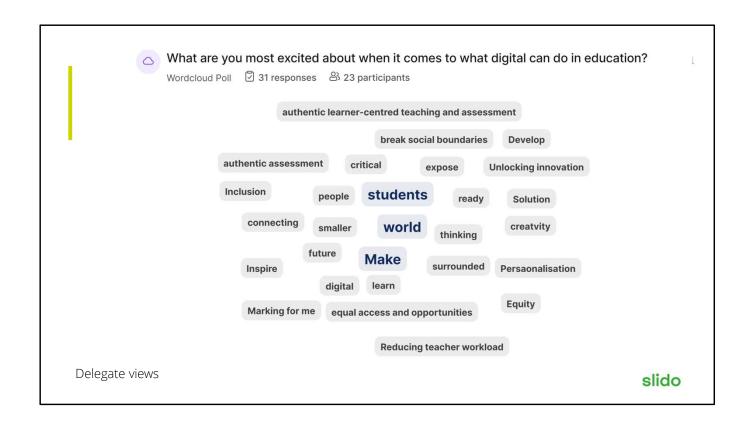


For event attendee reference only. Please do not circulate.

## **Digital** in Schools

Breaking down barriers and embracing innovation







## Our pledge



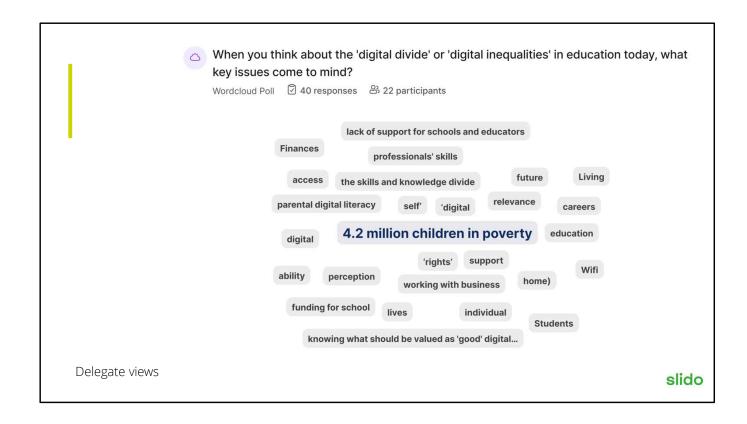
#### **Exploring four key areas**

- 1) How can we facilitate **further collaboration** around some of the key challenges being experienced within the education community?
- 2) How can we help **every school** to shape **sustainable and brighter futures**?
- 3) How can we **accelerate progress** to ensure **all** learners and educators feel **included** in education?
- 4) How can we **collectively tackle** the **digital divide**?
- <u>Pearson School Report 2023</u>



Watch the video





#### What positive action are you already taking or what might you try?



- Ensure staff are unskilled and are given the tools hardware, software and online that they need or should need!
- all teachers are trained as Microsoft Educators
- Embrace mobiles as devices, instead of banning them
- Focus on PedTech pedagogical intentions first, technology second. Subject Expertise with digital literacy skills embedded into schemes of work.
- Ensure a range of devices are available to pupils iPads, laptops and desktops to develop a range of skills
- Technology written into the teaching and learning policy not an add on
- Worked on a framework of guidance principles for staff use of ICT / AI
- Parental digital literacy classes
- Focus on the learning
- Employ a It innovations lead that is also a technician to be more proactive in curriculum, teaching and learning rather than reactive
- Strategic approach to addressing the divide
- Digital Skills curriculum that is taught alongside all subject areas and utilising computing curriculum time for computer science and online safety.
- MATs are key drivers of digital capacity in the English school sector (as different to other countries where LAs/regional/central government have a clearer roadmap)
- Equitable bring your own device scheme for all students. Chromebook being the most viable option, an every child entitlement if parents can, or school will provide.
- Employ a specialist computing teacher in a primary school
- We are focusing on upskilling staff across the school in digital literacy, ensuring that it is a key part of our teaching and learning strategy.
- Need to prioritise the divide
- Clear vision (theory of change) and digital roadmap for schools

Delegate views





### We believe in...

- Assessing the right skills in the right way, enabling learners to highlight their strengths and successes
- Creating greater diversity and representation that reflects young people's lives, to better engage them in learning
- Accelerating digital transformation, bringing all parts of the system together to realise the opportunities that technology can bring to the education experience







### Evolving how we assess...



OxEd & Assessment
Early language programme
(NELI)



Onscreen Exams
Summer 2023:
2,263 International GCSE exams
8,042 GCSE Computer Science exams



Remote Invigilation
1,000+ International GCSEs sat remotely this year

#### Examples that you may want to discuss



Technology transforming inclusion for children and young people, but 'digital inequalities limiting access'

Parents and students want more exams to go digital

What does ChatGPT mean for the future of assessment?

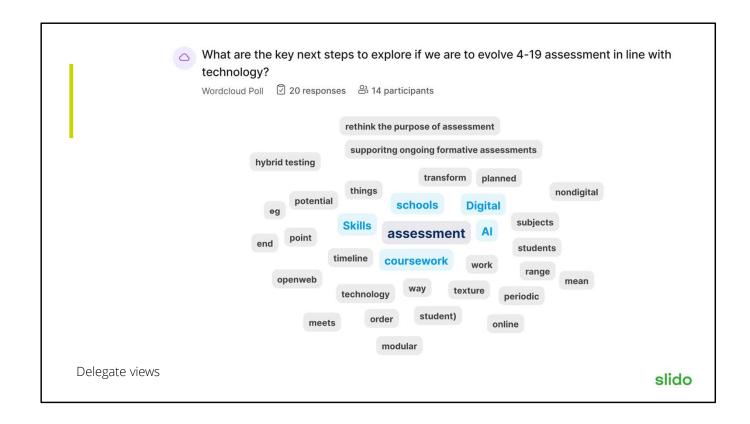
Are current assessment models problematic for the future of England's job market?

Reception Baseline Test to go digital from 2024

New Campaign to Boost Digital Skills in All Primary Schools

The future is digital – but not exclusively so









### Your questions on Al

inclusion

learning security

accuracy experimentation

curriculum training
assessment examples awareness

dangers fairness

biases workload data
truth plagiarism
ban risk
encourage preparation safeguarding
accessibility



### Innovations and Al

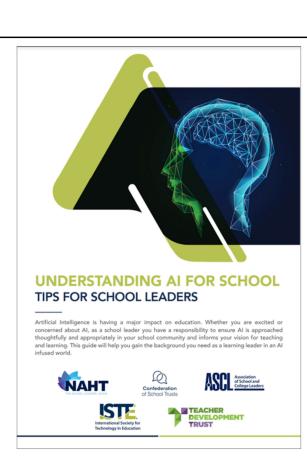
#### Laurie Forcier, Louise Worgan, Jonathan O'Donnell

Developing an approach to AI for impact within schools now and in the future











- A partnership to support school leaders
- School leaders will drive change - they will create the space



## Al in education

What's the picture?

#### Our definition

- Al is a branch of computer science aimed at creating machines that mimic human intelligence – and it's not new.
- Perform tasks that require human thought e.g. recognising patterns
- Infused in everyday life e.g. Alexa/Siri, autocorrect



## Al in education

What's the picture?

#### Why now?

- Generative AI (ChatGPT, Claude, Bing, Midjourney etc) generates new content
- One survey (June 2023)
   suggests 67% of UK secondary students had already used chatbots to do homework.
- Quickly developing excitement and caution

#### Statistics source

#### **Students**

- 68% say they are getting better grades with Al
- 40% ChatGPT writes the work, they edit
- 36% worried they are missing opportunities to learn
- 17% learning more using Al tool (skill) plus learning content
- 48% hold them back if Al excluded from classrooms
- 70% worry they will struggle in exams without Al support

#### **Teachers**

- 56% need proper training in Al
- 35% education sector is not moving fast enough to adapt to new technologies
- 41% ask for regulation
- 35% worry students won't learn as much
- 27% parents need to police Al use at home
- 26% should be incorporated into curriculum for safe use
- 89% nothing can replace human intelligence, empathy & creativity



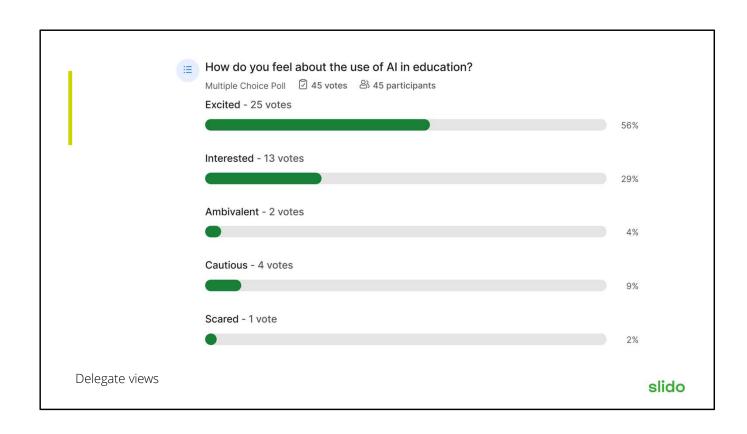
## Al in education

### What does it mean for us?

- It's here and engagement isn't optional
- Real opportunities to leverage AI to support teachers and students.
- Cautions
  - o Rapid pace of change
  - Limitations
  - o Ethical implications of the use of AI
- We need to educate ourselves, stakeholders and students.

#### **Poll question:**

How do you feel about the use of Al in education?





## Al in education

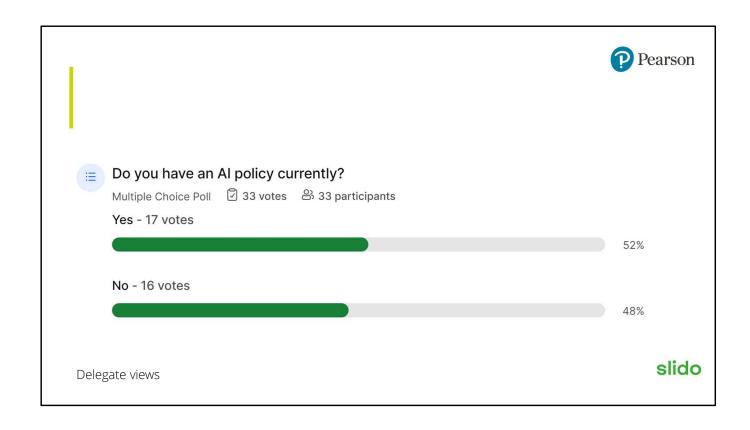
What do we need to do?

#### Two key areas

- Policy
- Practice

#### How do we....

- Learn?
- Prepare?
- Explore?





### Al Policy

Learn Prepare Explore

#### **Poll question:**

Do you have an AI policy currently?

If so, how did you build it? And how will it evolve?

- Why do we need an AI policy?
- What do we need to consider in an AI policy?
- Who should be involved in the creation of a policy?
- Where can we go to for more information?

#PearsonDigitalRoundtable

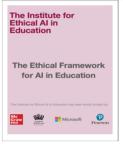
**Purpose and Scope:** clearly state its purpose and the scope of Al usage in the school: types of Al tools to be used, the intended benefits, and the roles and responsibilities of different stakeholders.

- **Ethical Use of AI:** outline the ethical use of AI in the classroom. This includes guidelines for students on responsible use, emphasising the importance of originality and avoiding plagiarism, the need to fact-check (hallucinations), issue of bias.
- Data Privacy and Security: address data privacy and security concerns. It should outline measures to protect student data and comply with relevant laws and regulations e.g. GDPR.
- Accessibility and Inclusivity: ensure that AI is used to promote
  accessibility and inclusivity. Outline how AI will be used to support students
  with disabilities and cater to individual learning needs.
- Evaluation of Al Tools: provide a process for evaluating Al tools and Algenerated content for accuracy, relevance, and appropriateness.
- Continuous Learning and Improvement: emphasise the need for continuous learning and improvement. This includes staying updated on the latest developments in AI and regularly reviewing and updating the AI policy.
- Who stakeholders teachers, parents, experts, students



Free policy and guidance resources













### Al Policy

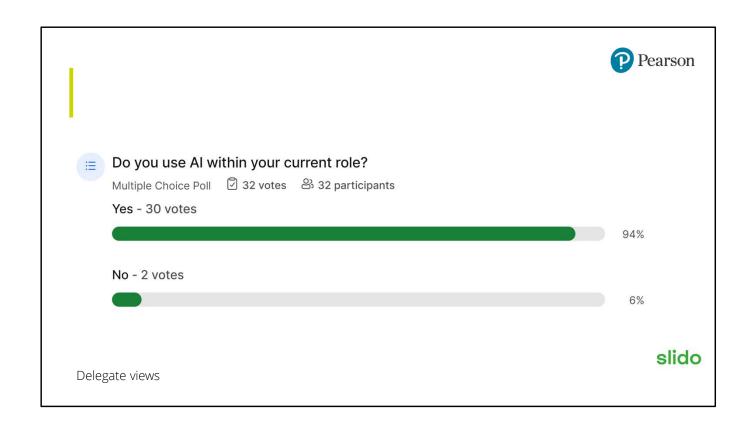
Learn Prepare Explore

#### **Harris Federation Tips**

- Raising awareness
- IT and cyber security team involved
- Focus on one Al platform
- Clear and concise guidance on acceptable and unacceptable use cases
- Frequent monitoring



- Before committing to policies it is vital to raise awareness, even if students or staff can not access this technology at school, they can at home!
- IT and Cyber Security teams need to be involved, there are likely already a number of IT policies in place. These teams will conduct a thorough risk assessment.
- Minimise the risks by just focusing on one AI platform, GPT / Bard / Grok etc
- Be very clear in the acceptable and unacceptable use cases.
  - Do not examples
    - Use any identifiable student data
    - Use copyrighted resources
    - Use to create sensitive or highly important communication
- Have an individual or a team that monitors the technology, tests and advises (potentially immediately) of any threats.





### Practice

#### Poll question:

Do you use Al within your current role?

#### I wonder....

- 1. How do we educate teachers to use Al effectively?
- 2. How can AI help teachers train and develop?
- 3. How can we educate students to use Al intelligently and ethically?



## Practice **Learn**

- Learn about AI through experimentation with tools, courses, newsletters, articles
- Start from your real goals and challenge: what are the pain-points for teachers?
- What do you wish to change?
  - o reduce workload?
  - o teacher development?
  - supporting student learning?
- Set up a learning group of leaders within school/ across schools
- Bear in mind government guidance e.g. Keeping children safe in education 2023





#### Leading in the Age of Al

New Artificial Intelligence Professional Development





ne Purpose Panels Resources Nev



#### Al's Role in the Education Revolution

Discover, Engage, Transform



My Al Resources



Artificial tradiligance is having a major impact on education. Whether you are excited or concerned allowed, it is a shared leader you have a regressibility to resurce A supprached throughtfully and approprietally in your sollhold community and informs your vision for teaching and learning. This guide will help you gain the background you need as a learning leader in an Al infrased world.



Understanding AI for School: Tips for School Leaders



Al for Inclusive Learning -Quick Start Guide



### Practice

#### **Prepare**

#### **Prepare Staff**

- Divisive and emotive topic
- Involve staff in discussions pros, cons, potential uses.
  - Adapting homework tasks can we harness AI to develop thinking skills?
  - What issues around equity and inclusion are there to consider?
  - How to teach students about the technology and its limitations?
  - How can AI be harnessed to help with lesson preparation? What are the risks?
- How should we think about CPD?



### Practice

#### **Explore**

#### **Explore together**

- Have a go with tools and tasks
- Look at your curriculum
  - Does it educate students in ethical use and citizenship?
  - Does it promote computational thinking
     STEM fields and elsewhere?
- Harris examples
- Training teachers
  - o TDT Simulation + Mentor
  - ISTE Stretch Al

#PearsonDigitalRoundtable

#### Examples of popular tools

- Lesson planning generic, not taking into account key variables. Exam board, key stage appropriate content and out of date pedagogy still being used. To be used as a training or an assistant but not to replace.
- Question generation huge benefit creating MCQ, suggesting possible answers and even creating exemplar answers (if providing enough data/prompts!)
- Rewriting text to be accessible, age appropriate, condensed, translated has huge potential but outputs can be variable, reprompting and making small adjustments advisable
- Creating fun, engaging content such as songs, poems, stories, scripts to teach very promising. Rhyming prone to hallucinations as will sometimes prioritise the rhyming over the integrity of the content.
- Disciplinary Literacy support, generating keywords, definitions, synonyms, examples used in sentence, etymology and morphology quickly and effectively.
- Marking great potential but takes a lot of training the model, providing the model the MS and depending on the complexity of the question a number of marked example answers of differing "quality" and providing detailed notes.

- Generating images huge potential historical moments, generating art examples, creating scenes for MfL teaching and learning. Terrible at graphs and text
- Other possible areas SEND support (potential), admin tasks (some very promising), report writing (not advised), teaching assistant (requires students have access to technology), data analysis (not advisable using LLM but getting better)

Currently exploring use of images, GPTs, OCR (reading handwriting)

Incorporating AI into the curriculum -

- Fits into an established computer science curriculum computational thinking skills, e-safety, IT tools to create digital artifacts, ethics.
  - KS3 create, reuse, revise and repurpose digital artefacts for a given audience, with attention to trustworthiness, design and usability
  - understand a range of ways to use technology safely, respectfully, responsibly and securely, including protecting their online identity and privacy; recognise inappropriate content, contact and conduct, and know how to report concerns
  - KS4 All 3 areas of the nc! develop their capability, creativity and knowledge in computer science, digital media and information technology
  - develop and apply their analytic, problem-solving, design, and computational thinking skills
  - understand how changes in technology affect safety, including new ways to protect their online privacy and identity, and how to report a range of concerns

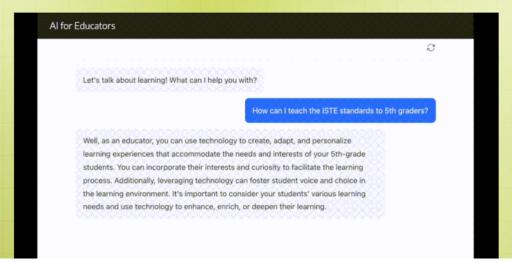
Tools to teach AI students <a href="https://experience-ai.org/">https://code.org/</a> (raspberry pi) <a href="https://code.org/">https://code.org/</a>

Tools to train teacher AI - <a href="https://experience-ai.org/">https://experience-ai.org/</a> <a href="https://experience-ai.org/">https://e

### Introducing an Al Tool Just for Educators



Coming soon: Stretch AI, a chatbot just for educators! With Stretch AI, you can learn about the ISTE Standards and ASCD's research-based pedagogical practices - anytime, anywhere. Ask your questions and get answers you know you can trust! Sign up now for news and updates.



#### SimulationBot + Mentor

You have just started teaching a new Year 9 maths class in a mixed-sex school. They've had several temporary teachers and have a bit of a troublesome reputation.

After your last lesson finished, you are walking toward their maths classroom to meet them for the first time and you find them milling around in the corridor making lots of noise. Your job is to get them lined up and ready to go in.

Luckily you have an invisible mentor by your side. You can direct a comment or question to your mentor by writing it in in square brackets, e.g. [Oh no, what do I say now?] and your mentor will write back to you in square brackets too.

#### SimulationBot + Mentor

The children notice you walking toward them. What do you do and what do you say?

Write what you say and do. You can aim comments at your invisible mentor by writing them [in square brackets like this].



#### Demo Link:

https://vimeo.com/user46376173/tdt simulationmentordemo?share=copy



# The big question ... I wish

How can we work together as a sector to leverage this technology to close gaps and drive equity?



- How can we work together as a sector to leverage this technology to close gaps and drive equity?
- · At what point will working together end with us being out of job?
- Involve learners in decisions around how AI can be used well and responsibly
- Chatgpt says:The education sector can harness Al technology to foster equity and bridge gaps through various collaborative strategies: 1. \*\*Access to Quality Education:\*\* Collaborate to ensure equal access to quality education for all students, irrespective of their socioeconomic background. Al-powered adaptive learning platforms can personalize learning experiences, catering to individual needs and leveling the playing field. 2. \*\*Data-Driven Insights:\*\* Pool resources to gather and analyze data using Al algorithms. This can identify learning gaps, predict at-risk students, and tailor interventions to support marginalized groups, thereby reducing disparities in academic achievement. 3. \*\*Resource Allocation:\*\* Utilize Al to optimize resource allocation. This includes identifying areas where additional support, funding, or specialized educations are needed to address disparities in education quality across different regions or schools. 4. \*\*Teacher Professional Development:\*\* Collaborate on Al-based tools and resources for teacher professional development. These tools can offer insights, lesson plans, and strategies to adapt teaching methods to diverse student needs, ultimately promoting inclusive education practices. 5. \*\*Ethical Al Integration:\*\* Work together to ensure the ethical use of Al in education, mitigating biases in algorithms, protecting student data privacy, and fostering transparency in Al-driven decision-making processes. 6. \*\*Community Engagement:\*\* Collaboratively engage with communities to understand their unique needs and perspectives. Al-enabled communication tools can facilitate better engagement, incorporating diverse voices into the educational system's decision-making processes. 7. \*\*Partnerships and Knowledge Sharing:\*\* Foster collaborations among educational institutions, government bodies, tech companies, and nonprofits. Sharing best practices, research findings, and successful implementations can accelerate equitable Al integration in education. 8. \*\*Policy Advocacy:\*\* Collabor
- needs to be a partnership between employers, government and educators
- less theoretical debate, more meaningful practical examples/applications that work

Delegate views



9

How can we work together as a sector to leverage this technology to close gaps and drive equity?

- A strategic national approach to guidance and training for teachers
- Adding more emphasis on raising students' awareness of social injustice issues instead of purely focusing on computational thinking
- Working in collaboration and partnerships
- · The problem is not now to educate teachers on AI, but on what problems AI will solve for teachers
- · Help students, parents and teachers to use new Al tech safely and effectively
- Shared knowledge and shared guidance from reliable sources so that educators are not having to spend lots of time researching themselves
- Automatically adapt curricula and assessment to local contexts (making it more relevant and accessible) including the likely range of cultural capital for those groups of learners, e.g. rural schools, city schools etc
- · Teach learners to be critical in their use and interaction with it
- 3 prongs: access to tools, access to training and access to opportunity
- The role of parents can't be underestimated an Al tool that makes parents more confident in supporting their children could be a huge leveller
- Requirement for educational publishers to provide a free bot e-tutor could be a gamechanger in terms of equity (where students don't have support at home) as seen in Korea
- Teacher training Al training integrated into removes the fear factor
- all schools need a framework/ guidance to adhere to
- · Collaboration is key working with subject experts to develop bespoke products in curriculum areas. Not a one size fits all approach.
- Regular training for all teachers

Delegate views



## Finding out more

Links:

<u>Understanding AI for school - tips for school leaders</u>

- TeachAl resources
- Institute for Ethical AI in Education
- Council of Great City Schools and COSN GenAl-Readiness Checklist for Schools
- Al and education: guidance for policy-makers UNESCO
- Leading in the Age of Al (ISTE+ASCD CPD)
- Bourne-Epsom Protocol

Panel discussion: Education for a bright, innovative future harnessing the power of our young people to make positive change.

> https://tdtrust.org/an nual-conference-2024/





### Final Thoughts

- What would most help schools to safely manage and effectively utilise AI now?
- Are there any actions that you are going to take away from this session?
- What are the key next steps to explore or indeed barriers to remove?



- Are there any actions that you are going to take away from this session?
- Check out Chat GPT 4.0
- Work with leaders across my trust to develop a strategic approach to policy practice and training
  My take away and personal project will be to look at Ai Policy but more so Data-Driven Insights. Al can analyse my student performance data to identify gaps in learning and provide targeted interventions way faster than me This will give me time to drum up more cool STEM and robotics based curriculum
- Upgrade to a subscription
- use it to summarise a survey I haven't yet analysed!
- Involve student voice in development of ai policy
- Check out resources
- Broaden the range of colleagues in the Al conversation.
- Conduct a review on the disciplinary differences in using AI in assessments
- Engage even more with students
- Thinking more strategically as to how we can develop AI use in school
- Read 'Understanding AI for Schools'
- A more collaborative approach to Al and the innovation that surrounds it within MAT
- Further read/research leading in an ai infused world to develop an ai policy
- Think about specific applications of AI in education not just general ones
- Develop Al policy. Create or delegate role within school regarding Al use.

Delegate views





- What's your key takeaway from today?
- We should not project our notions/definitions of digital on students. Let's place them at the heart of the change that digital and Al
- Embracing and committing to change because our students will live AI in the future with or without the support of schools and
- Personalised Learning: Data Driven Insights Al can adapt to each student's learning pace and style, providing personalised
- resources. This will help my students who might be left behind in a traditional one-size-fits-all approach.

  Much potential, excitingly scary! We need to embrace AI, act quickly but carefully. AI can help closing the digital divide, but it can also make it grow exponentially if we don't look at it holistically.
- Inequality is a political choice
- So much positivity and desire for collaboration excited to build on this
- Considering the power of digital assessment and AI to create more equity across our student cohort.
- How much support educators need with the rapid pace of change in technology and the rapid changes of learner behaviour and expectations that follow.
- disciplinary nuances and differences in attitudes towards Al
- $\label{thm:convex} \mbox{Tech can revolutionise and improve education but the sector needs more financial support to do it...}$
- Inequity is a real problem that won't go away without real and concentrated effort and intentional action

Delegate views

Looking at the bigger picture

Here's the visual summary of today, as depicted by Eleanor Beer







# Looking to the future

- We believe in the power of digital and curiosity and challenging what's possible. And it's clear from what we've heard at the roundtable that so many others do too.
- From reports and guidance to calls for positive change, we'll be sharing reflections on these discussions and taking action to practically and tangibly support schools in the now as well as in future.
- Let's continue the conversation via #PearsonDigitalRoundtable.
- Get in touch if you've got any questions or suggestions.
- Explore the latest from Pearson on digital learning and innovation.

