

Professor
Rose Luckin



The Impact of AI on Education: Benefits and Challenge_s

1

AI tools:

Using AI in Education to tackle some of the big educational challenges

2

Increasing Human Intelligence:

Changing Education so that we focus on human intelligence and prepare people for an AI world

3

Learning about AI:

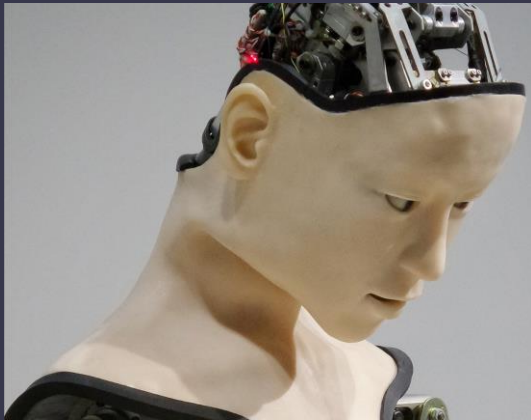
Educating People about AI so that they can use it safely and effectively

Artificial intelligence in Education



But first..
What is Artificial
Intelligence (AI)?

EC High-Level Expert Group on Artificial Intelligence definition within the European Commission's Communication on AI



https://ec.europa.eu/futurium/en/system/files/ged/ai_hleg_definition_of_ai_18_december_1.pdf

“Artificial intelligence (AI) refers to systems that display intelligent behaviour by analysing their environment and taking actions – with some degree of autonomy – to achieve specific goals.”

AI-based systems can be purely software-based, acting in the virtual world (e.g. voice assistants, image analysis software, search engines, speech and face recognition systems) or AI can be embedded in hardware devices (e.g. advanced robots, autonomous cars, drones or Internet of Things applications).”

And AI is not
new!

Also, AI in
Education is not
New

AI can sense behaviours based on multiple sources of data then advise/recommend



MultiSense



SimSense



What is Generative AI?

**AI that creates new content
of human like quality**



But scaled
technology that is
freely available,
such as ChatGPT,
is new.



← Safari

DINA

Design a worksheet to practice the formation of the imperfect subjunctive in Spanish, include instructions on formation rules and examples of use

CHATGPT

Absolutely, here's a worksheet that focuses on the formation rules of the imperfect subjunctive in Spanish, along with examples of its use:

Worksheet: Formation and Usage of the Imperfect Subjunctive

Part 1: Formation Rules

Instructions: Complete the following sentences by conjugating the verbs in parentheses into the imperfect subjunctive tense. Follow the formation rules for each subject.

1. Yo quería que ella _____
(estar) feliz.
2. Ellos deseaban que tú _____
(venir) con nosotros.
3. Ella prefería que yo no _____
(decir) nada.

Message



Let's look at AI
more generally



Am I using AI
already?



Examples of AI in use

now:

Predictive text,

Grammarly, Otter.ai

Email assistants

Image search (e.g. google
lens)

ChatGPT

Digital voice assistants

e.g. Google or Alexa

Text to speech tools

Translation tools



How can AI be used in Education?



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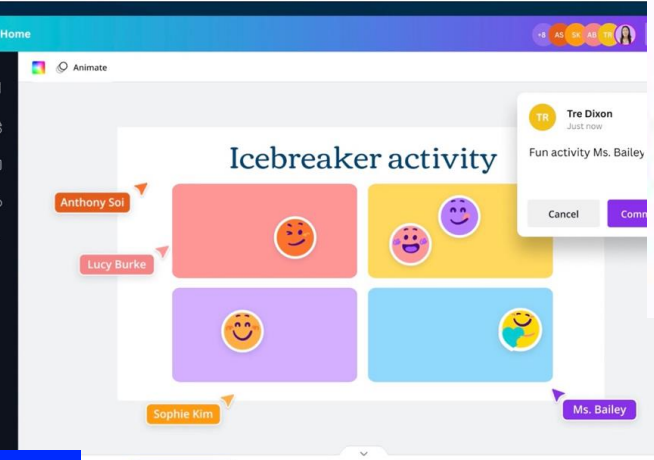
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AI tools

Using AI in Education to tackle some of the big educational challenges





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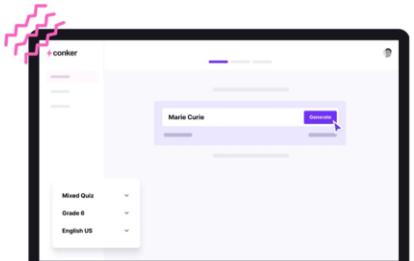
As seen on:



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Create and interact with talking avatars using Generative AI via D-ID's API or Creative Reality™ studio.

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Examples of AI tool functionality

01	Personalisation	Learning paths Next steps Feedback
02	Adaptive	Learning Assessment
03	Generation	Teaching content Student content Video, image, audio, text
04	Virtual	Classrooms VR, AR
05	Assistants	Automated marking Chatbots, Virtual tutors Learner analytics



How can these
tools be used?



Educational challenges

Equity in education

Student and staff wellbeing

Student engagement

Staff recruitment and retention

Access to quality education for all

Time restraints on educators

Funding and resources pressures

Differential attainment

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increasing Human Intelligence

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Learning is Complex and Human teachers are vital

Our ability to learn must continue
to evolve to be ever more
sophisticated



Machine Learning and Human Intelligence

The future of education for the 21st century

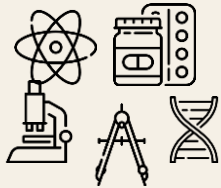
Rosemary Luckin



3. Social intelligence

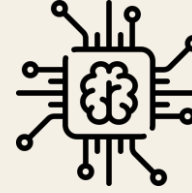


2. Meta-knowing intelligence



1. Interdisciplinary Academic intelligence

4. Meta-cognitive intelligence



5. Meta-subjective intelligence



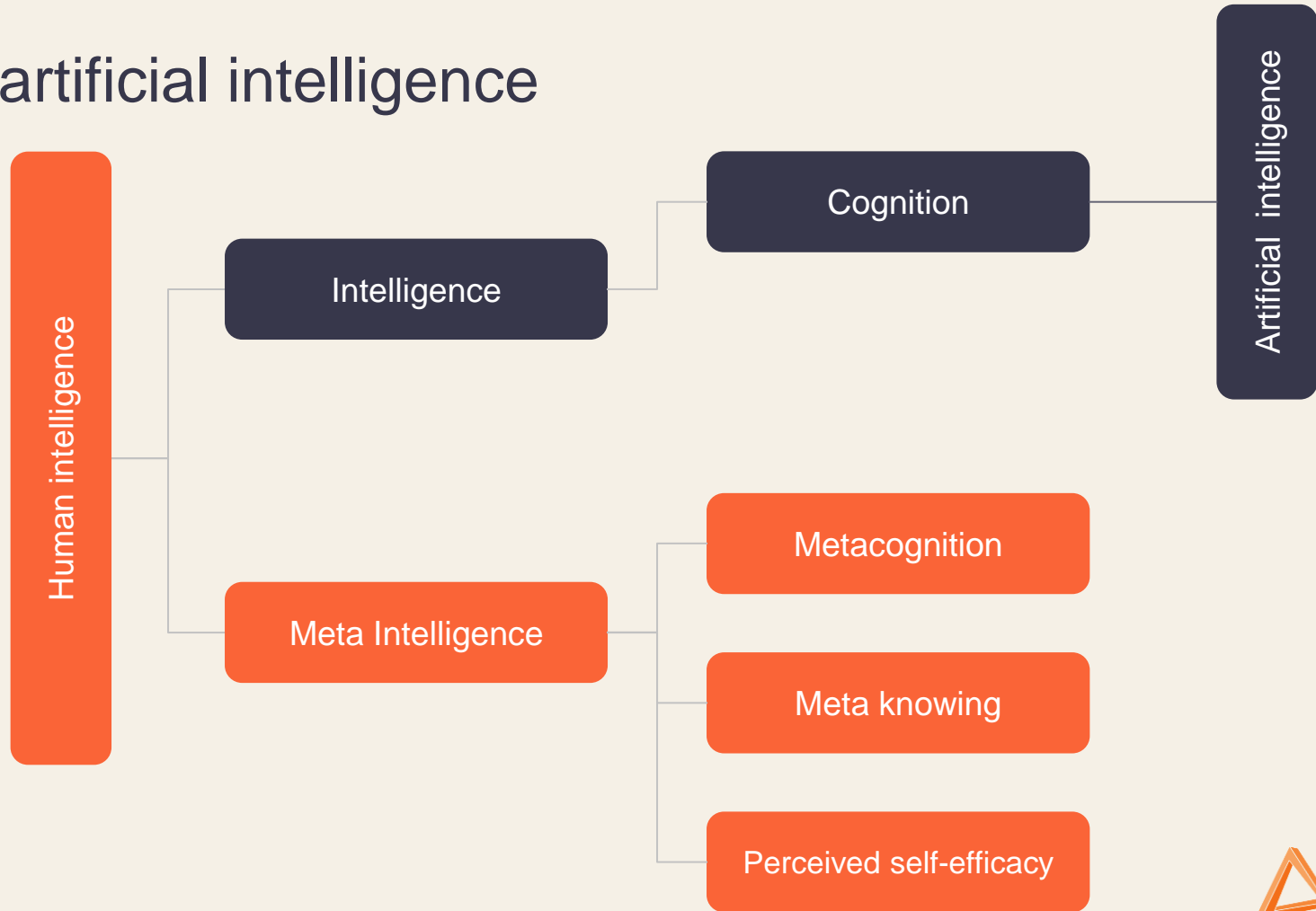
6. Meta-contextual intelligence



7. Perceived self-efficacy



Human vs artificial intelligence



The future is
uncertain



Caution

*“Unlike most non-human biological cognition, human cognition is changing: the average IQ in many countries is increasing (the Flynn effect), our memory (Sparrow et al. 2011) is changing due to the Google effect (digital amnesia), navigation abilities (McKinlay 2016; Milner 2016) atrophied because satnavs, cognitive rewards mechanisms are changing because of gamification, etc. This is a process that is **accelerated by technology**, and will be **magnified by the use of cognitive assistants and cognitive prosthetics**, especially for the elderly. AI itself and human-machine hybrids (either as individual cyborgs or as mixed collectives) are progressing in directions that we are not able to compare with the past or extrapolate, in order to understand where all this is leading, and the associated opportunities and risks (research priorities and safety concerns).”*

Bhatnaga et al., 2018



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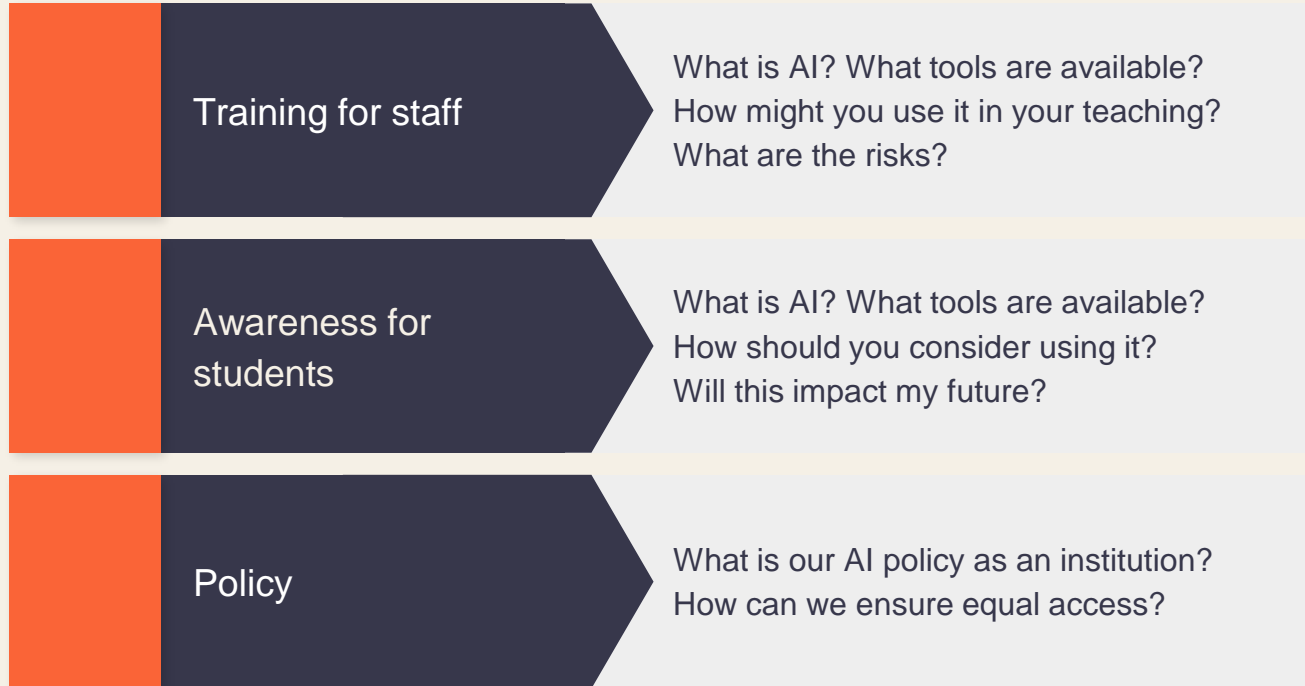
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How might we go about that?



How should we
consider ethics
when using AI?



IOE professor co-founds the UK's first Institute for Ethical Artificial Intelligence in Education

18 October 2018



conceived by Sir Anthony Seldon, Priya Lakhani OBE, and Professor Rose Luckin

**The Institute for
Ethical AI in
Education**

**The Ethical Framework
for AI in Education**

The Institute for Ethical AI in Education has been kindly funded by:



FREE TO DOWNLOAD <https://www.buckingham.ac.uk/wp-content/uploads/2021/03/The-Institute-for-Ethical-AI-in-Education-The-Ethical-Framework-for-AI-in-Education.pdf>

Are you AI curious?

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for our AI training
for educators.

AI in Schools



Host of the EdTech Podcast

Professor
Rose Luckin



THE EDTECH PODCAST

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[Bespoke AI & Data Science Consultancy](#)

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EDUCATE
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Some useful resources



Book

<https://www.routledge.com/AI-for-School-Teachers/Luckin-George-Cukurova/p/book/9781032037714>

Free audio chapters <https://www.educateventures.com/all-other-downloads>

Take a Free AI readiness course: <https://www.educateventures.com/ai-readiness-online-course>

Find out more hello@educateventures.com

Are you AI curious?

Please sign up
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Thank You