

NEW TOY IN THE TECHNOLOGICAL PLAYGROUND OR A MASSIVE THREAT?

GENERATIVE AI TOOLS IN EDUCATION FROM VARIOUS EDUCATIONAL
STAKEHOLDERS' PERSPECTIVES

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The 5th Annual Symposium of the Institute for Education 'Minds and Machines Unite: The AI symposium'

23rd October 2024



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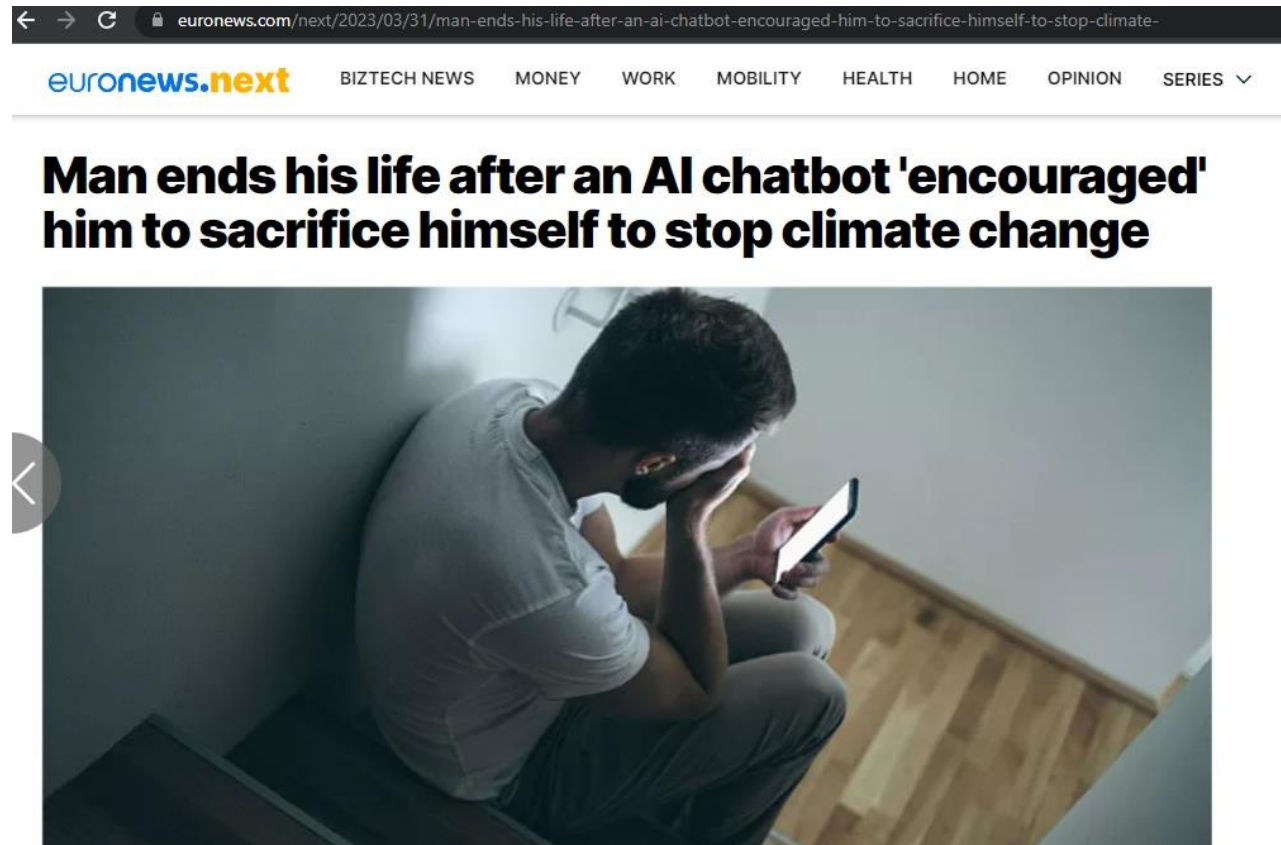


WHEN DID THE HYPE AROUND THE GPT CHAT
TOPIC START?



WHAT DO WE KNOW ABOUT GPT CHAT?

WHAT DID THE PRESS WRITE ABOUT THE GPT CHAT? WHAT DID THE PUBLIC SAY?



TECH

Italy became the first Western country to ban ChatGPT. Here's what other countries are doing

PUBLISHED TUE, APR 4 2023 4:48 AM EDT | UPDATED MON, APR 17 2023 1:24 AM EDT

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 **Ryan Browne**
@RYAN_BROWNE

KEY POINTS

- Italy last week became the first Western country to ban ChatGPT, the popular AI chatbot.
- ChatGPT has both impressed researchers with its capabilities while also worrying regulators and ethicists about the negative implications for society.
- The move has highlighted an absence of any concrete regulations, with the European Union and China among the few jurisdictions developing tailored rules for AI.

More about this topic

ChatGPT



VIEW

How should we regulate generative AI, and what will happen if we fail?

https://www.cnbc.com/2023/04/04/italy-has-banned-chatgpt-heres-what-other-countries-are-doing.html

https://www.euronews.com/tag/chatgpt

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ENTERPRISE TECH

Who Ultimately Owns Content Generated By ChatGPT And Other AI Platforms?

Joe McKendrick Contributor
I track how technology innovations move markets and careers

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Dec 21, 2022, 12:59pm EST



<https://www.forbes.com/sites/joemckendrick/2022/12/21/who-ultimately-owns-content-generated-by-chatgpt-and-other-ai-platforms/>

photoshopcafe.com/will-artists-be-replaced-by-ai-art-mid-journey-and-chat-gpt-what-i-think/

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WILL ARTISTS BE REPLACED BY AI ART? MID JOURNEY AND CHAT GPT. WHAT I THINK

Colin Smith

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Will A.I. Art Replace Photographers & Artists? The Truth Behind A.I. Image Generation

A collage of AI-generated images. On the left, a large, glowing blue eye with a fiery orange iris. In the center, a face with intricate, golden, fractal-like patterns. On the right, a fiery, orange and red abstract shape.

<https://photoshopcafe.com/will-artists-be-replaced-by-ai-art-mid-journey-and-chat-gpt-what-i-think/>

EXCLUSIVE: 'Half of school and college students are already using ChatGPT to cheat': Experts warn AI tech should strike fear in all academics

- Many school districts have already banned the use of ChatGPT
- GPT-4 can score 90 percent on many exams already including the American bar
- [READ MORE: We test out the new GPT-4 and it's astounding](#)

By ROB WAUGH TECH CORRESPONDENT FOR DAILYMAIL.COM

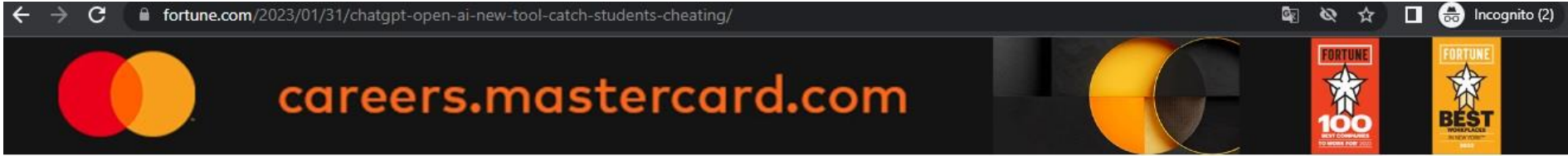
UPDATED: 18:41 BST, 26 March 2023



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- S** **SaneOrNo**
Jersey City, United States · 26 March, 2023
The real issue is, if people decide to cheat their way through school, degrees will be more worthless than they have already become. How does it make you feel if medical students use this to cheat th...[See more](#)
↑ 159 ↓ 2 · [f](#) [t](#) [p](#) [e](#) [l](#)
↳ 2 replies
- S** **Stratos7**
London, United Kingdom · 26 March, 2023
It struck me the other day that we knew plastic wouldn't biodegrade but mass-produced it anyway. We know AI could wreck civilisation but we've released it anyway. We deserve all we get.
↑ 113 ↓ 4 · [f](#) [t](#) [p](#) [e](#) [l](#)
↳ 2 replies
- FH** **Frankie Howard**
Halifax, United Kingdom · 26 March, 2023
Unfortunately I missed out on the cut and paste generation of students. Oh and my parents wouldn't do my homework either. Qualifications held by the young are now meaningless.
↑ 89 ↓ 1 · [f](#) [t](#) [p](#) [e](#) [l](#)
- M** **MikeN**
Peterborough, United Kingdom · 26 March, 2023
One way of slowing the potential cheating is to have students hand write their essays/dissertation. While not a perfect solution, having to copy everything will at least have them absorb information ...
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TECH · CHATGPT

ChatGPT just created a new tool to catch students trying to cheat using ChatGPT

BY MATT O'BRIEN, JOCELYN GECKER AND THE ASSOCIATED PRESS

January 31, 2023 at 8:29 PM GMT+1



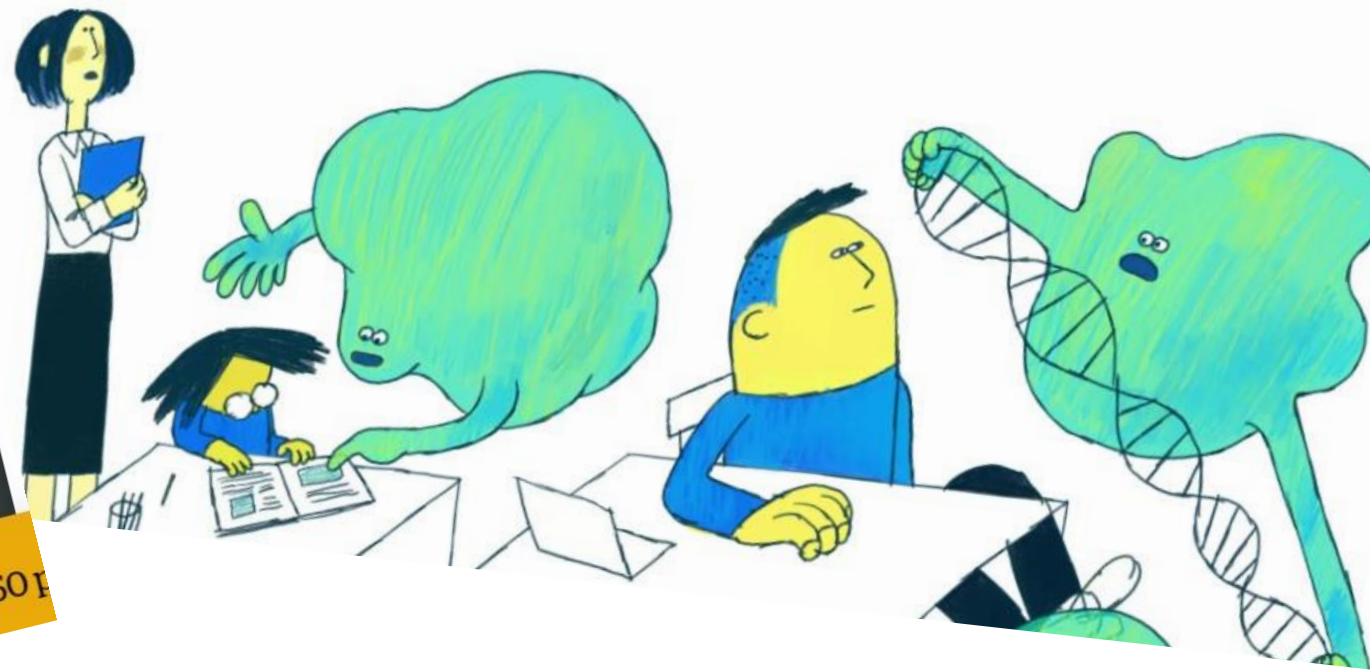
<https://fortune.com/2023/01/31/chatgpt-open-ai-new-tool-catch-students-cheating/>

THE SHIFT

Don't Ban ChatGPT in Schools. Teach With It.

OpenAI's new chatbot is raising fears of cheating on homework, but its potential as an educational tool outweighs its risks.

Give this article 363



https://www.nytimes.com/2023/01/12/technology/chatgpt-schools-teachers.html

AI and ChatGPT cheating allegations at Cambridge and Pukekohe High outrage parents of top students

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By: [Raphael Franks](#) and [Rachel Maher](#)
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SELECTED RESEARCH RESULTS,
CONCLUSIONS, AND REFLECTIONS



RESEARCH CONTEXT

RESEARCH SAMPLE :

STUDENTS AGED 15 TO 19

75 TEENAGERS

(40 women, 30 men, 5 people did not declare their gender)

RESEARCH TOOLS:

NEO Five-Factor Inventory NEO-FFI by P.T. Costa and R.R. McCrae

Multidimensional Preference Questionnaire WKP

The diagnostic survey questionnaire

What level of knowledge, approach and use of the GPT chat are declared by students of secondary schools where teaching is supported by technology in every subject, and what is it related to?



The research report has been accepted for publication in Journal: The New Educational Review: K. Skop, M. Frania for Everyone? Disposition Towards the Use of GPT Chat Among Secondary School Adolescents . . . (to be published)



SELECTED RESEARCH RESULTS

AS THE VOICE OF HIGH SCHOOL STUDENTS

- Almost half of the surveyed students have previously used GPT chat and other AI tools in the learning process (**no gender differences**).
- Most respondents described their level of knowledge as average.
- Activities in which artificial intelligence would be most useful: information search, preparing texts in another language, translating from a foreign language.
- Among the surveyed teenagers, there are both **supporters and sceptics** of artificial intelligence in the school environment.
- *“AI will one day become as popular as computers, thus becoming the standard in education.”*
- **The surveyed students believe they should be educated in using artificial intelligence rather than prohibited from using it at school.**

SELECTED RESEARCH RESULTS

AS THE VOICE OF HIGH SCHOOL STUDENTS

- GENDER AND SELECTED INDIVIDUAL DIFFERENCES

- Among the surveyed teenagers, **boys declared a higher level of interest in issues related to artificial intelligence** ($W=702.0$; $p=0.033$).
- In a subjective assessment of their own knowledge of artificial intelligence, **men rated it higher than women** ($W=698.0$; $p=0.034$).
- People with high level of managerial and organisational interests declare a **higher level of interest** in artificial intelligence tools (Spearman Correlation $Rho = 0.404$; $p < 0,001$)
- Creative people with a high level of practical and aesthetic interests admit that GPT chat and artificial intelligence tools **limit human creativity** (Spearman Correlation $Rho = 0.421$; $p < 0,001$)

RESEARCH CONTEXT

RESEARCH SAMPLE :

STUDENTS AGED 15 TO 19

378 FUTURE TEACHERS

(POLAND: 115, CROATIA: 173, SPAIN: 90)

MOST AGED 20 TO 30

Research tools: the diagnostic survey questionnaire

What level of knowledge, approach and use of the GPT chat are declared by future European teachers?

The research project is currently being carried out in an international research team: M. Frania, K. Skop, I. Batarelo-Kokić, M. Felicidad Tabuenca, F. Prades Esteban et.al.



SELECTED RESEARCH RESULTS

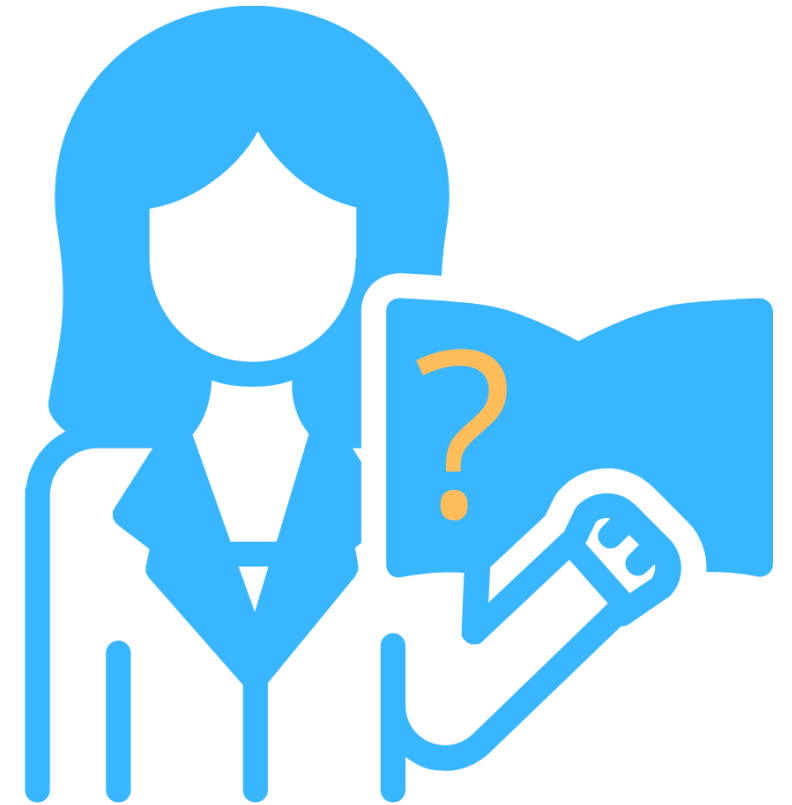
AS THE VOICE OF FUTURE TEACHERS IN THE DISCUSSION ABOUT AI IN EDUCATION

- 77% of future teachers use AI tools for educational purposes.
- **Most frequently used tools (N=378)** - both at work and in private life:
GPTChat (79%), OpenAI (26%), AI-based photo editors (14%), Bing (8%)
- Future teachers rate their knowledge as **average** (44%) or **good** (34%)
- They describe themselves as *„advocate of balance between tradition and innovations (including technological ones)“* – 137 students, 36%

SELECTED RESEARCH RESULTS

AS THE VOICE OF FUTURE TEACHERS IN THE DISCUSSION ABOUT AI IN EDUCATION

- „Teachers should be familiar with the latest technologies, including AI tools”
- „We believe that teachers should receive regular training in the use of AI tools in education”
- „Teachers’ knowledge of artificial intelligence tools is insufficient.”



WHAT ARE THE THREATS AND OPPORTUNITIES OF USING GPT CHAT IN EDUCATION FIELD?*

**Let's leave the answer to artificial intelligence for a moment*

The use of GPT chat in the education field brings both opportunities and challenges. Here are some of the potential threats and chances associated with using GPT chat in education:

What are the threats and chances of using GPT chat in education field?



The use of GPT chat in the education field brings both opportunities and challenges. Here are some of the potential threats and chances associated with using GPT chat in education:

Threats:

1. **Inaccurate or Misleading Information:** GPT chat models can generate responses that may contain inaccuracies or misinformation. Without proper fact-checking or human oversight, students may receive incorrect information, leading to misunderstandings or incorrect learning outcomes.
2. **Reinforcement of Biases:** GPT chat models can unintentionally reinforce biases present in the training data, which may perpetuate societal prejudices or stereotypes. This can have implications for the inclusivity and fairness of educational experiences.
3. **Lack of Human Interaction:** Relying solely on GPT chat for educational interactions may lead to a reduced level of human engagement. This can impact the development of social and emotional skills that are nurtured through face-to-face interactions with teachers and peers.
4. **Limited Adaptability:** GPT chat models might struggle to adapt to the individual needs and learning styles of students. They may not provide personalized feedback or tailored guidance that takes into account the unique strengths and weaknesses of each learner.

Chances:

1. **Personalized Learning:** GPT chat can offer personalized learning experiences by

Chances:

- Personalized Learning
- Enhanced Access to Information
- Supplementary Learning Tool
- Language Support
- Continuous Learning Availability

(GPT Chat, June 2023)

- Personalized Learning
- 24/7 Availability
- Instant Feedback
- Enhanced Accessibility
- Assisting Teachers
- Fostering Curiosity
- Multilingual Support

(GPT Chat, October 2024)



Threats:

- Inaccurate or Misleading Information
- Reinforcement of Biases
- Lack of Human Interaction
- Limited Adaptability

(GPT Chat, June 2023)

- Dependency on Technology
- Accuracy and Bias
- Reduction in Academic Integrity
- Limited Contextual Understanding
- Equity and Digital Divide
- Privacy and Data Concerns
- Teacher Job Displacement

(GPT Chat, October 2024)





RESEARCH CONTEXT

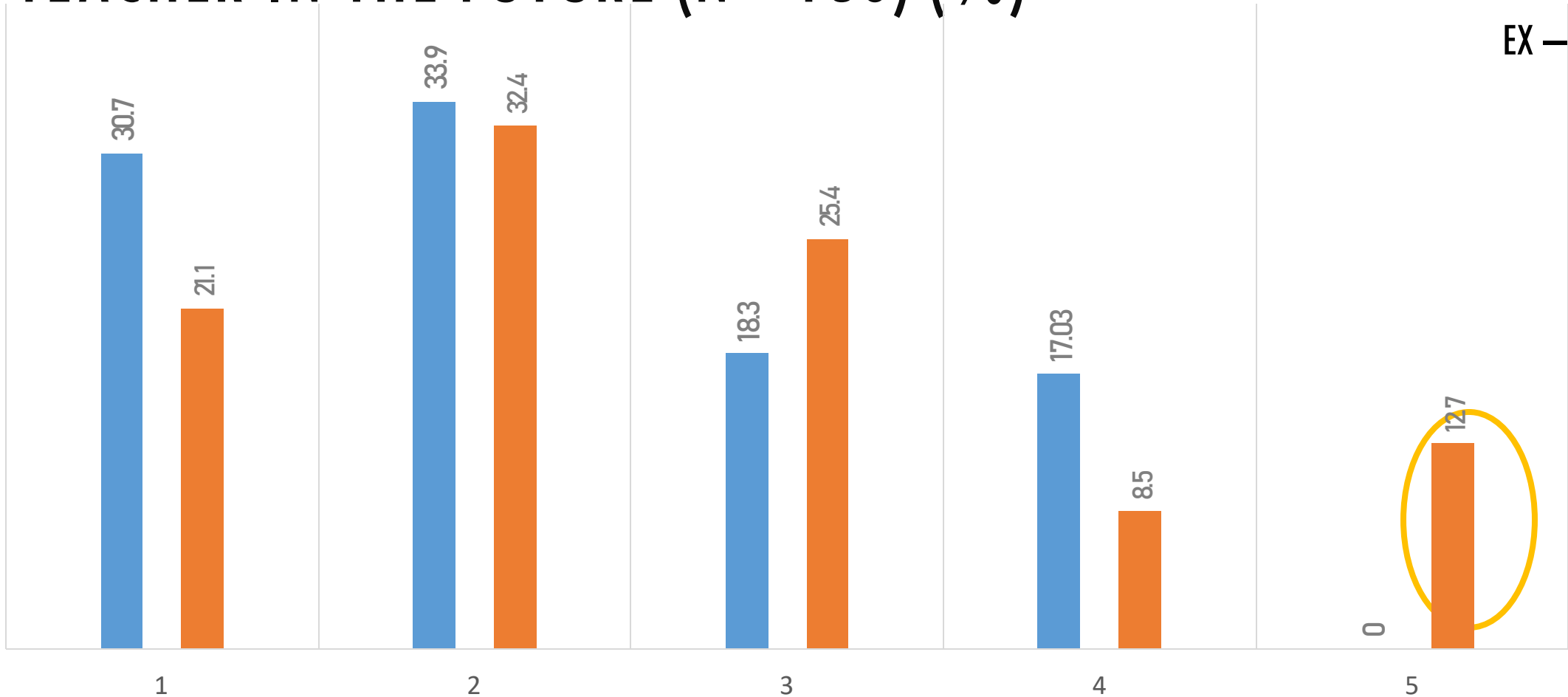
- **Preliminary, pilot research** conducted among 130 students (FT – N=59, EX – N=71) of the last year of studies: early school and pre-school education which prepare students for the teaching profession, as well as students of teaching faculties, post-graduated training's students including the Erasmus exchange program students
- The study used a **diagnostic survey** based on a survey questionnaire (May 2023)
- The two main **research questions**:
 - *What is the respondents' experience so far in using GPT chat in their own education and how will they evaluate this tool?*
 - *What is the opinion of the respondents on the use of AI tools, in particular the GPT chat, in school education in the future?*

M. Frania, own pilot research, unpublished



GPT CHAT AND OTHER AI TOOLS COULD REPLACE THE TEACHER IN THE FUTURE (N=130) (%)

FT — N=59 ■
EX — N=71 ■



Likert Scale: 1-strongly disagree; 5 — strongly agree



**HOW CAN WE MAXIMIZE THE BENEFITS
AND MITIGATE THE THREATS OF USING
GPT IN EDUCATION?**



To maximize the benefits and mitigate the threats, it is crucial to combine GPT chat with human guidance and oversight. Teachers and educators should curate and validate content, provide critical analysis, and foster a well-rounded educational experience that incorporates human interaction, critical thinking, and ethical considerations.

(GPT Chat, June 2023)

To maximize the benefits of GPT chat in education, schools should integrate it as a supportive tool alongside human teachers, emphasizing critical thinking and proper AI usage. To mitigate threats, clear guidelines on ethical use, accuracy checks, and equitable access must be established while ensuring data privacy and security.

(GPT Chat, October 2024/15 months later)



Key Differences:

- The first statement centers on human guidance and a well-rounded educational experience, emphasizing **the teacher's active role**.
- The second statement is more institutional, **discussing the broader policies** and practical guidelines schools need to implement when integrating GPT chat into the curriculum.

In summary, the first focuses on teacher involvement and human interaction, while the second is more concerned with institutional policies and proper AI





**IS (NEW) MEDIA LITERACY
AND MEDIA EDUCATION THE ANSWER
TO THESE CHALLENGES?**





THANK YOU!

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