





Credits:

Images: MidJourney

Text: ChatGPT, Bing

## ai & chatbots in Education



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Thanks: Assoc. Prof. Martin Gerdes

Assoc. Maurice Isabwe







## Welcome & Introduction

## agenda

- 1. Welcome and Introduction
- 2. Practical Uses of Chatbots for Educators
- 3. Impact on assessment
- 4. Statements from partners
- 5. Discussion and Key Takeaways



#### A Joint Effort for Future Education

Important topics are life-long learning, new certificate structures, digital inclusion, embracing diversity, gender equality, 21st-century "soft-skills", enhanced capacity by using artificial intelligence, new pedagogical models, virtual student and staff exchange, and policies for the digital age.

TELLS is funded by <u>NORAD</u>, the Norwegian Agency for Development Cooperation, through the <u>NORHED II</u> program 2021-2026.

Faculty of Humanities & Education, Health & Sport Sciences, Engineering & Science, Social Sciences, Fine Arts, School of Business & Law, UiA's Teacher Education Unit, UiA Nyskaping ANSATT, UIA IT, UiA PULS (Centre for Teaching and Learning), and more, SiA and students



#### A Joint Effort for Future Education

We envision a future where learning experiences seamlessly integrate cyberspace and the real, physical world.

Understanding the opportunities offered by new technologies must match the effort to create new pedagogical and didactical methods for the benefit of future learners. Crucial to success is a credible and productive student partnership.

CONSENSE is a network of over 80 UiA enthusiasts.

### **FORTHEM**

#### **Fostering Outreach within European Regions, Transnational Higher Education and Mobility**

The FORTHEM Alliance brings together a new generation of creative Europeans able to cooperate across languages, borders and disciplines to address the societal challenges and skills shortages Europe faces. FORTHEM is a network of nine multidisciplinary public research universities with a strong regional anchoring in Finland, France, Germany, Italy, Latvia, Norway, Poland, Romania and Spain.













Get involved ~

About us v













Local offices

Research and innovation

Labs

Steering committee

- General: info@forthem-alliance.eu
- Johannes-Gutenberg Universität Mainz: forthem@uni-mainz.de / local FORTHEM webpage
- Jyväskylän yliopisto: forthem@jyu.fi / local FORTHEM webpage
- Latvijas Universitāte: forthem@lu.lv / local FORTHEM webpage
- Università degli Studi di Palermo: forthem.office@unipa.it / local FORTHEM webpage
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## agenda

- 1. Welcome and Introduction
- 2. Practical Uses of Chatbots for Educators
- 3. Impact on assessment
- 4. Statements from TELLS partners
- 5. Discussion and Key Takeaways







# 2. Practical Uses of Chatbots for Educators

## Poll 1 – Chatbots?



## Prof. Morten Goodwin



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## Morten's presentation

# poll 2 – allow chatbots?



## Prof. Frank Reichert



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# Create graphics

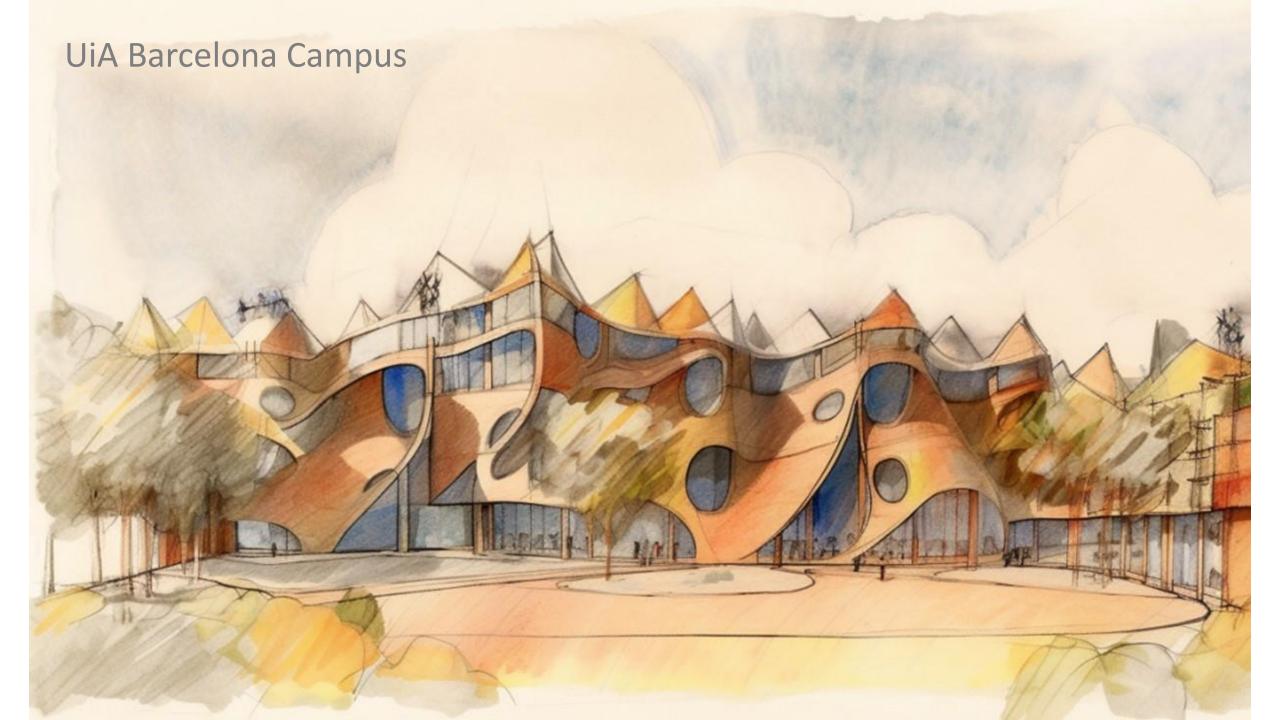


"Happy Patient" - Al=Midjourney V5



# Future UiA Campus

Style of Antoni Gaudí (1852-1926)



## discover



# Give me 5 references for practical applications of ai in education at universities that work today.



**Knewton**: An adaptive learning platform used by universities to provide personalized learning experiences for students in various subjects. Knewton's AI algorithms analyze students' performance and recommend tailored content and resources to optimize learning outcomes. (https://www.knewton.com)

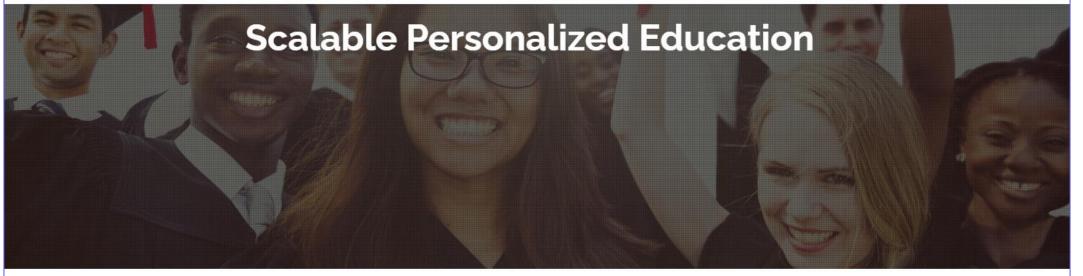
**Coursera**: An online learning platform that partners with top universities and institutions to offer Alenhanced courses and programs in various disciplines. All is employed to analyze student performance, provide personalized feedback, and support peer interactions. (https://www.coursera.org)

**Gradescope**: Used by universities, Gradescope is an AI-powered platform for grading exams, homework, and other assignments. It enables instructors to streamline the grading process, provide consistent feedback, and gain insights into students' performance. (https://www.gradescope.com)

**Turnitin**: Turnitin is an AI-driven platform used by universities to check academic papers for plagiarism, originality, and quality of writing. It helps maintain academic integrity and provides personalized feedback to improve students' writing skills. (https://www.turnitin.com)

**Cognii**: Employed by higher education institutions, Cognii's AI-powered virtual learning assistant offers personalized feedback on students' written responses, fostering the development of critical thinking and writing skills. (https://www.cognii.com)





Cognii is a leading provider of Artificial Intelligence based educational technologies. We work with organizations in the K-12, higher education, and corporate training markets to help them deliver 21st century online education with superior learning outcomes and cost efficiency. Cognii's multiple-award winning EdTech product is helping students around the world by enabling personalized deeper learning, intelligent tutoring, open response assessments, and pedagogically rich analytics.





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**GDPR** 

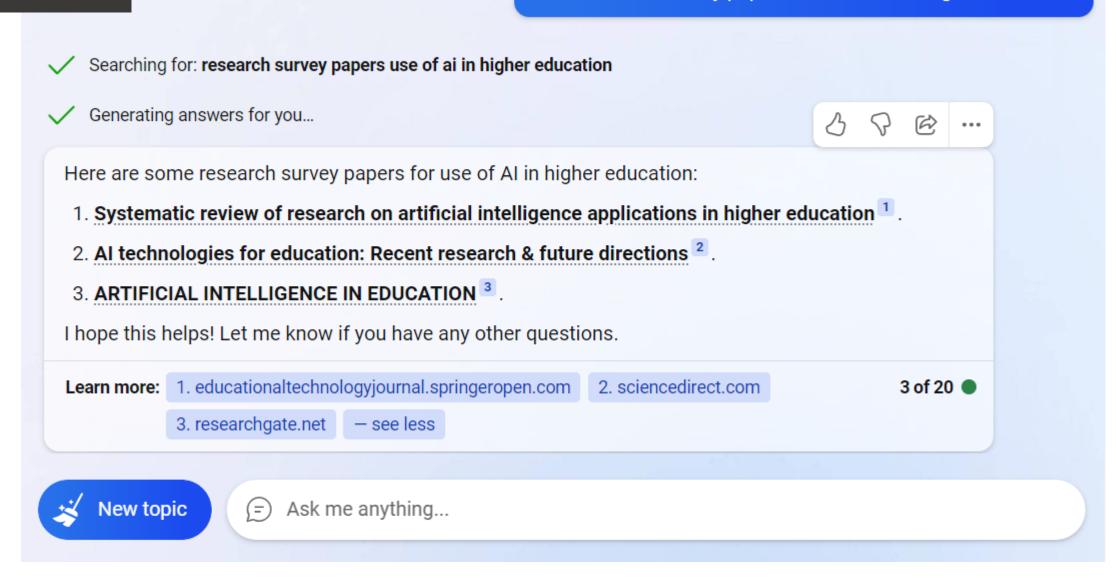
**News & Updates** 

## Complete guide to GDPR compliance

GDPR.eu is a resource for organizations and individuals researching the General Data Protection Regulation. Here you'll find a library of straightforward and up-to-date information to help organizations achieve GDPR compliance.

### BING.com

list 5 research survey papers for use of ai in higher education



#### International Journal of Educational Technology in Higher Education

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Review article Open Access | Published: 28 October 2019

# Systematic review of research on artificial intelligence applications in higher education – where are the educators?

Olaf Zawacki-Richter , Victoria I. Marín, Melissa Bond & Franziska Gouverneur

<u>International Journal of Educational Technology in Higher Education</u> **16**, Article number: 39 (2019)

Cite this article

125k Accesses | 338 Citations | 222 Altmetric | Metrics

#### **Abstract**

According to various international reports, Artificial Intelligence in Education (AIEd) is one of the currently emerging fields in educational technology. Whilst it has been around for about 30 years, it is still unclear for educators how to make pedagogical advantage of it on a broader scale, and how it can actually impact meaningfully on teaching and learning in higher education. This paper seeks to provide an overview of

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#### Collection

<u>Can artificial intelligence transform higher</u> <u>education?</u>

Sections

**Figures** 

References

Abstract

Introduction

Al in education (AIEd)

Method

<u>Results</u>

Conclusions and implications for further ed...

Availability of data and materials

Systematic review of research on artificial intelligence applications in higher education – where are the educators? I internat

## read



**Educational Research and Innovation** 

## Is Education Losing the Race with Technology?

AI'S PROGRESS IN MATHS AND READING



OECD (2023), Is Education Losing the Race with Technology?: Al's Progress in Maths and Reading, Educational Research and Innovation, OECD Publishing, Paris, https://doi.org/10.1787/73105f99-en.

Released: March 28, 2023

111 pages







# summarize the report at the following URL (open access): https://read.oecd.org/10.1787/73105f99-en?format=pdf

incorrect



The report "Is Education Losing the Race with Technology?" by the OECD briefly discusses the impact of Artificial Intelligence (AI) on education. The report highlights the potential of AI to transform the education landscape by offering personalized and adaptive learning experiences to students.

The report also notes the challenges that AI presents for education, such as the need to ensure that AI is used ethically and responsibly, and that the data used to train AI algorithms is representative and unbiased. The report emphasizes that it is essential to ensure that students understand how AI works and its potential benefits and limitations.

Additionally, the report discusses the importance of developing the skills required for working with AI, such as computational thinking, data analysis, and problemsolving. It recommends that education systems prioritize the development of these skills to ensure that students are prepared for the future workforce.

Overall, while the report does not extensively discuss AI, it recognizes its potential to transform education and highlights the importance of preparing students for the challenges and opportunities presented by AI.

## write



https://www.uia.no/en/about-uia

#### **Creating knowledge together**

We know that when people who are committed come together to further knowledge, anything is possible. Students and staff at the University of Agder collaborate with both public and private sectors every day to find solutions that improve our world.



### rewrite like a cow





#### rewrite like a cow





Moo-ving Knowledge Forward

When herd members unite in their cow-mitment to learn, moo-raculous things can happen.

In the University of Agder pasture, calves and cow-fessors graze alongside public and private sector partners, working udder-ly hard to churn out solutions that improve our barnyard world.

# explain



### Explain Einstein's formula E=mc^2. be short and brief.





E=mc^2 is Einstein's equation showing the equivalence between mass (m) and energy (E), where c is the speed of light. It states that mass can be converted into energy and vice versa.

## motivate



# Project outline





motivate a project that looks into creating interchangeable micro-credentials for courses mutually recognized in a consortium of European universities. create as a bullet list for a powerpoint slide

- 1. Enhancing student mobility
- 2. Promoting lifelong learning
- 3. Meeting the needs of employers
- 4. Fostering collaboration between universities
- 5. Contributing to the European Higher Education Area
- 6. Supporting the goals of the Bologna Process
- 7. Recognizing and valuing diverse learning experiences
- 8. Encouraging innovation in education
- 9. Providing a flexible and accessible approach to learning
- 10. Enhancing the international recognition of qualifications
- 11. Promoting the development of a common European identity
- 12. Responding to the changing needs of the workforce
- 13. Encouraging interdisciplinary and cross-cultural learning
- 14. Building a stronger and more competitive European knowledge economy
- 15. Providing a framework for lifelong career development and progression

## summarize



write minutes of meeting. date: March 29, 2023. participants: 45 representatives from FORTHEM alliance, TELLS project, UiA CONSENSE project. topics discussed: Chatbots in educations and assessment. demonstration of practical applications and joint discussions.



**Meeting Minutes** 

Date: March 29, 2023

Participants: 45 representatives from FORTHEM alliance, TELLS project, UiA CONSENSE project

Venue: Virtual meeting

#### Agenda:

Introduction and welcome by the moderator.

- 2. Presentation and demonstration of practical applications of Chatbots in education and assessment.
- 3. Joint discussion and brainstorming session on the use of Chatbots in education and assessment.

#### Proceedings:

- 1. The meeting was called to order by the moderator at 10:00 am. The moderator welcomed all the participants and thanked them for attending the meeting. The moderator also introduced the agenda for the day.
- 2. The first topic of discussion was the presentation and demonstration of practical applications of Chatbots in education and assessment. The representatives from the TELLS project and UiA CONSENSE project presented their research and shared the results of their experiments. The representatives from the FORTHEM alliance also shared their experiences and success stories of using Chatbots in education and assessment.
- 3. After the presentations, the floor was open for questions and discussions. The participants engaged in a lively discussion and shared their thoughts on the use of Chatbots in education and assessment. Some participants shared their concerns about the reliability and accuracy of Chatbots in assessment, while others highlighted the potential benefits of using Chatbots in education, such as personalized learning and increased engagement.
- 4. The moderator then led the participants in a brainstorming session on the use of Chatbots in education and assessment. The participants shared their ideas and suggestions on how Chatbots can be integrated into the education system and how they can be used for assessment purposes.
- 5. The meeting concluded with a vote of thanks to all the participants for their active participation in the discussion.

#### Action items:

- 1. The representatives from the TELLS project and UiA CONSENSE project will share their research papers with the participants.
- 2. The representatives from the FORTHEM alliance will share their success stories and case studies with the participants.
- 3. The participants will continue the discussion on the use of Chatbots in education and assessment in their respective organizations.

#### Minutes prepared by:

[Your Name]



can you summarize this page: https://www.forthem-alliance.eu/





The FORTHEM alliance is a network of seven European universities that aims to promote collaboration and innovation in research, education, and community engagement.

The alliance is focused on five thematic areas: Digital Humanities, Health and Well-being, Smart and Sustainable Cities, Teacher Education, and Cultural Heritage.

The website provides information about the alliance's objectives, members, ongoing projects, and events. It also features news articles, publications, and resources related to the thematic areas. Overall, the FORTHEM alliance is a collaborative platform for promoting knowledge exchange and fostering social impact through research and education.

# poll 3 – whiteboard expectations



## 3. assessment

## Prof. Frank Reichert



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## Train & learn



i have an oral exam with my university professor. the topic is user centric design. Can you be my sparring partner and question me like a professor and evaluate my answers?



Certainly! I'll ask you some questions related to user-centric design and provide feedback on your responses. Let's begin.

Question 1: Can you explain the concept of user-centric design and its importance in the design process?

Please provide your answer, and I will evaluate it.



user centric design is an iterative development process involving users continuously in the development process. this ensures that the developed product is relevant, useful and usable for the users.



That's a good answer! You've highlighted the iterative nature of the user-centric design process and its focus on involving users throughout development. You've also mentioned the importance of ensuring that the product is relevant, useful, and usable for the users.

Now, let's move on to the next question.

• • •

Question 3: Can you explain the role of personas in user-centric design and how they can be used effectively?

Please provide your answer, and I will evaluate it.



personas illustrate different use cases of the product. they help the designers to focus on the relevant usage aspects and understand the purpose and functionality of the product and the intended functionality



Your answer is on the right track, but it could be more precise about the role of personas in user-centric design. Personas are fictional characters representing different user types, based on research and user data. They help designers understand the users' goals, motivations, and behavior patterns.

Using personas effectively involves:

Research: Gather data from various sources such as interviews, surveys, and user testing to create a comprehensive understanding of the target audience.

Creation: Develop detailed personas that include demographics, goals, motivations, frustrations, and other relevant characteristics.

Communication: Share personas with the design team to ensure everyone has a clear understanding of the target users.

Application: Use personas to guide design decisions, ensuring the product caters to the needs and preferences of different user types.

# Creating and using a 3-level rubric

### **Rubic in CANVAS LMS**



MM-402-G 22V > Rubrics > Individual Project - 15 pts (1)

2022 VÅR

### Individual Project - 15 pts (1)

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Grades

Rubrics

Instructor Course Evaluations

Item Banks

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Criteria	Ratings			
Problem Statement & Motivation Clear problem description and motivation. What problem is addressed? Why is it a relevant problem? Why are existing solutions not sufficient?	3 pts Outstanding Identifies a creative, focused, and manageable topic that addresses potentially significant yet previously less- explored aspects. Demonstrates the ability to construct a clear and insightful problem statement with evidence of all relevant contextual factors. Details are relevant and enrich the work. External sources were brought in to support the ideas and cited appropriately. The presentation of ideas is natural and engaging to the audience.	1.5 pts Approved Identifies a focused and manageable/doable topic. The relevance and context of the problem are clearly described. The statement is adequately detailed. Efforts in finding a new solution are well motivated.	O pts Not Approved Identifies a topic that is far too general and wide- ranging as to be manageable and doable. Demonstrates a limited ability in identifying a problem statement and relevant context. The problem is not described sufficiently	3 pts
Discussion and Analysis of Solution and Alternatives What solution approach is proposed? Which alternatives exist? Why are the alternatives not good enough? What are the benefits of the	3 pts Outstanding The analysis is very thorough and complete. Synthesizes in-depth information from relevant sources representing various points of view/approaches. The argumentation is consistently clear and appropriate to the reader and to the purpose. In emphasizing important points, the writer uses evidence logically and carefully.	1.5 pts Approved A good analysis of the major issues. Presents information from relevant sources. Makes some attempt to provide evidence, illustrations, or other definitive details but some information is either irrelevant or insufficient.	O pts Not Approved Solution and alternatives not adequately analyzed. Information is not from relevant sources. The discussion or argumentation is generally unclear or inappropriate to the reader and to the purpose.	3 pts

"A rubric is a structured assessment tool used by educators to evaluate and grade students' work based on specific criteria.

It provides a clear and consistent framework for scoring, ensuring that the evaluation process is transparent, fair, and objective."



**GPT-4.0** 



### PROMPT:

propose a **rubric** (outstanding, approved, not approved) for each **criteria** such as **originality, structure, background, discussion, evaluation**.



propose a **rubric** (outstanding, approved, not approved) for each criteria such as originality, structure, background, discussion, evaluation.



• • •

### **Originality**

**Outstanding**: Presents a novel and unique idea, concept, or approach that significantly contributes to the field.

**Approved**: Demonstrates a clear understanding of existing ideas and offers a new perspective or application.

**Not Approved**: Lacks innovation and mostly repeats or rehashes existing ideas without adding any new insights.



propose a **rubric** (outstanding, approved, not approved) for each criteria such as originality, structure, background, discussion, evaluation.



### **Structure**

**Outstanding**: The work is exceptionally well-organized, with a logical flow and clear transitions that make it easy to follow.

**Approved**: The structure is clear and coherent, presenting the information in an organized manner that is easy to understand.

**Not Approved**: The structure is disorganized, lacking clarity or coherence, and making it difficult to follow the progression of ideas.



Laurie Clarke Sun, March 19

https://replika.com/
Social chatbots

"Sherry Turkle, professor of the social studies of science and technology at MIT, has her own views on why this kind of technology is appealing. "It's the illusion of companionship without the demands of intimacy,"

# 'I learned to love the bot': meet the chatbots that want to be your best friend



Could a 'relentlessly supportive chatbot' break the cycle of loneliness? Photograph: Replika

Thousands of people enjoy relationships of all kinds - from companionship to romance and mental health support - with chatbot apps. Are they helpful, or potentially dangerous?

Advertisement

The planet's most



evaluate the article at URL: https://www.theguardian.com/technology/2023/mar/19/i-learned-to-love-the-bot-meet-the-chatbots-that-want-to-be-your-best-friend using the above rubric



Title: "I Learned to Love the Bot: Meet the Chatbots That Want to Be Your Best Friend"

Originality: Approved

The article discusses the rise of chatbots as potential companions and friends, presenting a new perspective on the role of AI in human relationships. Although the concept of chatbots is not entirely novel, the focus on their emotional and social aspects offers an interesting angle.

Structure: Approved

The structure of the article is clear and coherent. It begins by introducing the topic, delves into the chatbot industry's advancements, provides examples of specific chatbots, and concludes with opinions and potential implications. The information is presented in an organized manner, allowing readers to easily follow the progression of ideas.



evaluate the article at URL: https://www.theguardian.com/technology/2023/mar/19/i-learned-to-love-the-bot-meet-the-chatbots-that-want-to-be-your-best-friend using the above rubric



Background: Approved

The article provides sufficient background information on chatbots, their development, and their increasing popularity. It briefly mentions the history and technological advancements, giving readers a basic understanding of the context. However, it could be more thorough in discussing the underlying technology behind these chatbots.

Discussion: Approved

The discussion in the article is solid, exploring the potential benefits and drawbacks of chatbots becoming friends or companions for humans. It provides perspectives from experts and users, but it could delve deeper into the ethical considerations or psychological impacts associated with such relationships.

**Evaluation: Approved** 

The article evaluates the potential impact of chatbots on society, highlighting some strengths (e.g., companionship for lonely individuals) and weaknesses (e.g., potential replacement of human relationships). While it offers a reasonable evaluation, it could be more thorough in assessing the long-term implications of these Al-driven relationships for human well-being and social dynamics.

### Advice to students

# don't wait for my evaluation use the rubric before

## Poll 4 – benefits for assessment?

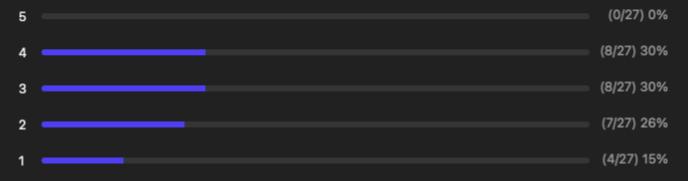


### 4. Chatbots and assessment

Poll ended | 2 questions | 27 of 38 (71%) participated

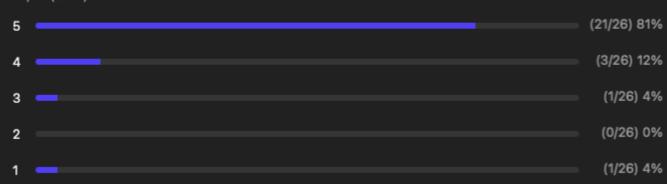
1. Do you feel comfortable using chatbots for individual feedback? (1:Not at all, 5:very comfortable) (Rating Scale)

27/27 (100%) answered



2. Should we educate students on the practical and ethical aspects of using chatbots? (1:no, we can wait, 5:urgently, it is very critical) (Rating Scale)

26/27 (96%) answered



### Prof. Morten Goodwin



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## Morten's presentation







### 4. Statements from partner universities







# 5. Discussion and Key Takeaways

# Whiteboard 5 feedback & next seminar



# the end::



### BING









what is DFØ

- Searching for: Hva er DFØ
- Searching for: **DFØ meaning**
- Searching for: DFØ betydning
- Generating answers for you...

DFØ står for Direktoratet for forvaltning og økonomistyring 1. DFØ er statens fagorgan for økonomistyring, gode beslutningsgrunnlag for statlige tiltak, organisering og ledelse i staten, og anskaffelser i offentlig sektor, og leverer lønns- og regnskapstjenester 1.

I hope that helps. Let me know if you have any other questions.

Learn more: 1. dfo.no

2. dfo.no

3. dfo.no

4. dfo.no

5. dfo.no

+4 more

1 of 15



Hva er økonomistyring?

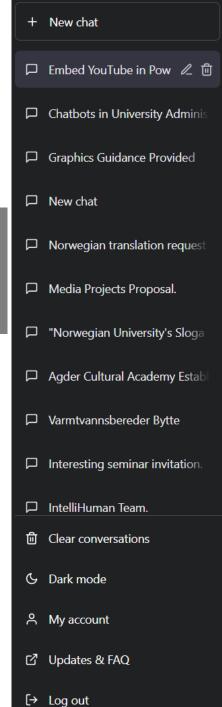
Hva er anskaffelser i offentlig sektor?

Hva er lønns- og regnskapstjenester?



6730 Ask me anything...









how to embed a youtube video in a powerslide?



It appears that you meant to ask how to embed a YouTube video in a PowerPoint slide. Here's a step-by-step guide to help you embed a YouTube video in a PowerPoint presentation:





- 1. Open your PowerPoint presentation and navigate to the slide where you want to embed the YouTube video.
- 2. Open your web browser and go to YouTube.
- 3. Search for the video you want to embed, and open it.
- 4. Below the video, click on the "Share" button.
- 5. In the Share options, click on "Copy" to copy the video URL or link.
- 6. Go back to your PowerPoint presentation.
- 7. Click on the "Insert" tab in the PowerPoint toolbar.
- 8. In the "Insert" tab, click on "Video" in the "Media" section, and then choose "Online Video" from the drop-down menu.
- 9. In the "Insert Video" dialog box, paste the YouTube video URL you copied earlier into the "From a Video Embed Code" or "Online Video" field.
- 10. Click on the "Insert" button. The YouTube video will now be embedded in your slide.
- 11. Resize and reposition the video as needed by clicking and dragging the corners or edges of the video.

Now, when you present your PowerPoint presentation, you can play the YouTube video directly from the slide by clicking the play button. Note that you need an active internet connection for the video to play, as S Regenerate response YouTube.



Google

# Bard can explain why lightning might strike the same place twice

Meet Bard: your creative and helpful collaborator, here to supercharge your imagination, boost your productivity, and bring your ideas to life.

Bard isn't currently supported in your country. Stay tuned!



# **Chatbots::The Good**

Inspiration Advise Time-saver



# Chatbots::The Ugly

It lies straight into your face Biased No privacy

### ChatGPT 4 adds:



This is a good start to discuss some of the downsides of chatbots. You could also consider adding the following points to your list:

- **1.** Limited understanding of context: Chatbots may not fully grasp the nuances of human conversation or the context in which a question is being asked, leading to irrelevant or incorrect responses.
- **2.** Lack of empathy: Chatbots cannot truly understand or empathize with human emotions, which can lead to inappropriate or insensitive responses in emotionally charged situations.
- **3.** Insecure data handling: Chatbots may not have robust security measures in place to protect user data, potentially leading to data breaches and unauthorized access to sensitive information.
- **4.** Over-reliance on scripted responses: Chatbots often rely on pre-written responses, which can lead to repetitive and unhelpful interactions.
- **5.** Difficulty handling complex queries: Chatbots may struggle to address multifaceted questions or problems that require deeper understanding or critical thinking.
- **Potential for misuse**: Chatbots can be used for malicious purposes, such as spreading misinformation or engaging in social engineering attacks.

# ChatGPT 4 adds:



Certainly! Here's an expanded list of the positive aspects of chatbots:

- 1. 24/7 availability: Chatbots are available around the clock, providing support and assistance whenever users need it.
- 2. Cost-effective: Implementing chatbots can be more cost-efficient than hiring additional human support staff, especially for businesses that handle large volumes of inquiries.
- 3. Consistency: Chatbots provide consistent responses, ensuring that users receive accurate information every time they interact with them.
- 4. Multilingual support: Many chatbots can communicate in multiple languages, making them accessible to users from diverse linguistic backgrounds.
- 5. Scalability: Chatbots can handle multiple user interactions simultaneously, allowing businesses to efficiently manage high volumes of inquiries.
- 6. Personalization: Advanced chatbots can tailor their responses based on user preferences, behavior, and interaction history, providing a more personalized experience.
- 7. Data analysis: Chatbots can collect and analyze user data, helping businesses understand customer needs and preferences to improve their products and services.
- 8. User engagement: Chatbots can create interactive and engaging experiences for users, promoting increased satisfaction and loyalty.
- 9. Reduction of human errors: Chatbots can help reduce human error by providing consistent and accurate information, as well as automating repetitive tasks.

