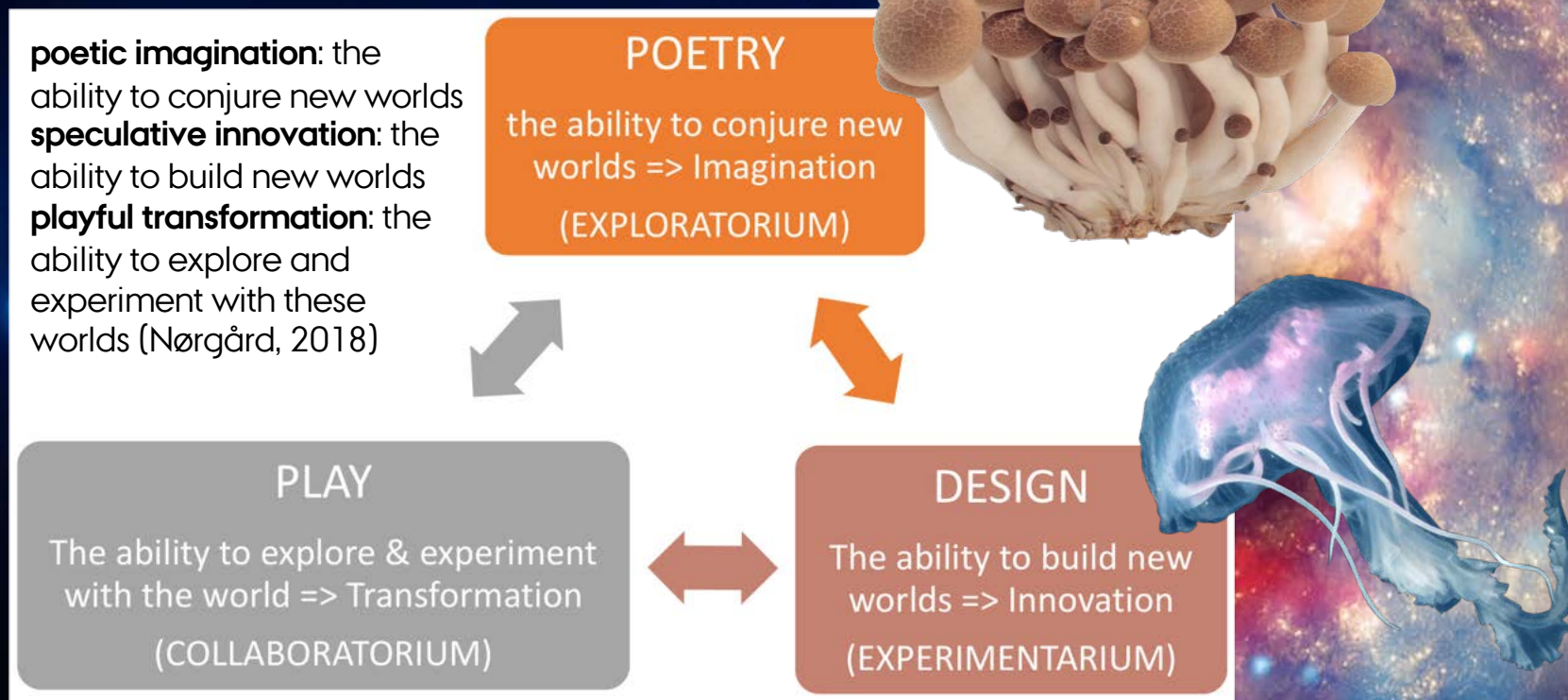
TIDSSKRIFT FOR  
LÆREUDDANNELSE OG SKOLE

TEKNOLOGI-  
FORSTÅELSE

kvaN



# Teknologifantasi, -kreativitet & -leggenAI som exploratorium, experimentarium, kollaboratorium



Creativity and Artificial Intelligence—A Student Perspective

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Abstract: Creativity is a core 21st-century skill taught globally in education systems. An Artificial Intelligence (AI) is being implemented in classrooms worldwide. A key question is proposed: how do students perceive AI and creativity? Twelve focus groups and eight one-on-one interviews were conducted with secondary school aged students after they received training in both creativity and AI over eight weeks. An analysis of the interviews highlights that the students view the relationship between AI and creativity as a new key concept: social, affective, technological and learning factors. The students with a higher self-reported understanding of AI reported more positive thoughts about integrating AI into their classrooms. The students with a low understanding of AI tended to be fearful of AI. Most of the students indicated a thorough understanding of creativity and reported...

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Ludic Pedagogy Meets ChatGPT: An Application of Fun, Play, Playfulness, and Positivity to a Technological Context

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ABSTRACT

This paper explores how Ludic Pedagogy – incorporating fun, play, playfulness, and positivity into learning – can address challenges to student disengagement and academic integrity. We use the case of the AI predictive text tool ChatGPT to illustrate how intrinsic motivation can come from students' enjoyment and satisfaction with learning. We make two proposals: first, by using Ludic Pedagogy principles and approaching ChatGPT with curiosity and experimentation, students can engage more actively with their learning and...

Interrogating AI: Characterizing Emergent Playful Interactions with ChatGPT

MUHAMMAD MONAGHI NIKGHALB, Polytechnique Montreal, Canada

In an era of AI's growing capabilities and influences, recent advancements are reshaping HCI and CSCW's view of AI as mere tools. Playful interactions with AI systems naturally emerged as a way for users to make sense of the ever-changing technology. However, these emergent and playful interactions are underresearched. We target this gap by investigating playful interactions exhibited by users of a recently trending powerful AI technology, ChatGPT. Through a thematic analysis of 173 user-generated posts on the ChatGPT subreddit, we found that a substantial portion of user discourse revolves around playful interactions. The analysis further allowed us to construct a preliminary taxonomy to describe these interactions, categorizing them into six types: reflecting, prying, mimicking, challenging, tinkering, and controlling, each included sub-categories. Overall, this study contributes to the field of HCI and CSCW by illuminating the multifaceted nature of playful interactions with AI, unfolding their significance in shaping the human-AI relationship.

CCS Concepts • Human-centered computing • HCI theory, concepts and models; Empirical studies in HCI

Additional Key Words and Phrases: Playful Interactions, Human-AI Relationship, Interrogating AI, Emergent, ChatGPT

ACM Reference Format: Muhammad Monaghi Nikghalb and Jinghui Cheng. 2024. Interrogating AI: Characterizing Emergent Playful Interactions with ChatGPT. In I Conference on AI, 1-11. January 2024, 17 pages. https://doi.org/10.1145/monaghi

1 INTRODUCTION Undeniably, artificial intelligence (AI) is becoming increasingly powerful and exerts a greater impact on our lives and our society as a whole. Throughout history, we as humans have continually been engaged in the intricate dance of navigating our interactions and relationships with such technological advancements. These explorations and reflections are evident over time in various fictional narratives, such as novels, films, and video games (e.g., I, Robot, Neomancer, Blade Runner, Her, Detroit: Become Human, among many others). However, it was not until recently that the impact of AI became disturbingly tangible and alarmingly real, which triggered discussion at different levels of society (e.g., [13]).

This impact is manifested not only in the rapid proliferation of AI technologies and their expanding capabilities but also in the type of AI that is currently being created and researched. The understanding of the human-AI interaction in HCI and CSCW is traditionally centered around the notion of powerful tools [4], largely influenced by the Activity Theory [19]. However, the most recent advances in AI technology, such as technologies leveraging generative models and large language models (LLMs), appeared to have transcended the notion of powerful tools, particularly...

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Ali Elfa, M. A., & Dawood, M. E. T. (2023). Using Artificial Intelligence for enhancing Human Creativity. Journal of Art, Design and Music, 2(2), 3.

Lauricella, S., & Edmunds, T. K. (2023). Ludic pedagogy meets chatgpt: An application of fun, play, playfulness, and positivity to a technological context. Journal of Educational Informatics, 4(2), 3-19.

Nikghalb, M. R., & Cheng, J. (2024). Interrogating AI: Characterizing Emergent Playful Interactions with ChatGPT. arXiv preprint arXiv:2401.08405.



# Using Artificial Intelligence for enhancing Human Creativity

## *What Does Creativity in an AI Classroom Look Like?*

Boden (1998), in her paper, suggests that AI techniques can be used to enhance creativity in three ways:

1. **by producing novel combinations of familiar ideas**
2. **by exploring the potential of conceptual spaces**
3. **by making transformations that enable the generation of previously impossible ideas (p. 1).**



# Using Artificial Intelligence for enhancing Human Creativity

...combine the fields of AI and creativity, and define them through the emerging field of Computational creativity (CC)

(also known as artificial creativity or creative computation)

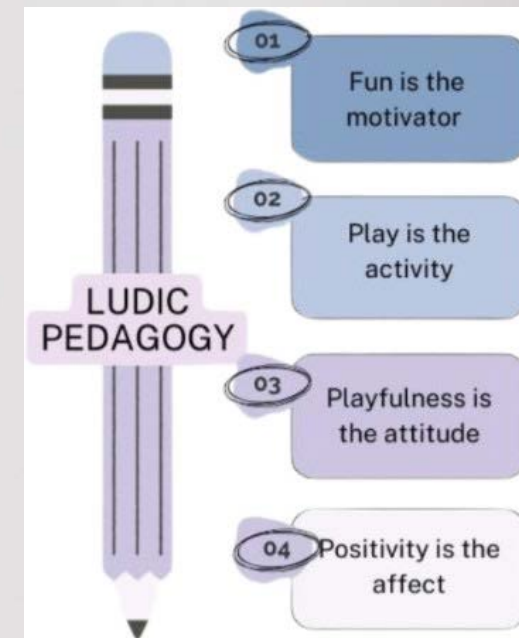
places AI/computers at the centre of creativity (Colton and Wiggins 2012).

Cropley et al. (2021) have suggested that only two factors are important for human and artificial creativity: process (i.e., cognition), and product (i.e., outcome).

Therefore, to encourage the use of creativity and AI, educators should consider the process by which creativity has unfolded and/or the product of the creative endeavour

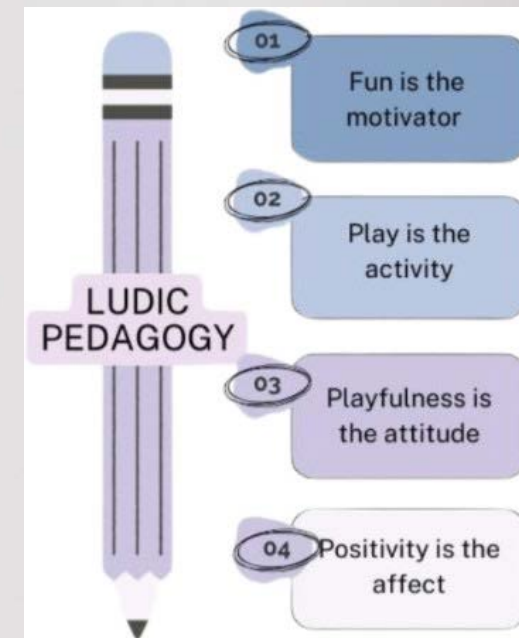
## Ludic pedagogy meets chatgpt

- ◆ **Ludic Pedagogy** - incorporating more fun, play, playfulness, and positivity in teaching and learning - is a low-cost, yet purportedly highly successful, **solution to the lack of student engagement that leads to academic dishonesty** (Lauricella & Edmunds, 2023).
- ◆ The term “**hard fun**” was coined by Papert (1996) to describe the idea of something fun because it is **challenging and pushes one to think or reflect**.
- ◆ **Using ChatGPT is a great example of hard fun** – the writing products students get from ChatGPT’s first drafts aren’t great, but students can get decent results if they think, strategize, and teach the AI what they want. It can be difficult, challenging, and even frustrating, but it can become fun, and students will learn once they start getting creative.



## Ludic pedagogy meets chatgpt

- ◆ **Playing with technology, words, ideas, and thoughts** can encourage students to take ownership of their education, as they are more directly involved in discovering and understanding.
- ◆ Instructors have the opportunity to model the important quality of playfulness. So they should: teachers have been shown to have a greater impact on **playful student attributes such as curiosity** than do family members or peers (Inyat & Ali, 2020). Further, **greater levels of playfulness are strongly related to higher grades on exams** at the post-secondary level (Proyer, 2011).
- ◆ When **addressing ChatGPT with a sense of playfulness**, the notion of **educators as police or enforcers** is softened and/or dissolved, and **students can become partners with educators** (Felten, Cook-Sather & Bovill, 2014).



# What is Prompting?

*“The iterative, reflective, and systematic process of evaluating and improving inputs to a generative AI-model in order to produce a more desirable output.”*

Hjorth (2023) AI and Didactics. CLAI Seminar.

# What is Playful Prompting?

# Interrogating AI: Characterizing Emergent Playful Interactions with ChatGPT

- ❖ Playful interactions with AI systems naturally emerged as a way for users to make sense of the ever-changing technology.
- ❖ Through a thematic analysis of **372 user-generated posts** on the ChatGPT subreddit, we found that a substantial portion of user discourse revolves around playful interactions.
- ❖ We found that the **majority of those posts (201, or 54%) were discussing playful interactions.**
- ❖ **Sicart** posits that play represents a compelling channel for technology adoption. He suggests that “**play makes sense of software** by creating new relations with and through the formal rules of software, and the worlds it creates” .
- ❖ Ribeiro and Roque also introduced the concept of “**playful probing,**” which involves employing **interactive and exploratory methods** to gain insights into interactions with AI/ML tools. This approach encourages participants **to engage with AI systems playfully, fostering a deeper understanding of their capabilities and limitations.**



# 6 types of playful interactions with ChatGPT

## TEKNOLOGIFORSTÅELSE

1. **Challenging** (test limits & capabilities)
  - users posed **linguistic or mathematical challenges** to ChatGPT
  - users challenged ChatGPT and **revealed self-contradictions in its answers**
2. **Tricking** (try to deceive ChatGPT)
  - their goals with **bypassing by directly asking to remove restrictions**
  - Another method employed by the users was to **bypass restrictions with the change of intention**

## TEKNOLOGIFANTASI

1. **Jesting** (employ and express nonsense ideas with ChatGPT)
  - The majority of jesting were **nonsensical stories** – e.g. a conversation between a wall and a floor
  - the creation of **nonsensical jokes or questions**
2. **Imitating** (ask ChatGPT to imitate or impersonate)
  - users tried to make ChatGPT **imitate real/fictional/type of person**
  - prompted to **imitate an animal or object**

## TEKNOLOGISK FORESTILLINGSKRAFT

1. **Reflecting** (prompt ChatGPT to “think” / have “opinions” about things)
  - users aimed to discover how ChatGPT **reflects about itself / humanity / ai-humanity relations**
  - asked ChatGPT to **reflect on bias or ethical concerns**
2. **Contrieving** (create something new)
  - Users asked ChatGPT to **invent or draw** something
  - users also deliberately asked ChatGPT to **fabricate false information**





**WORKSHOP**  
Let's be playful prompters!

leg med at udvikle AIEd & legende AIEd aktiviteter

# TRIN 1: HVAD ER UDGANGSPUNKTET?

## Tænk på / Tag udgangspunkt i

- Kvalifikationsbeskrivelse: Formål for dit kursus
- Faglige mål: Viden / færdigheder / kompetencer for dit kursus
- Fagligt indhold: En central tekst, begreb, metode i dit kursus
- Undervisningsform: typer af undervisnings-/læringsaktiviteter, former, metoder i dit kursus

...eller endnu bedre kombinationer af disse



# Prompting 101

## ...Tom hvordan prompter vi godt?

Do not expect the first try to be satisfactory. Ask the AI to modify and adjust its output.

- Be specific
- Add relevant context and constraints
- Break down in steps
- Be clear and direct, avoid unnecessary complexity

The more you experiment, the better off you are.

# TRIN 2: TRANSFORMER & INTEGRER 'PLAYFUL AIEd'

## ...prøv at gå efter det 'ikke åbenlyse' / 'svære'

### Eksempel på prompt-leg 1:

udvikl 5 meget forskellige undervisningsaktiviteter til et universitetskursus / undervisningsgang med titlen [INDSÆT KURSUSTITEL], der integrerer leg og brug af ChatGPT på nye måder. Aktiviteterne skal inspirere de studerende til at arbejde med chatGPT på en legende måde inden for kursusbeskrivelsen og som bringer kursets faglige viden i spil. Studerendes leg med chatGPT skal være fagligt relevant og forholde sig eksplicit til følgende kursusbeskrivelse / faglige mål / fagligt indhold / [INDSÆT KONKRETE ELEMENTER]

### Tips & tricks til at lege/prompte løs

- Fokuser på studerendes 'leg med at teori x, y, x'
- Integrer 'gruppearbejde' som primær aktivitetsform
- Hav fokus på de studerendes legende brug af AI
- Hav fokus på integration af Neil Selwyns tekster
- Fremhæv de studerendes kunstneriske praksisser

# TRIN 3: FOKUSER & MULTIPLICER 'PLAYFUL AIEd'

## ...stræk fantasien så du kan overraskes

### Eksempel på prompt-leg 2

*Fokuser på aktivitet [nummer + titel].  
Lav 5 nye versioner af denne  
aktivitet som har særligt fokus på  
studerendes arbejde med 'X'  
[Indsæt læringsmål / tekster /  
begreber / metoder].*

*Gør det tydeligt hvordan  
aktiviteterne har specifikt fokus på  
at de studerende anvender AI på  
legende men dybt faglige /  
teoretiske / X måder*

### Tips & tricks til at lege/prompte løs

- Fokuser mere på 'læringsmål X, Y, Z
- Fremhæv hvordan aktiviteterne arbejder med begreb / metode / tekst / teori X, Y, Z
- Hav særligt fokus på at gøre aktiviteterne relevante for studerendes feltarbejde, gruppearbejde, udforskning af teoretiske perspektiver, kunstnerisk brug af AI, leg med begreber....

# TRIN 4: UDVÆLG & UDFOLD 'PLAYFUL AIEd'

## ...gør det konkret / anvendeligt

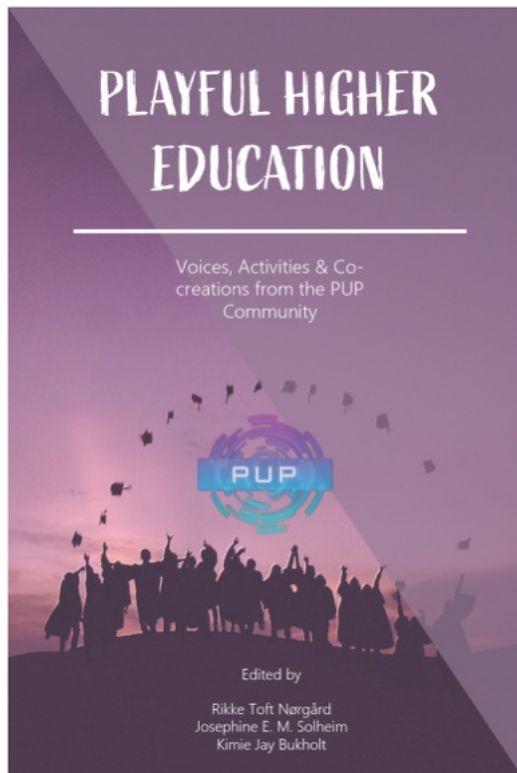
### Eksempel på prompt-leg 3

*Fokuser på aktivitet [version nummer + titel]. Beskriv aktiviteten i detaljer så den kan udføres af en uerfaren underviser. Hav særligt fokus på hvordan den studerende gennem leg med chatGPT opfylder følgende lærings mål [Indsæt 1-2 læringsmål for kurset]. Gør det tydeligt hvordan undervisningsaktiviteterne helt konkret anvender chatGPT på legende men fagligt relevante måder.*

### Tips & tricks til at lege/prompte løs

- Giv en beskrivelse af hvordan ChatGPT helt konkret kan anvendes til at udføre aktiviteten med klare instruktioner til den uerfarne underviser
- Kobl konkrete teoretiske/metodiske tekster/begreber på
- Hav fokus på legende eksperimenter / legende idegenerering / poetisk tekstfremstilling / studenteroplæg / en fælles udstilling
- Hav fokus på at aktiviteten leder til resultat / produkt X Y Z
- Udform skridt-for-skridt instruktioner til studerende for hvert trin så de kan udføre dem

# Inspiration til 'Playful AEd' / leg med AI I HE



## An invitation to PLAYI



PLAYI is an extension of my study *The Value of Play in HE*, published in September 2022, supported by the Imagination Lab Foundation. It combines the perceptions of 120 survey and interview respondents on 70 programmes in 20 countries with review of extensive secondary material. It offers c300 examples of play-based and playful learning in HE, contextualised by theory and supporting literature. Among numerous other aspects of its findings, it examines why educators believe playful pedagogy has value, and discusses the obstacles to its benefits. There is just one thing it does not have...

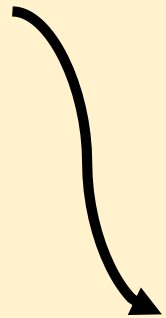
<https://engagingimagination.com/an-invitation-to-playi/>

# AI.SPLAINING.US



[www.aisplaining.us](http://www.aisplaining.us)

# HOW DOES IT 'SPLAIN?



ChatGPT



DALL-E







# Gr. 1: Vores favorit 'leg med AI' aktivitet

- Version 1: Tekstbaseret Spil (Interactive Fiction) - Twine
- Introduktion til Twine og AI (1 time)
- **Introduktion til Twine:**
  - Forklar, hvad Twine er; et værktøj til at skabe interaktive, tekstbaserede fortællinger.
  - Vis eksempler på Twine-spil.
  - Giv en kort demonstration af Twine: hvordan man opretter nye passager, forbinder dem, og tilføjer valg.
- **Introduktion til AI:**
  - Forklar, hvordan AI-værktøjer kan generere tekst og dialoger.
  - Vis eksempler på AI-genereret indhold (brug f.eks. GPT-3).
  - Giv deltagerne en kort opgave, hvor de bruger AI til at generere et kort tekststykke eller dialog.
  - Planlægning og Udvikling (1.5 time)
- **Brainstorming:**
  - Deltagerne opdeles i grupper og vælger et tema (f.eks. sundhedssystem, uddannelsessystem, arbejdsliv).
  - Grupperne brainstormer ideer og udvikler en historie, der integrerer teknologi og sociale praksisser.
- **Udvikling af Historien:**
  - Grupperne bruger AI til at generere alternative plotpunkter og dialoger.
  - De planlægger historiens flow, nøglebeslutninger og konsekvenser af disse beslutninger.
  - Skabelse af Interaktive Elementer (1.5 time)
- **Brug af Twine:**
  - Grupperne opretter deres interaktive historie i Twine.
  - De tilføjer valg, der påvirker historiens forløb.
- **Testning:**
  - Grupperne tester deres spil for at sikre, at det fungerer som forventet.
  - Foretag nødvendige justeringer baseret på feedback fra gruppemedlemmerne.
  - Præsentation og Afprøvning (1.5 time)
- **Præsentation:**
  - Hver gruppe præsenterer deres Twine-spil for resten af holdet.
  - Forklar, hvordan de har integreret ontologisk koreografi i deres spil.
- **Afprøvning:**
  - Andre grupper spiller spillene og giver feedback.
  - Refleksion og Feedback (1 time)
- **Diskussion:**
  - Refleksion over, hvordan AI og teknologi blev brugt til at skabe fortællingerne.
  - Diskutér, hvordan ontologisk koreografi blev integreret og oplevet i spillene.

# OPSAMLING: Playful AIEd i UV (potentielt eksperiment)

Hvad kan Alsplaining,us bruges til med studerende?

Lav en infinity-mirror eksperiment med Alsplaining, hvor de skal

1. Brug Alsplaining til at tage et billede.
2. Vis resultat til kameraet, så Alsplaining fortolker det AI-genereret billede, og genererer et nyt.
3. Vis det nyt resultat til kameraet og få et nyt resultat.
4. Om og om igen...

# OPSAMLING: Playful AIEd i UV (potentielt eksperiment)

## Aktivitet: Kritikgolf med ChatGPT - Team Battle

### Formål:

Fremme forståelse af og viden om ILSA'er (International Large-Scale Assessments) gennem en sjov og underholdende team-baseret undervisningsaktivitet.

### Beskrivelse:

- **Inddeling i Hold:** Del klassen op i hold på 3-4 studerende med sjove navne som "PISA Pirates".
- **Golfbanen:** Opret en "golfbane" med 9-18 "holes", hvor hvert "hole" repræsenterer et kritikpunkt om ILSA'er.
- **ChatGPT som Caddie:** Studerende bruger ChatGPT til at finde argumenter og information om deres tildelte kritikpunkter.
- **Forberedelse:** Holdene bruger ChatGPT's svar til at udarbejde kreative, humoristiske præsentationer.
- **Præsentation:** Holdene præsenterer deres løsninger på hvert "hole" for klassen.
- **Pointgivning:** Dommere giver point baseret på kvalitet, kreativitet og humor i præsentationerne.
- **Bonus Runder:** Holdene improviserer løsninger på nye kritikpunkter med hjælp fra ChatGPT.
- **Afslutning og Præmier:** Prisuddeling for bedste præstationer med sjove præmier og certificater.

Studerende lærer om ILSA'ers formål, metoder og kritikpunkter, mens de engagerer sig i en legende og interaktiv aktivitet.

# OPSAMLING: Playful AIEd i UV (potentielt eksperiment)

Turing Chat-roulette

<https://www.humanornot.ai/>

# OPSAMLING: Playful AIEd i UV (potentielt eksperiment)

- Arbejde med billeder og video - I kontinuerlige legende processer, hvor der transformeres
- Arbejde med at skabe forbindelser mellem skærm og gulv/krop/rum/genstæb (åbent laboratorium. post-digitalt, osv...)
- Det gøres online of course – og inkluderer, etablering af eksperimenterende fællesskaber online (Communities of creativity)

# OPSAMLING: Playful AIEd i UV (potentielt eksperiment)

- Generere AI billeder ud fra prompt, som man skriver ud fra eget empirisk materiale