

# Jisc – National centre for AI in tertiary education

## AI and education

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# About National Centre for AI in Tertiary Education

**Aim:** To accelerate the adoption of artificial intelligence across the tertiary education sector in a responsible way.



Pilots



Information



Events



Community



## Face Emotion Detection

Automatically detect faces and the emotions expressed in images



## Image Description

Generate descriptions of images



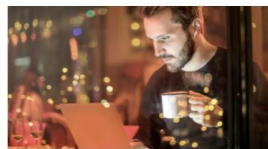
## Object Detection

Automatically detect objects in images



## Question Generation

Automatically generate questions and answers



## Recommending Articles

Recommendations based on Regulatory Developments blog posts



## Recommending Blog Posts

Recommendations based on Prospects Luminate blog posts

# Today's Session

AI and education: a view from Jisc's National Centre for AI in Tertiary Education

- A quick recap
- Where are we now?
- Library spaces
- Student usage and concerns
- Questions

A quick recap...



**Things have moved insanely quickly over the last 6 months!**

# AI is more than just generative AI...

- Uses machine learning to automatically label student feedback
- Accelerating analysis of comments
- Getting the right feedback to the right people



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

# And Generative AI is more than ChatGPT...

Chat

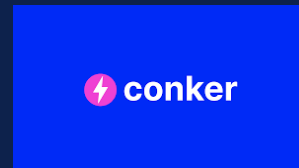
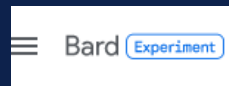
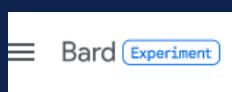
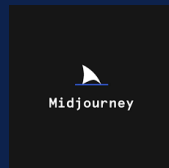
Search

Images

Code

Writing

Content



**We'll use ChatGPT as an example to explore generative AI in more detail...**



# ChatGPT in 4 bullet points...

- It was created by a company OpenAI. Other competitors exists.
- It's training on large chunks of the internet, plus some books.
- Humans help with the training by providing feedback.
- It works by predicting the next word\* given a sequences of words.



# Capabilities

- Writes plausible sounding text on any topic.
- Generate answers to a range of questions, including coding, maths type problems, multiple choice.
- Is getting increasingly accurate and sophisticated with each release.
- Generates unique text each time you use it.
- It's great at a wide range of tasks like text summarization.



# Limitations

- It can and often does generate plausible but incorrect information.
- This include false references and false claims about its capability.
- ChatGPT is only trained on information up until Sept 2021 (but this restriction will soon be removed)



# Concerns

- It can and does produce biased output (culturally, politically etc)
- It can generate unacceptable output.
- It has high environmental impact, concerns around human impact and ownership of training material.
- Danger of digital inequity.

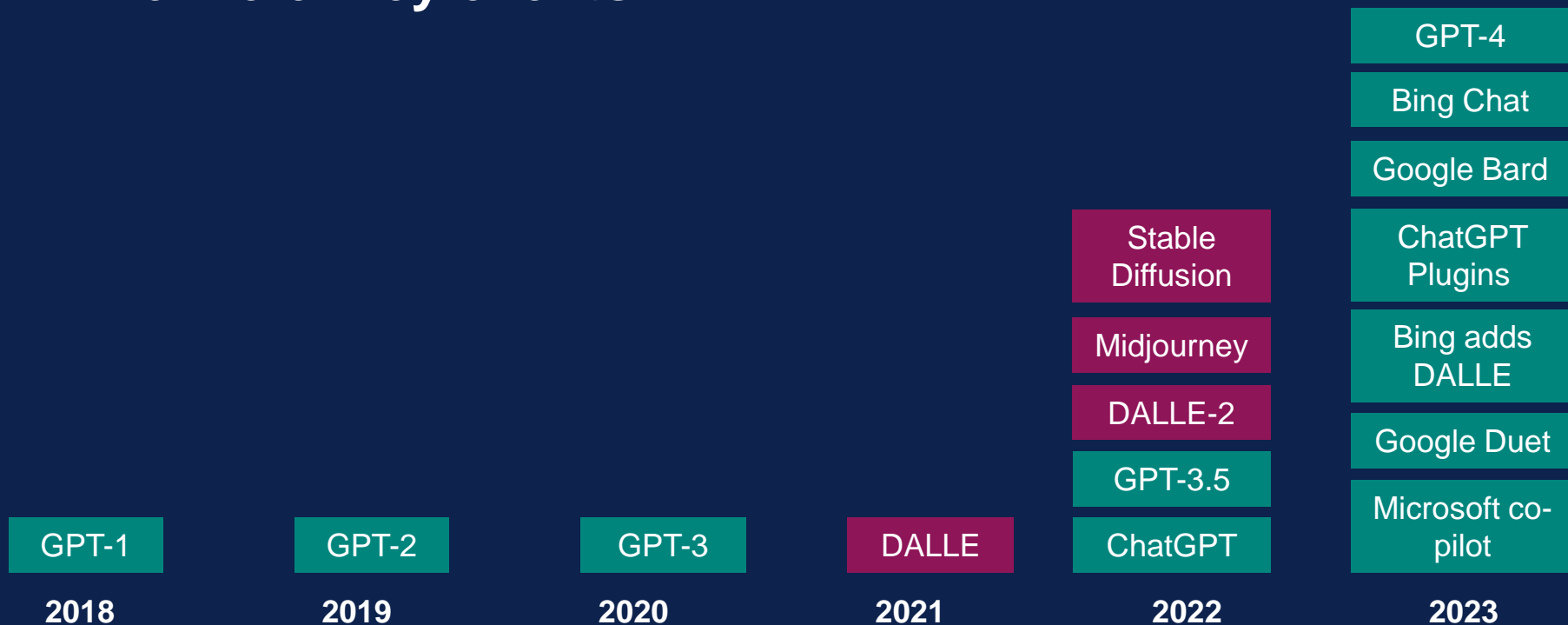


# Digital inequality through unequal access to tools...

## An example...

	ChatGPT	ChatGPT Plus
<b>Cost</b>	Free	\$20 a month
<b>Access</b>	Access intermittent	Fast reliable access
<b>Model</b>	GPT 3.5 (release 2022)	GPT-4 (release 2023)
<b>Information</b>	No web access, so information cutoff Sept 2021	Can search the web and get up to date information
<b>Plugins</b>	No plugin access, so poor at maths, reasoning etc.	Many plugins, include Wolfram Alpha, which excels at maths and other STEM.

# Timeline of key events



Where are we now...





# Trend: everyday AI

GPT is getting integrated into our everyday tools, e.g. Microsoft Copilot

**Meet better with Teams Premium**

Focus on what matters with AI-powered meetings, including GPT from OpenAI

MICROSOFT TEAMS

Learn more >

With a 252 percent increase in weekly time spent in meetings in the first two years of the pandemic, we needed to find ways to "work smarter, not harder." Both the pace of work and the amount of information needed to sift through have grown exponentially, especially with meetings. There's a ton of time-consuming administrative work during meetings, like taking notes, figuring out important takeaways, and capturing the right action items and owners.

That's why Teams is infusing AI throughout the meeting experience, helping you be more productive in new ways. With **Intelligent recap** in Teams premium, you'll get automatically generated meeting notes, recommended tasks, and personalized highlights to help you get the information most important to you, even if you miss the meeting.


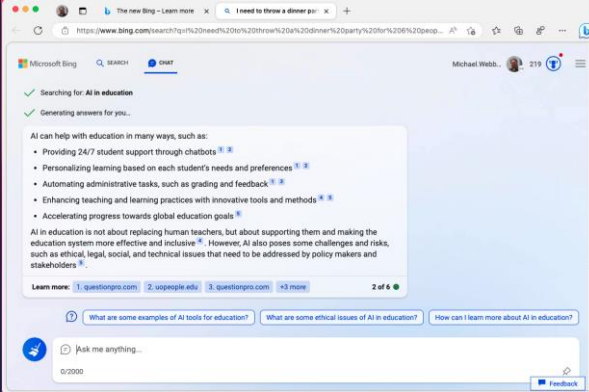


Figure 1. With intelligent recap, you'll have the information that's most important for you after a meeting, all in one place.



Microsoft Bing

Searching for: AI in education

Generating answers for you...

AI can help with education in many ways, such as:

- Providing 24/7 student support through chatbots
- Personalizing learning based on each student's needs and preferences
- Automating administrative tasks, such as grading and feedback
- Enhancing teaching and learning practices with innovative tools and methods
- Accelerating progress towards global education goals

AI in education is not about replacing human teachers, but about supporting them and making the education system more effective and inclusive. However, AI also poses some challenges and risks, such as ethical, legal, social, and technical issues that need to be addressed by policy makers and stakeholders.

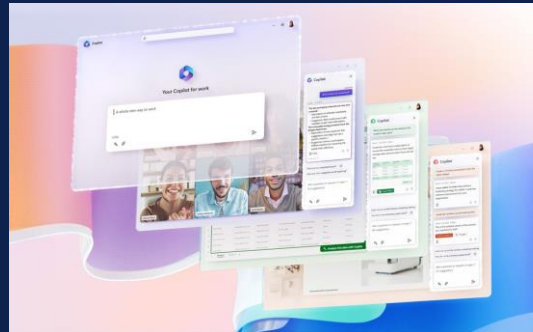
Learn more: 1. questgongos.com 2. uopeople.edu 3. questgongos.com >3 more 2 of 6

What are some examples of AI tools for education? What are some ethical issues of AI in education? How can I learn more about AI in education?

Ask me anything...

0/2000

Feedback




Generate images

miniature magical gardens

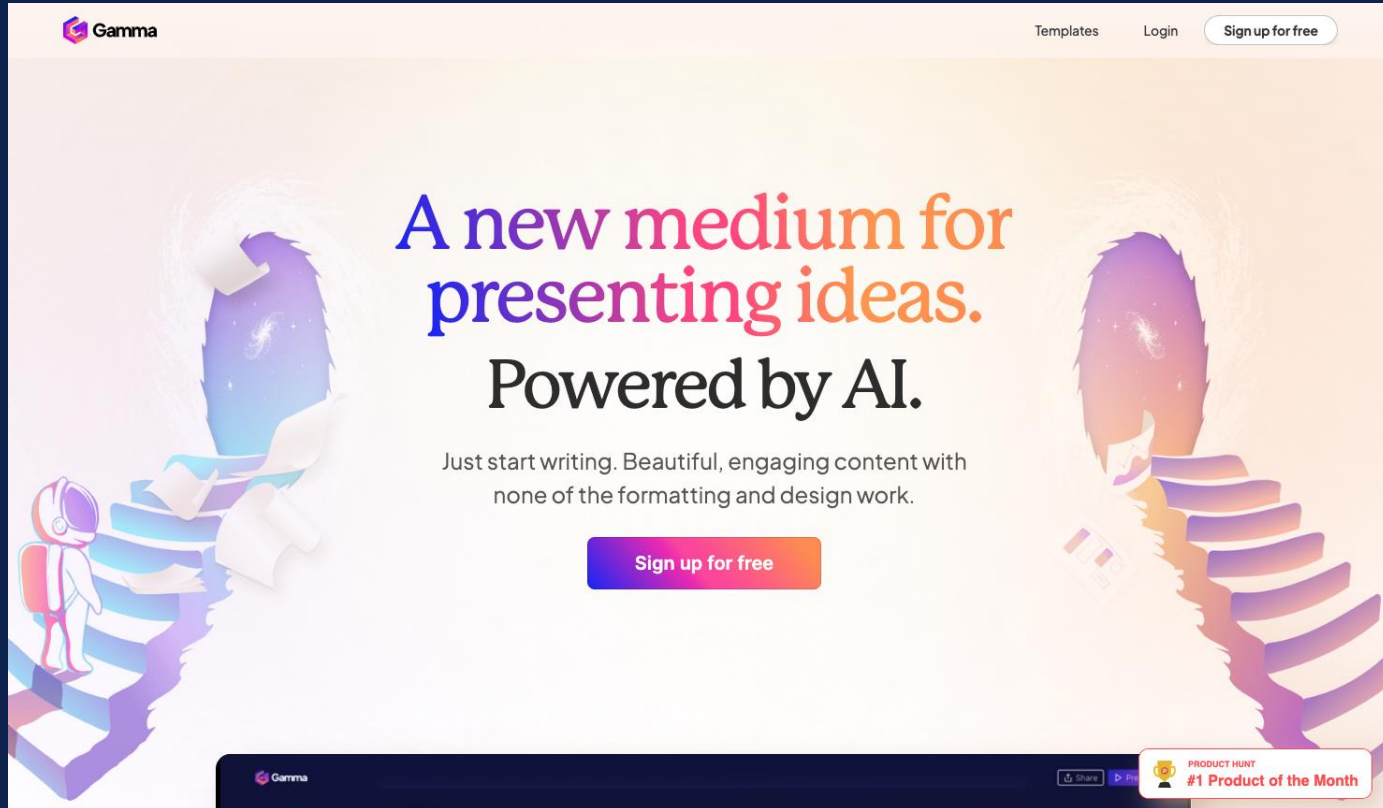
Creating...

A new era for AI and Google Workspace





# Example of a non-ChatGPT tool...



# Gamma...

PresentationDocumentWebpage

Sounds good! What would you like the presentation to be about?  
Tip: You can enter your own topic, or use one of our suggestions to get started quickly.

What employability skills do students need in 2023

50/300

What employability skills do students need in 2023? Sounds interesting!  
Let me come up with a few ideas...

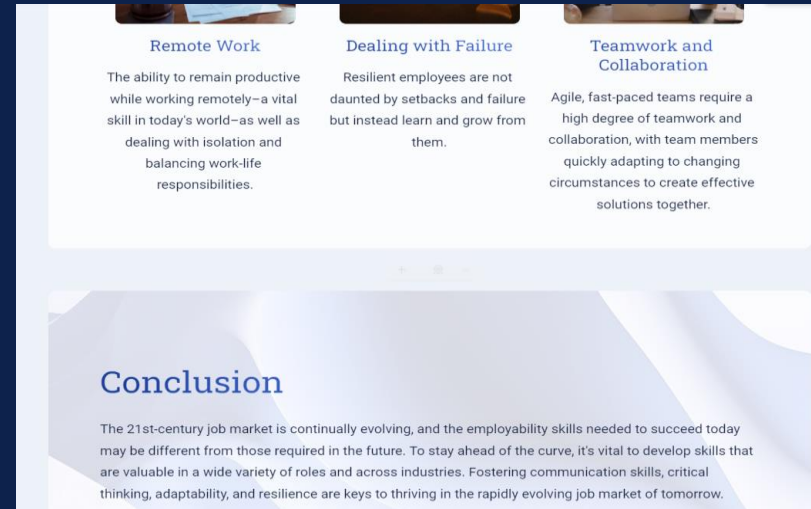
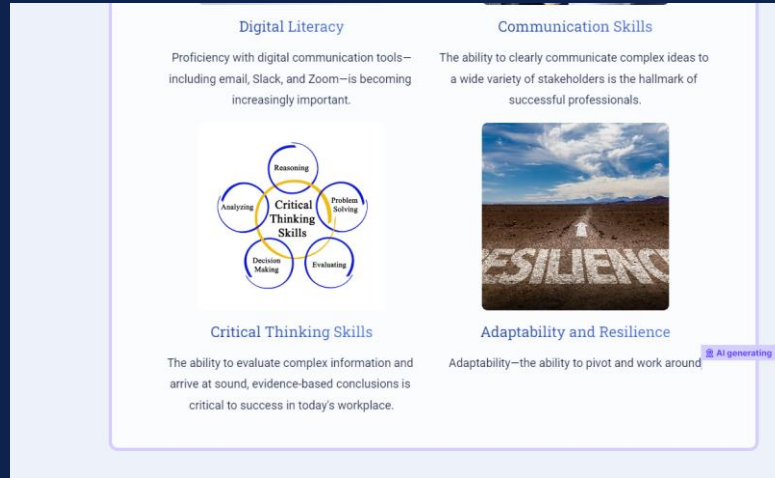
Here's an outline for you. What do you think?

You can edit this outline, or continue as is: English (UK)

- Introduction
- Current job market trends
- Identifying the in-demand employability skills for 2023
- Communication and digital literacy skills
- Critical thinking and problem-solving skills
- Adaptability and resilience in the workplace
- Conclusion

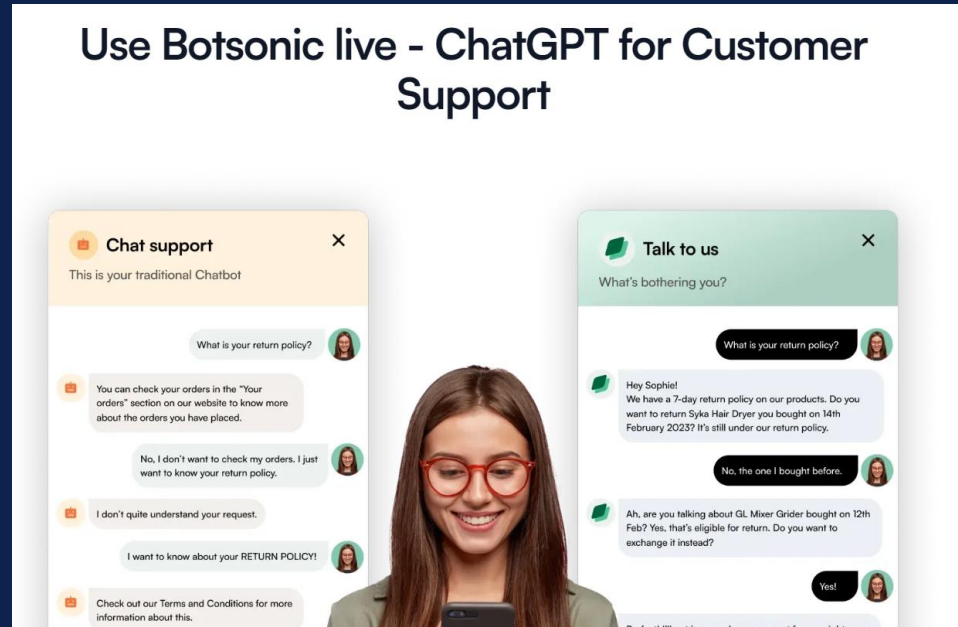
Try againContinue →

30 seconds



# Chatbots

- Curation always been an issue
- Generative AI overcomes that – now anyone can build a chatbot!
- No code solutions
- Point & play



Other solutions exist

# Technology is transforming 'almost every task...

- 44% of workers core skills are expected to change in next 5 years

*When it comes to very human traits like coordinating between people, like helping with decision-making and reasoning or communicating, that's where actually you see an uptick. That's where you see a greater prediction around automation than before.*

*"It's not surprising because we've all seen what is happening with generative AI and how fast that's getting adopted across various industries. That's exactly where there's some prediction that we're likely to see further disruption.*

Saadia Zahidi, World Economic Forum Managing Director

# Skills of the future...

By 2030, the most highly rewarded skills will be **soft skills** <sup>1</sup> <sup>2</sup>. These include <sup>3</sup> <sup>4</sup>:

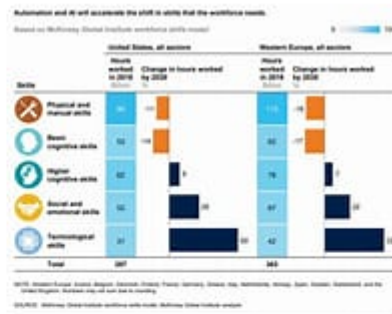
- Cognitive flexibility
- Digital literacy and computational thinking
- Judgement and decision-making
- Emotional and social intelligence
- Creative and innovative mindset
- Contextualized intelligence
- Leadership skills
- Entrepreneurial mindset
- Problem-solving
- Negotiation and persuasive skills

Learn more:

[1. weforum.org](https://www.weforum.org)

[2. pearson.com](https://www.pearson.com)

[+2 more](#)

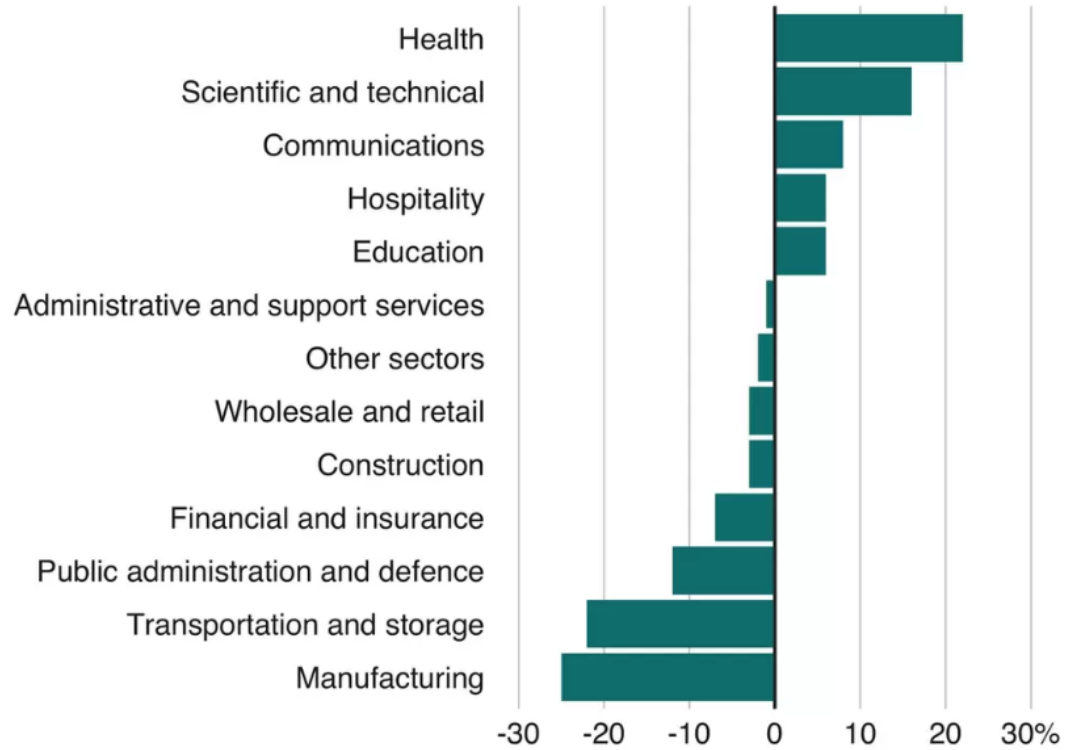


# Job predictions

- AI could displace 20% of existing UK jobs over the next 20 years – [weforum.org](https://www.weforum.org)
- AI could create 7.2m jobs in UK over the same period – PWC
- Winners & Losers

## How AI could change the job market

Estimated net job creation by industry sector, 2017-2037



Source: PwC

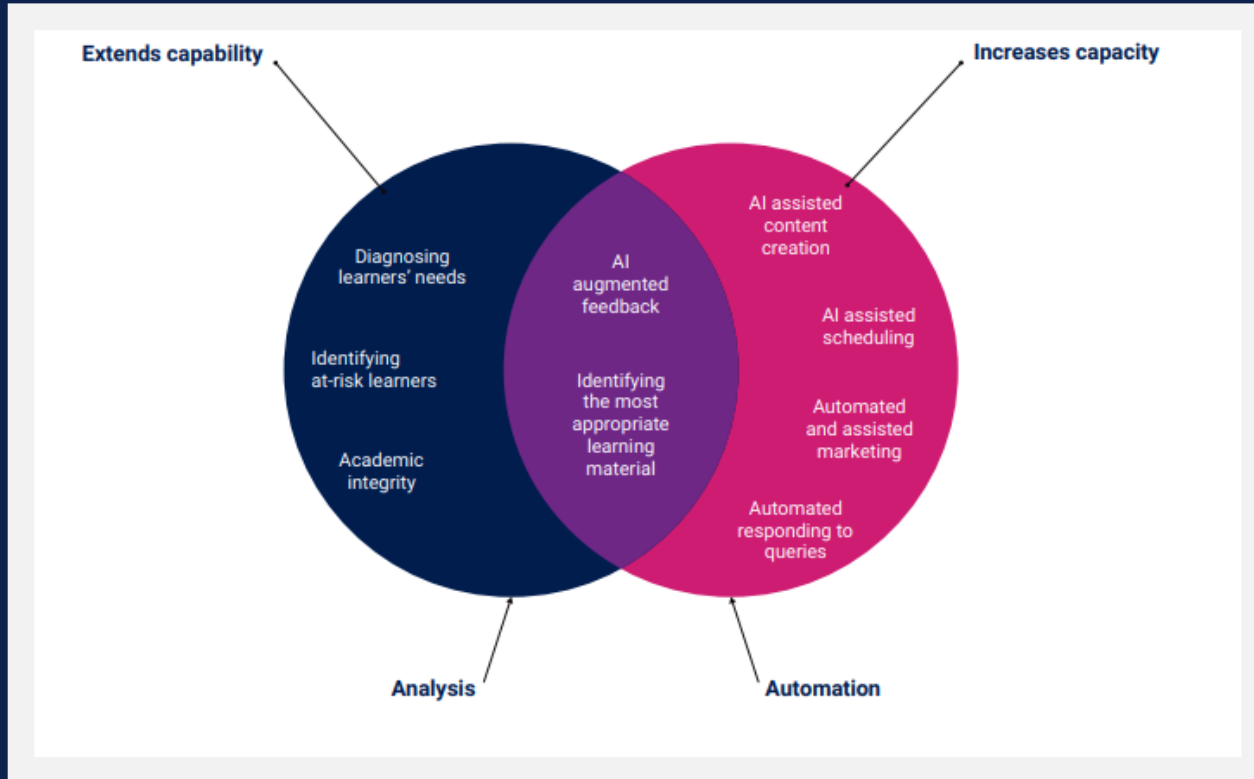
BBC

Library spaces...





# The role of AI in education





# Emerging areas of interest

- Collection management
- Discovery
- Space management
- Cataloguing
- Helpdesk
- Procurement
- Ethical considerations
- Digital literacy of staff (lack of expertise)
- Staff skills – changing job role
- Digital literacy of students – plagiarism/critical skills
- Personalisation and the student experience

# Current focus

- Practical guide to AI for libraries staff
- Library strategic response to AI – in collaboration with Dr Andrew M Cox

*Which developments are most critical in reshaping the library role? How can AI technologies enhance our library services? What challenges can AI help address? What are the potential risks and ethical considerations, and how can we mitigate them?*

*How can we continuously monitor and stay up-to-date with emerging AI trends and advancements? What examples can we share? What new skills do staff need and how to gain them?*

# Student usage and concerns



# Ways students are using ChatGPT

Research  
tool

Getting  
started

Translation

Iterate and  
discuss to  
create  
assignment

Just paste  
the question  
in

Exploring  
concepts

Creating  
structure

Rewriting  
sections

Sophisticated  
single prompt

Single basic  
prompt and  
submit

Structure  
and write  
letters to  
landlords etc

Writing job  
applications

Creating  
images

Getting  
feedback



More acceptable?

Less acceptable?



# Why are students using ChatGPT for translation?

ChatGPT doesn't just translate – it can:

- Change the reading level.
- Simplify
- Change the voice
- Explain
- Engage in a discussion about the content

# Student concerns:

- Information literacy: Navigating trust and accuracy
- Data security: Safeguarding privacy and ownership
- Detectors: Plagiarism concerns and ambiguous guidelines
- Regulation: striking a balance
- Staff use: Transparency and confidence
- Equity: Affordability and Access
- Over reliance: Balancing AI and intellectual development
- Employability/Jobs: Skills development and impact of automation
- Sustainability: carbon impact
- Human impact: developing countries

# Student needs:

- Skills: information/digital literacy/employability
- Practical Training: how to use responsibly
- Understanding: the future potential of AI
- Tools: want institution recommendations and understand how models work, what they are trained on
- Guidance & Policy: ethical considerations, more clarity, go beyond plagiarism, fairness, sector wide
- Discussion: students want to be involved in conversations

# Student hopes:

- Increased focus on information literacy and critical thinking skills throughout their education journey
- Clear sector wide guidance and policy
- Assessment reform – more focus on creativity and critical thinking
- Teaching – move away from ‘Sage on stage’ to an industry relevant experience
- Co-creation: students want to be an active part of the conversation



# Contact details

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