

Are We AI Ready?

Evaluating AI Applications and Ensuring Organizational Readiness for Classrooms, Schools, & Districts

Introductions

Kellie Ady

Executive Director,
Education Strategy & Learning
Innovation





The leading provider of cloud-based software for K-12 education in North America

Over
15,000
school
organizations

7
out of
10
top charter
management
organizations

50
million
students*

90
out of
100
top US districts

90+
countries &
territories



//CODiE//
2022 SIIA CODiE WINNER



EDTECH
BREAKTHROUGH
AWARD
2022

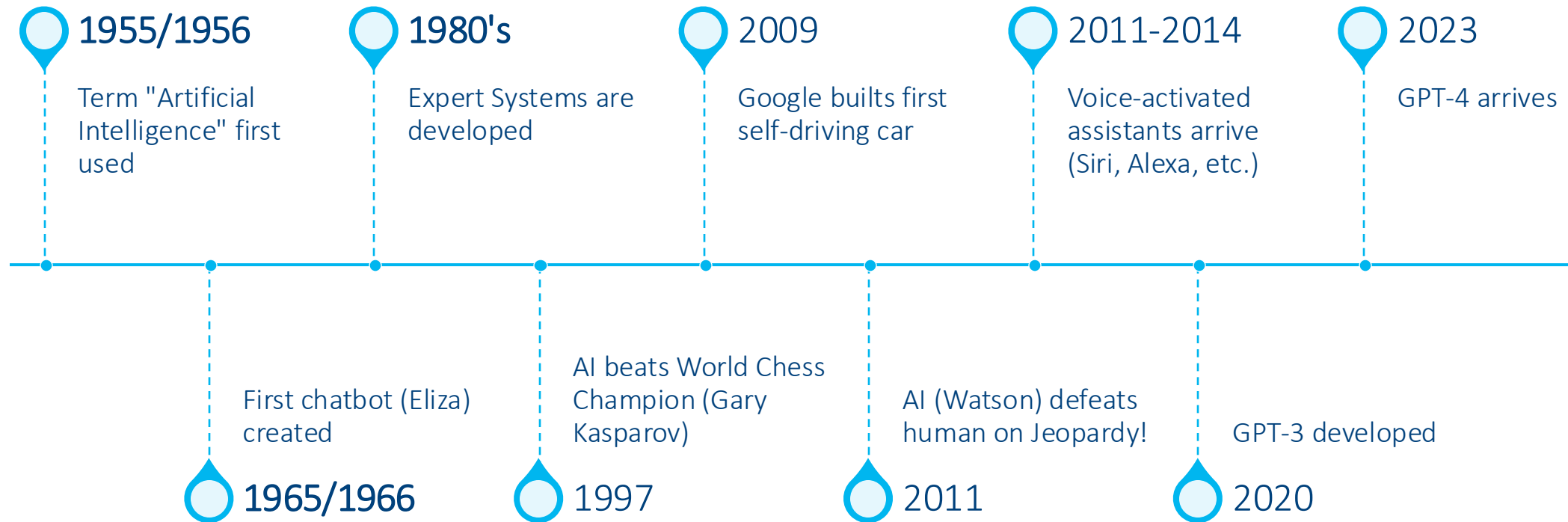


THE EDTECH
AWARDS

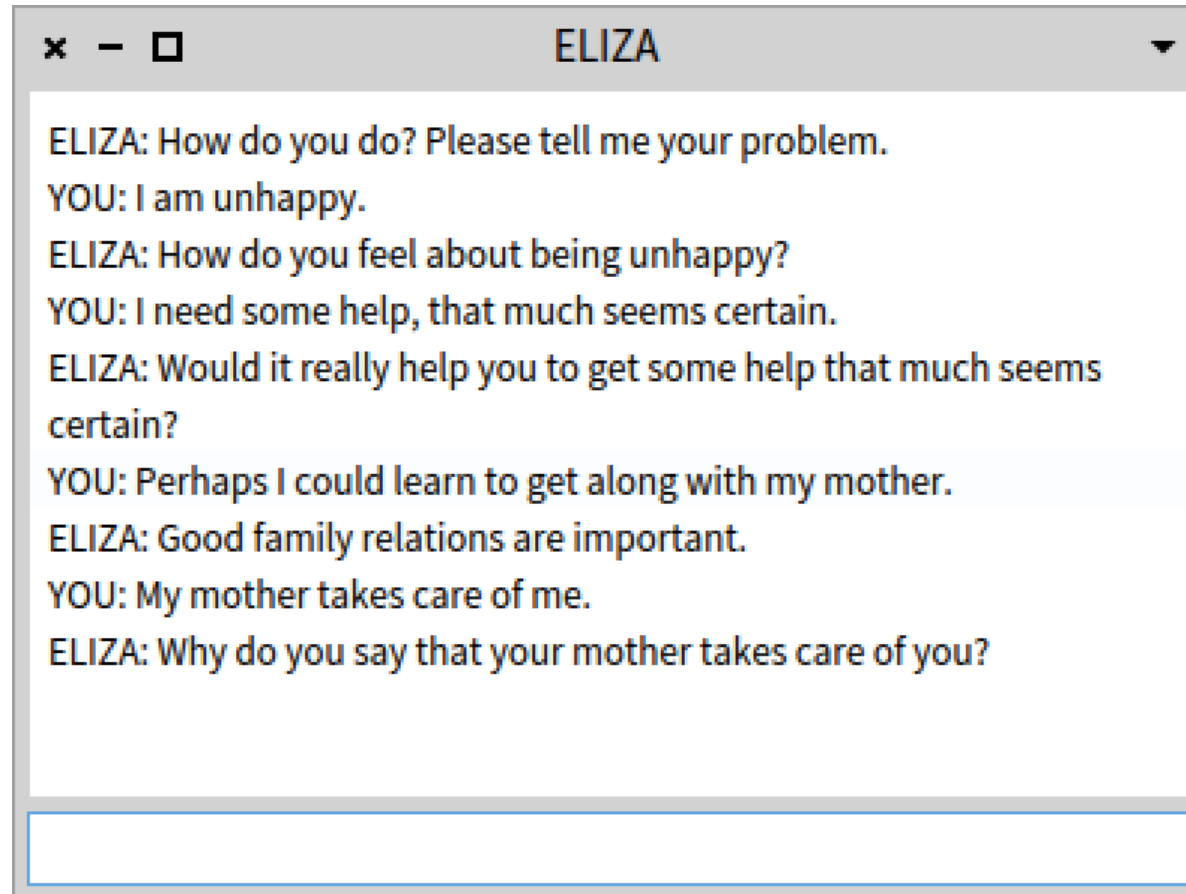
COOL TOOL
FINALIST 2022

* A total annual enrollment served calculation representing the sum of students support across all PowerSchool customers who use at least one PowerSchool product. This amount is valid for 2021.
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Timeline: Brief history of AI

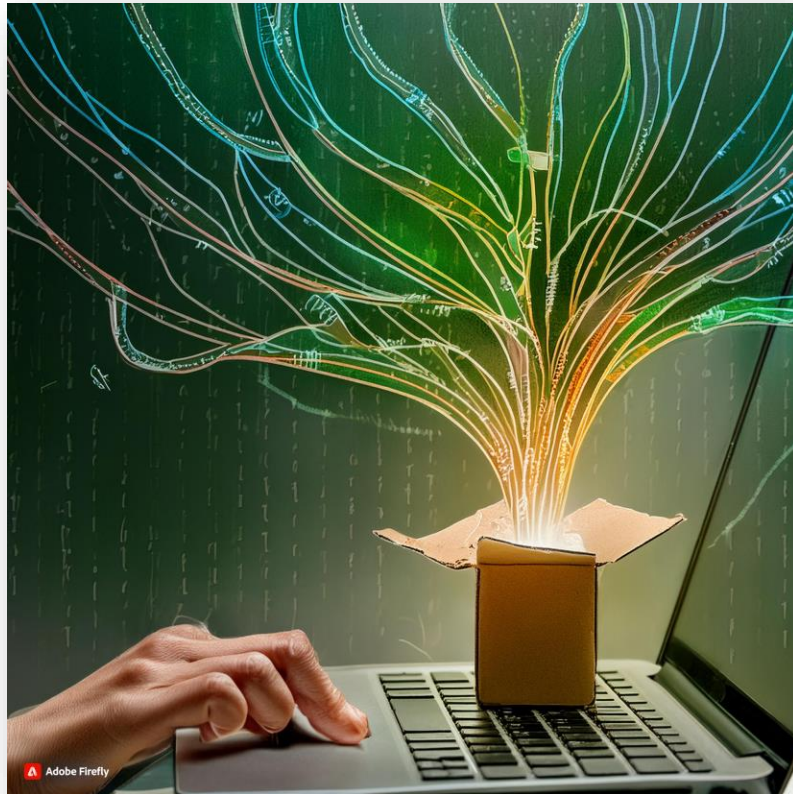


The First Chatbot, Eliza

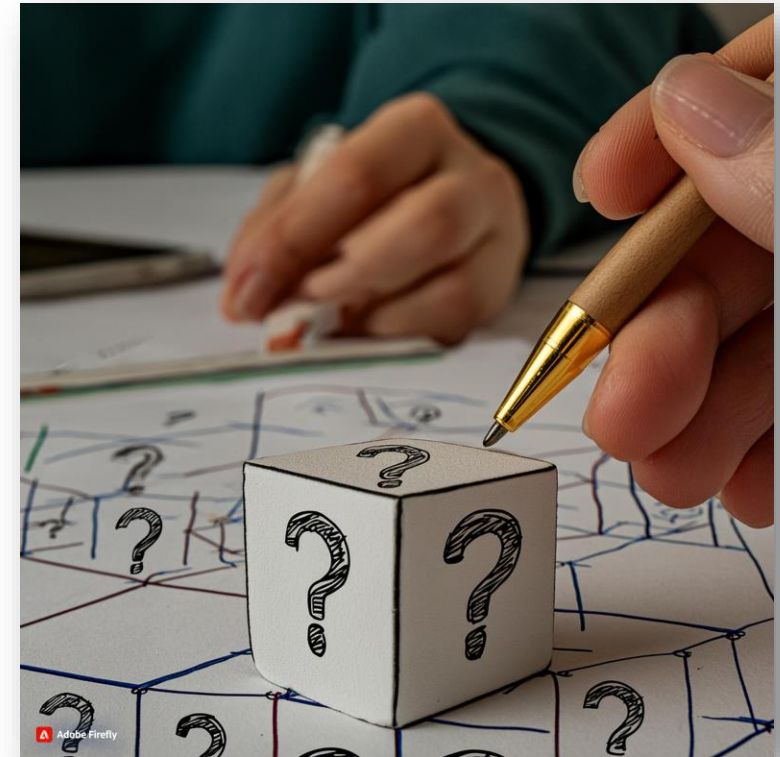


Key elements needed for effective AI

Large data sets/information

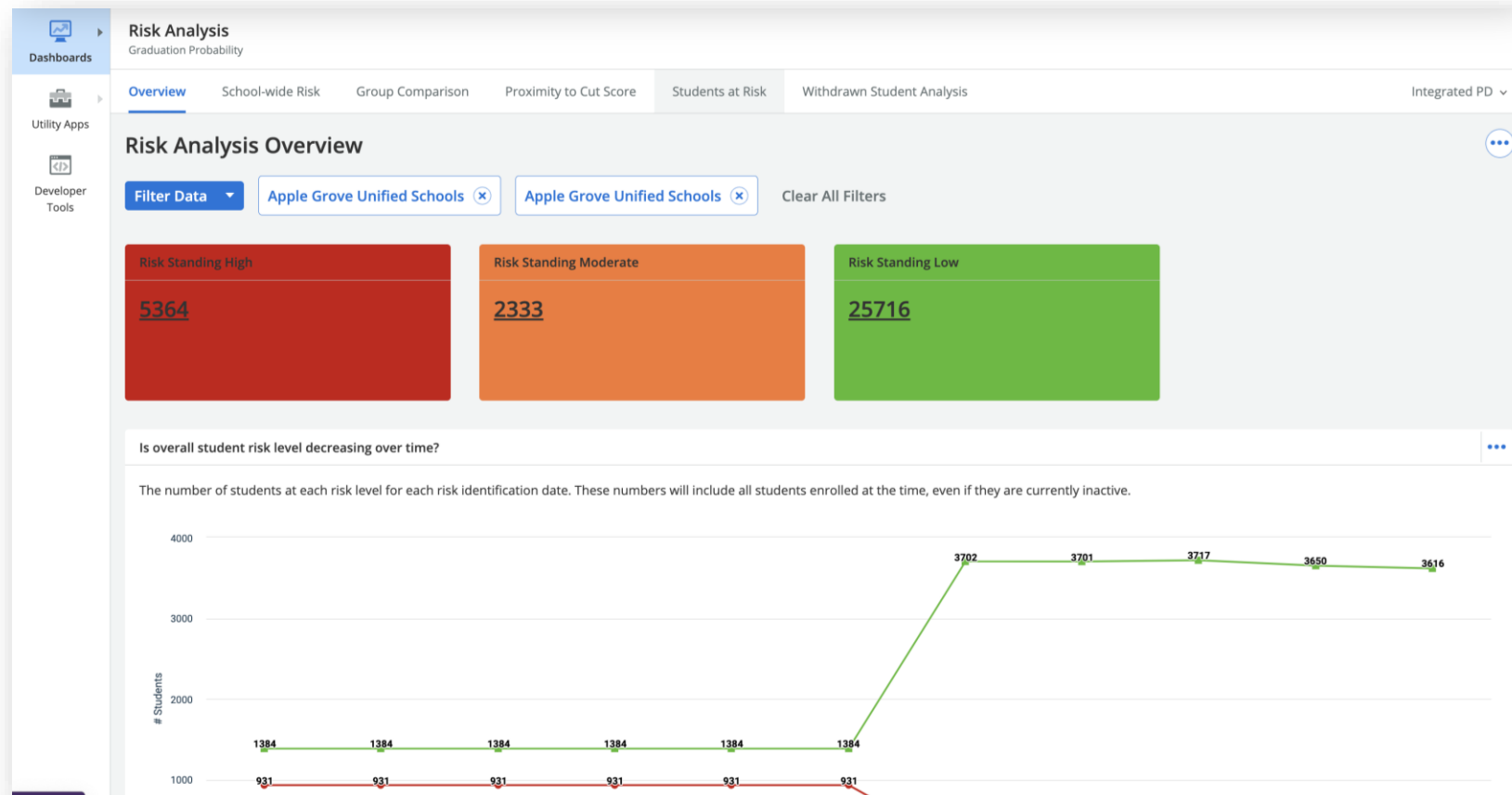


Context



One type of AI in Education: Machine Learning

Machine Learning for analyzing and identifying situations



Another type of AI in Education: Generative AI

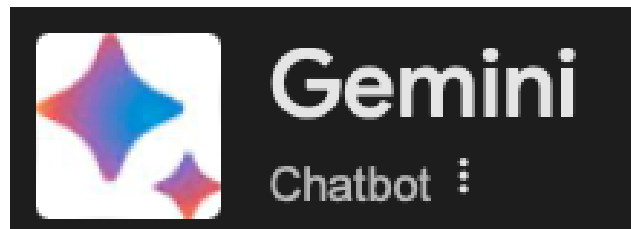
ChatGPT



Microsoft Copilot



ElevenLabs

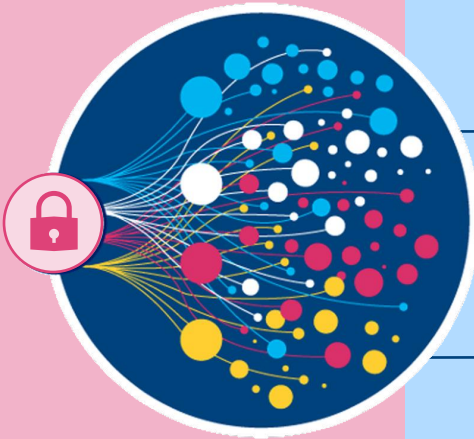


Data Foundation for Modernization



Secure Data Consolidation

- Attendance
- Behavior
- Transcripts
- Enrollment
- Screening Results
- Interventions
- IEPs
- Social Emotional
- Benchmark Scores
- State Assessments
- Skills Progress
- Career Interests
- Budget / Spending
- Recruiting / Hiring
- Staff Retention
- Performance Reviews



CONNECTED
INTELLIGENCE

Making an Impact with AI



AI Assistant



AI Agents



Cross-Product
Workflows

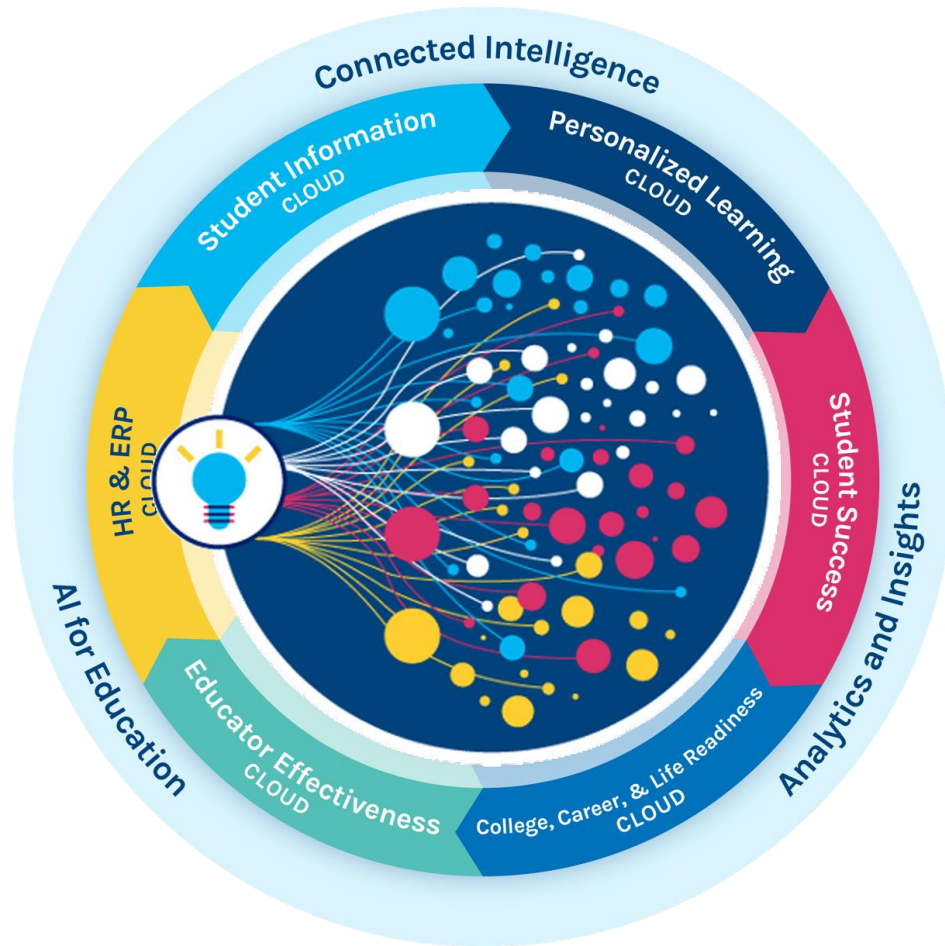


Cross-Product
Analytics



AI Assisted Data
Integrations

AI could have tremendous impact across all personas



STUDENT

Personalized Support

72%

of students learning gaps

addressed with personalized help on assignments, learning and homework



EDUCATOR

Personalized Teaching

7-12 hours

time savings a week

searching for and creating instructional resources



PARENTS

Personalized Information

60-80%

reduction in time spent

For parents to navigate 3-6 different systems they have to navigate today



SCHOOL ADMINISTRATION

Personalized Data

86%

of school leaders

agree technology helps personalize student learning so they can focus on supporting individual needs and meet learning goals



STATE OFFICIALS

Workforce planning

20%

access to CCLR counseling

1 in 5 students doesn't have access to counselors today,

The State of AI in Education

New Innovations in Generative AI Spark Discussion about Change and What's Possible

53% of district-level leaders agree in seeing value of AI for teaching and learning, compared to 44% of school-level educators.



EducationWeek

MENU SEARCH

LEADERSHIP POLICY & POLITICS TEACHING & LEARNING TECHNOLOGY OPINION JOBS

CLASSROOM TECHNOLOGY WEBINAR

Ready or Not, AI is Here: How K-12 Schools Should Respond

NOV 01

Wed., November 01, 2023, 2:00 p.m. - 3:00 p.m. ET

Price: Free

Add to Calendar

Ever since ChatGPT burst onto the scene late last year, educators have been grappling with the implications of artificial intelligence for teaching and learning. Some worry about rampant cheating now that Chatbots can write an essay on the causes of the Civil War that sounds eerily similar to something a human could produce. Others wonder how to teach math in a world where AI-powered tools can solve complex equations in

TECH & LEARNING

News > Classroom Tools

3 Resources for Teaching & Learning More About AI

By Erik Ofgang published about 14 hours ago

AI tools are everywhere but here are some teaching resources for understanding how this technology works and how it might impact society.

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THE JOURNAL

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Artificial Intelligence

AI to Experience Massive Growth in Education

By David Nagel | 01/12/23

Artificial intelligence will experience more than a tenfold growth in the education sector over the next eight years. According to a new forecast by P&S Intelligence.

The Seattle Times

LOCAL BIZ NATION SPORTS ENTERTAINMENT

Education Lab

AI might disrupt math and computer science classes — in a good way

Oct. 23, 2023 at 6:00 am | Updated Oct. 23, 2023 at 6:00 am

CBS NEW YORK

Ask the expert: How AI, like ChatGPT and Bard, are changing education

BY CBS NEW YORK TEAM

OCTOBER 24, 2023 / 10:33 AM / CBS NEW YORK

f t in

Education Next

NEWS RESEARCH PODCASTS THE JOURNAL BLOG BOOK REVIEWS

AI in Education

TECHNOLOGY VOL. 23, NO. 4

The leap into a new era of machine intelligence carries risks and challenges, but also plenty of promise

Trends: Supporting the Responsible Use of AI in K-12 Education

Data Points from Recent Research

Students Students Using AI

51%

Of students (aged 14-22) reported using GenAI tools (e.g. ChatGPT) ¹

Teachers Teachers Using AI

58%

of teachers reported having no PD on AI²

AI Policies Guardrails for AI Use

8/10

Teachers report that their districts don't have clear AI policies in place ²

Data Inefficiency Siloed data sets & barriers to access

#1

challenge for districts is connecting data across systems ³

Data Privacy Student data at risk

80%

of K12 districts have been the victims of ransomware attacks ⁴

Considerations

What is in place to support student use of AI?

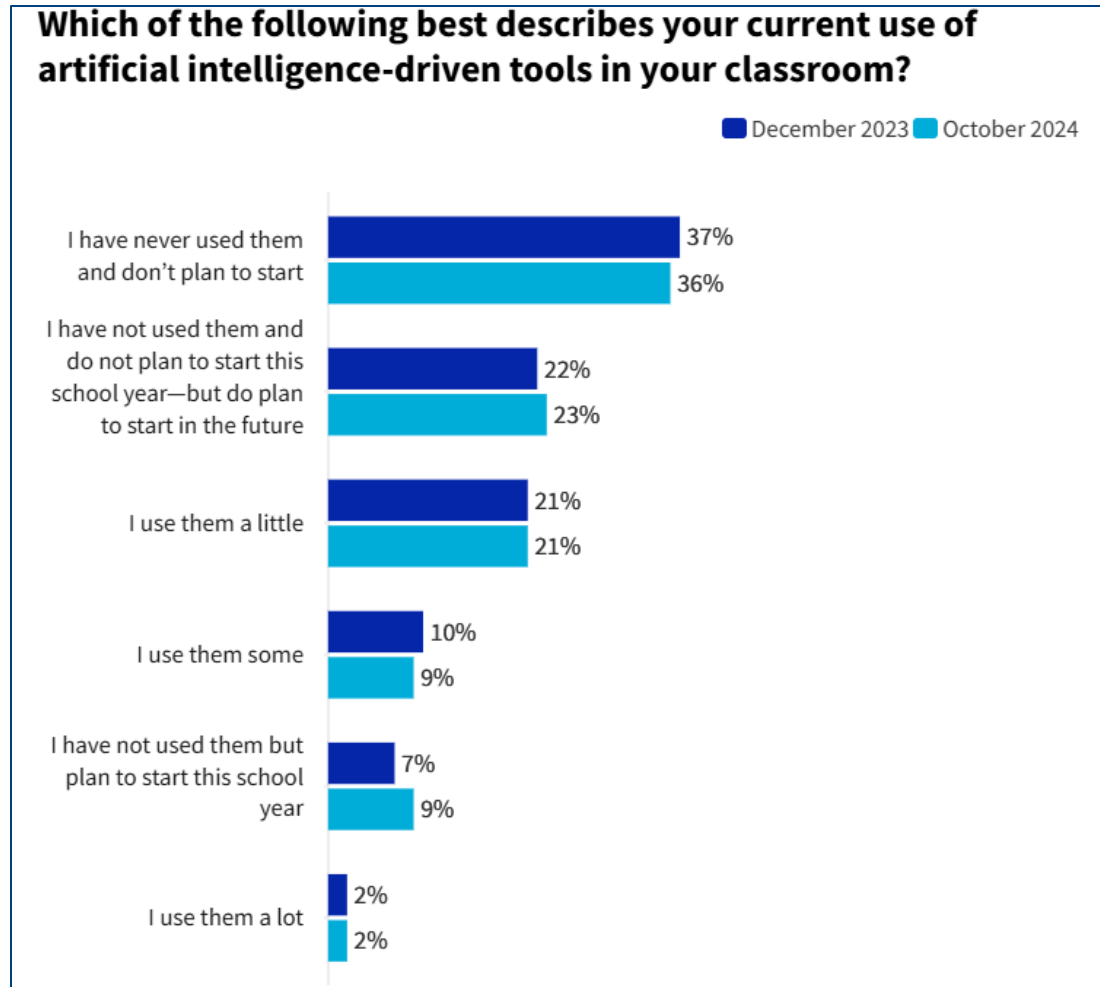
How can we better support educators in their use of AI?

In what ways can we provide guidance around responsible use of AI?

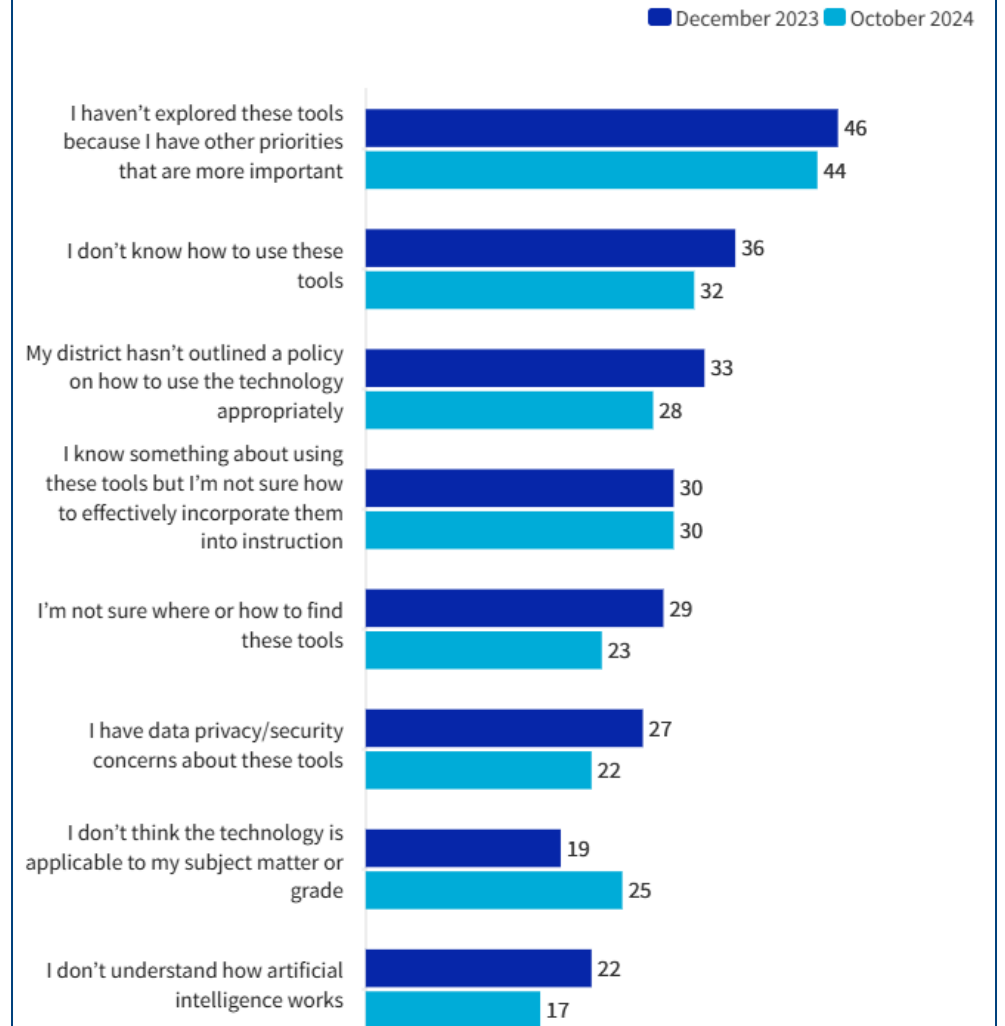
How can we remove data siloes across systems to support responsible AI?

How can we bolster data systems to protect against cybersecurity attacks?

Trends: Teacher use (or non-use) of AI in the Classroom



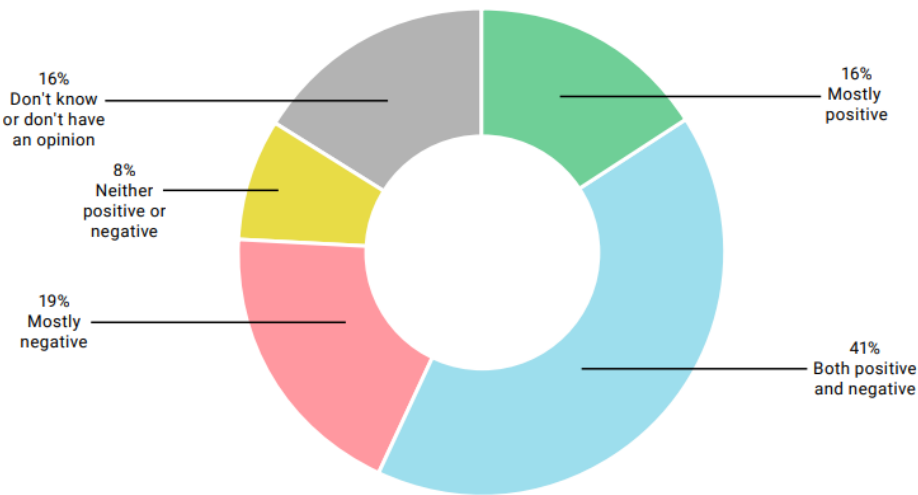
You indicated you don't currently use artificial intelligence-driven instructional tools in your classroom. Why not? Select all that apply.



Trends: Student use (or non-use) of AI

Young people are most likely to say generative AI will have both positive and negative impacts on their lives in the next 10 years

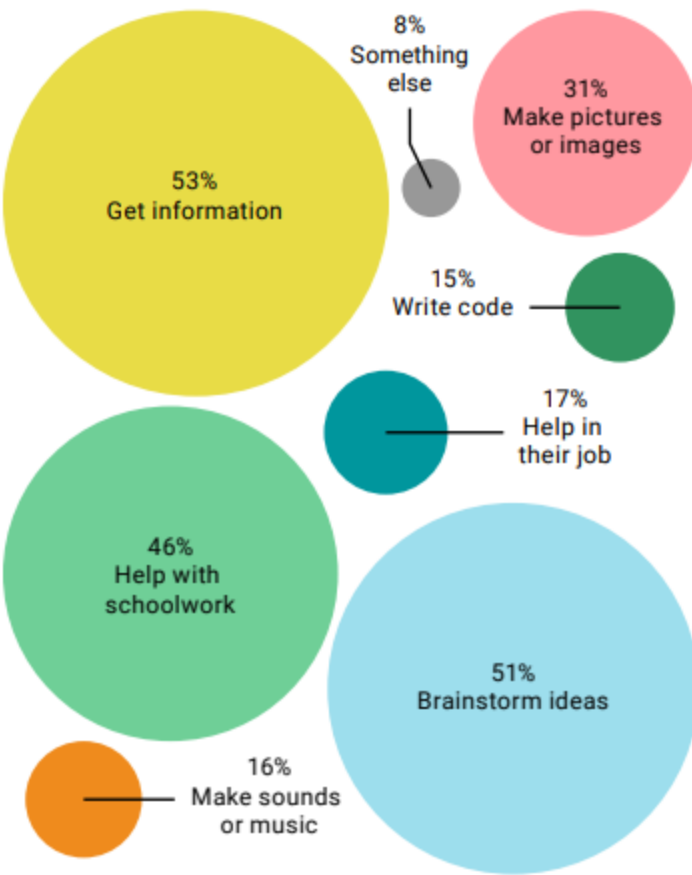
Perceptions of the impact of generative AI in the next 10 years among young people ages 14-22



Note: Items may not sum exactly due to rounding. Source: NORC survey for Hopelab and Common Sense Media conducted October 4-November 14, 2023, with 1,274 young people ages 14-22 nationwide.

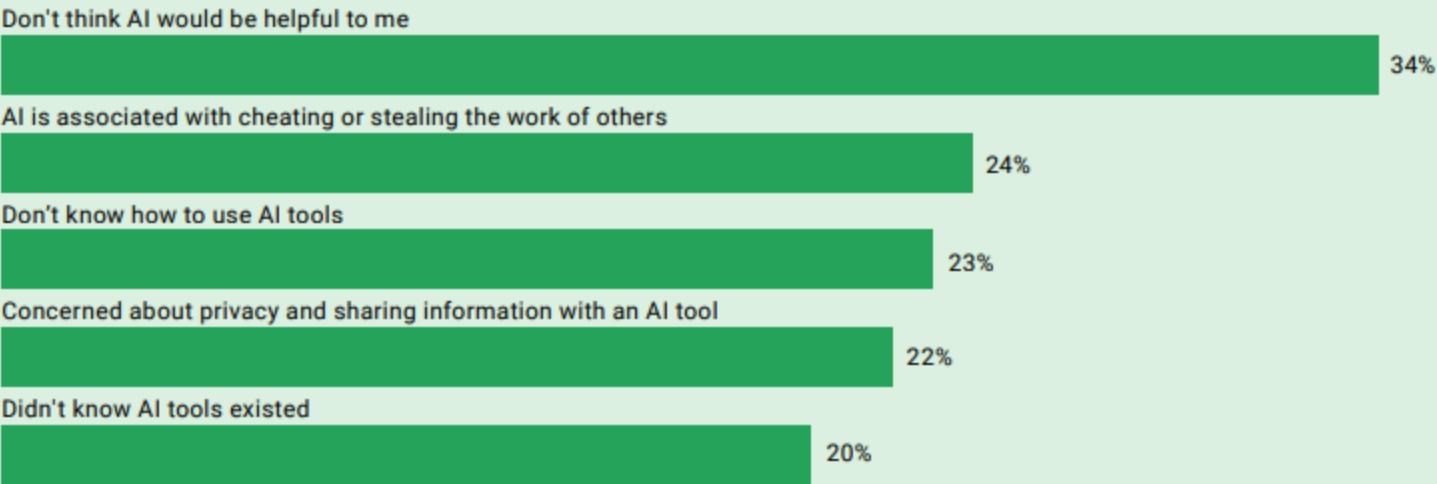
Finding information and inspiration are key uses

% of generative AI users ages 14-22 who have used it for the following reasons



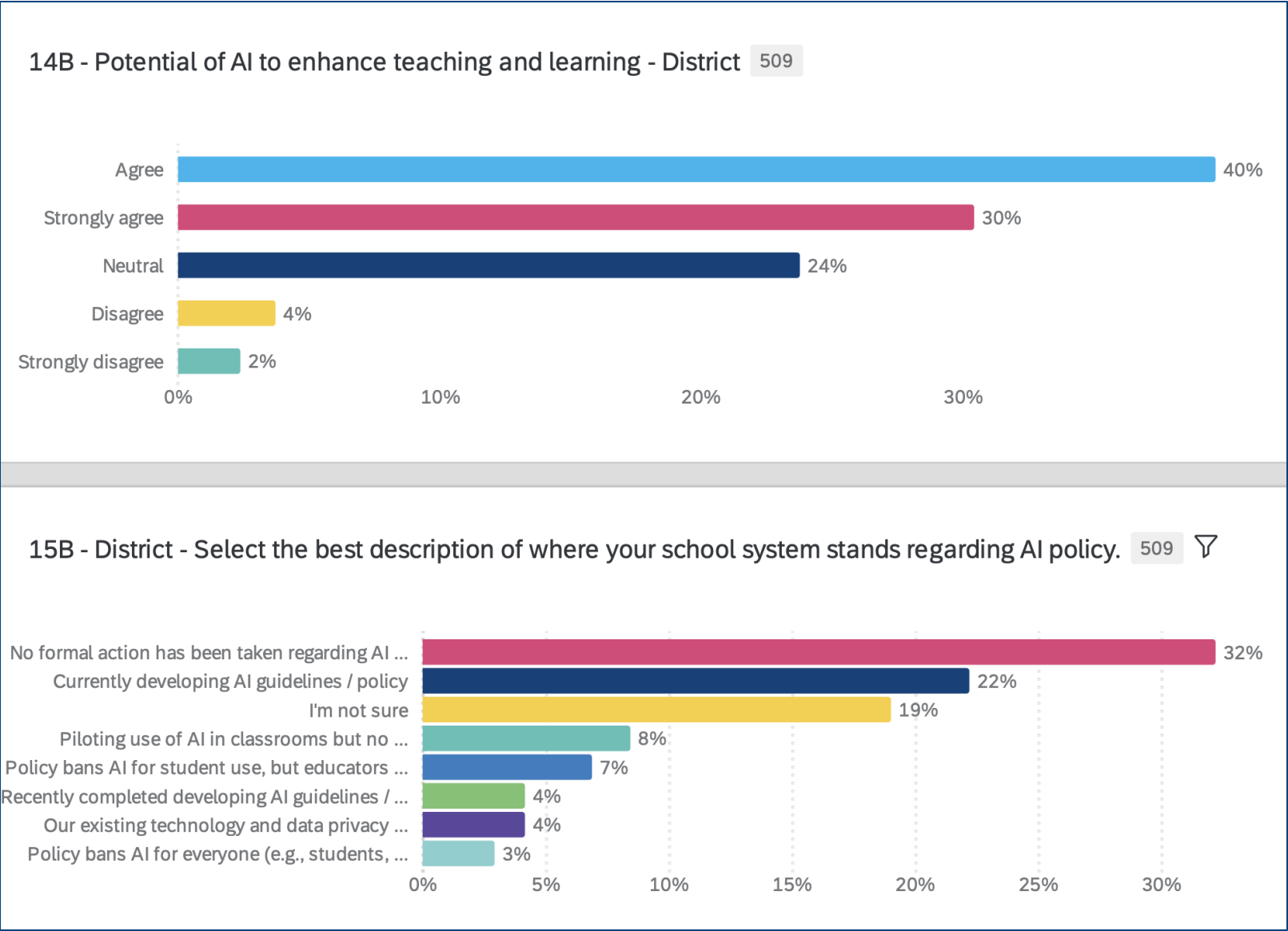
Source: NORC survey for Hopelab and Common Sense Media conducted October 4-November 14, 2023, with 632 young people ages 14-22 nationwide who reported using generative AI.

Reasons provided by young people who have never used generative AI



Trends: Leadership Perspectives about AI

- **70% of district leaders agree/strongly agree in potential of ai to enhance T&L, up from 53% in 2023.**
 - 65% of school level educators feel the same, up from 44% in 2023
- **Only 1 out of 5 leaders are actively developing AI policy/guidance**
 - 8% piloting use of AI in classrooms but no formal policy
 - 7% banned AI for students
 - 4% completed AI guidance



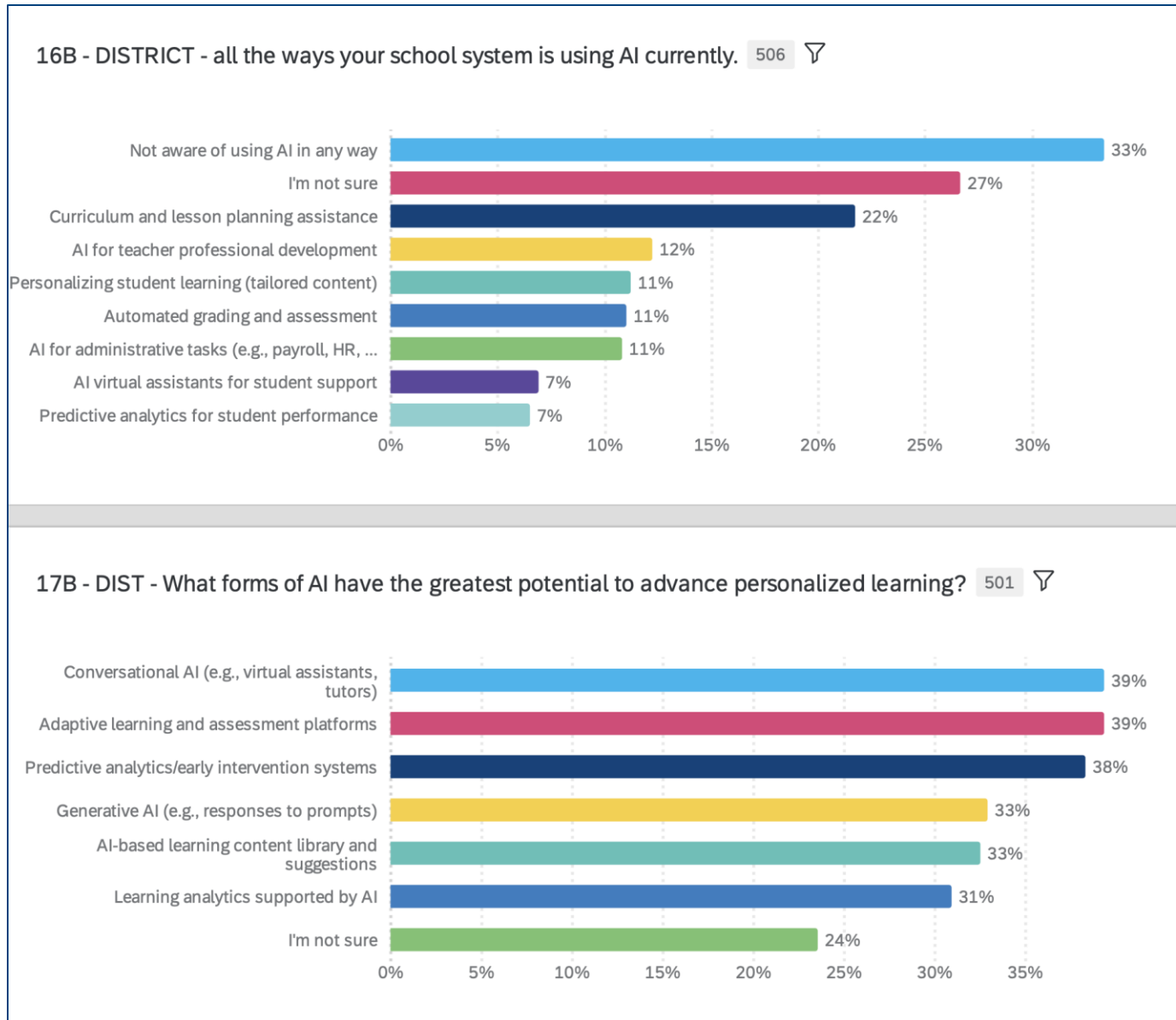
Trends: Leadership Perspectives about Classroom Use of AI

Use of AI

- 1 out of 3 district leaders are not aware of using AI in any way
- 1 out of 5 using AI for curriculum / lesson planning
- 1 in 10 using for PD / tailored student content / grading / admin

Highest potential AI

- Conversational AI (39%)
- Adaptive learning (39%)
- Predictive analytics (38%)
- Gen AI (33%)



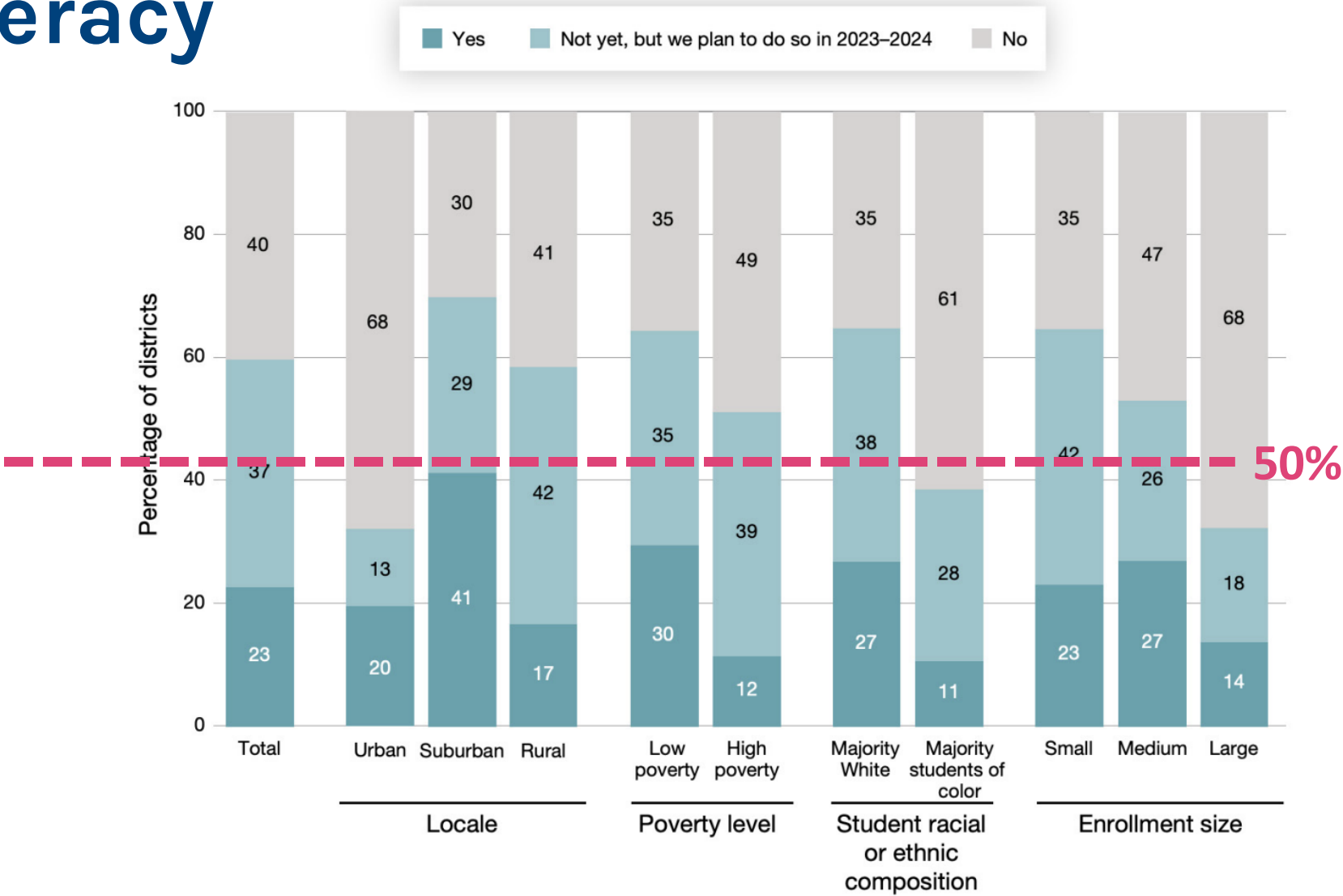
Trends: AI Literacy

Percentage of Districts That Have Provided Training (or Plan to Provide Training) to Teachers About AI Use

How many of your teachers have:

a) Tinkered with AI for work?

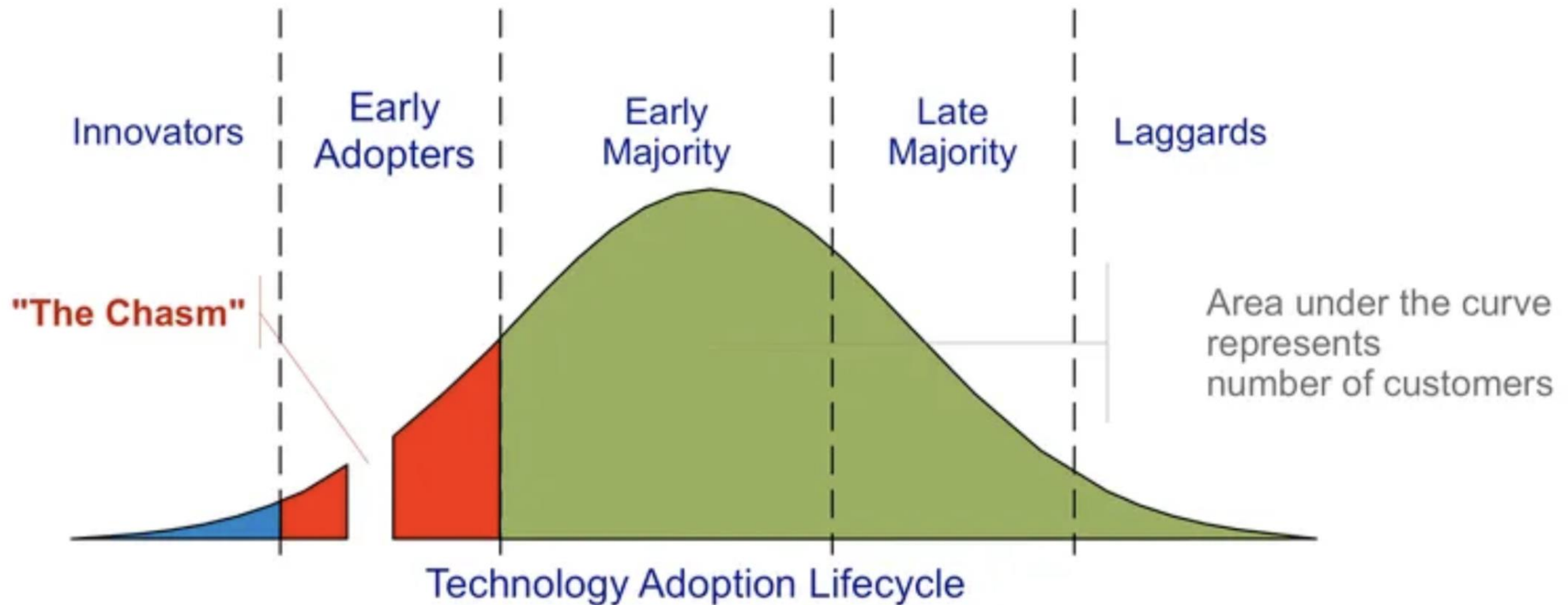
b) Gotten formal training?



From [RAND](#), *Using Artificial Intelligence Tools in K-12 Classrooms* (2024).

AI Adoption Curve

Where does your district fall on the curve?



Technology Adoption Lifecycle (Image: Craig Chelius, creative commons, CC-BY-3.0).

A photograph of a teacher and four students gathered around a laptop in a classroom. The teacher, a woman with dark hair, is pointing at the screen. The students, three girls and one boy, are looking at the laptop with interest. The image has a blue tint.

**How can schools and districts
evaluate AI applications more
thoroughly for responsibility,
safety and effectiveness?**

AI Use Cases – Prioritizing Impact



Democratization of data – Centralized repository of educational data with natural language queries. Opens data exploration, analysis and visualization to all. Early warning suggestions.



Personalization of Learning – AI efficiently generates instructional and assessment resources based on specific topic areas, grade, subject, standard alignment.



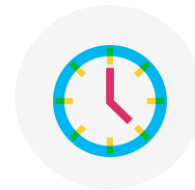
Assessing Student Learning – AI assesses a broader, holistic range of learner's knowledge, skills, abilities, and talents. Insights are timely, explainable, fair, and bias-free.



Autonomy and personalization – Increase student engagement. AI systems increase the level of control learners have over their learning and development.



Increase Community Engagement – AI opens new doors to increase family and community engagement.



Administrative Efficiency – AI should increase the capacity of organizations while prioritizing human decision-making (keeping humans in the loop).

PowerSchool AI Guiding Principles

Our Commitment to Serving Students, Parents, and Teachers Responsibly



Human-Centered



Built with Fairness
& Bias Resistance



Stringent data
governance, privacy,
and security



Transparency and
User Control



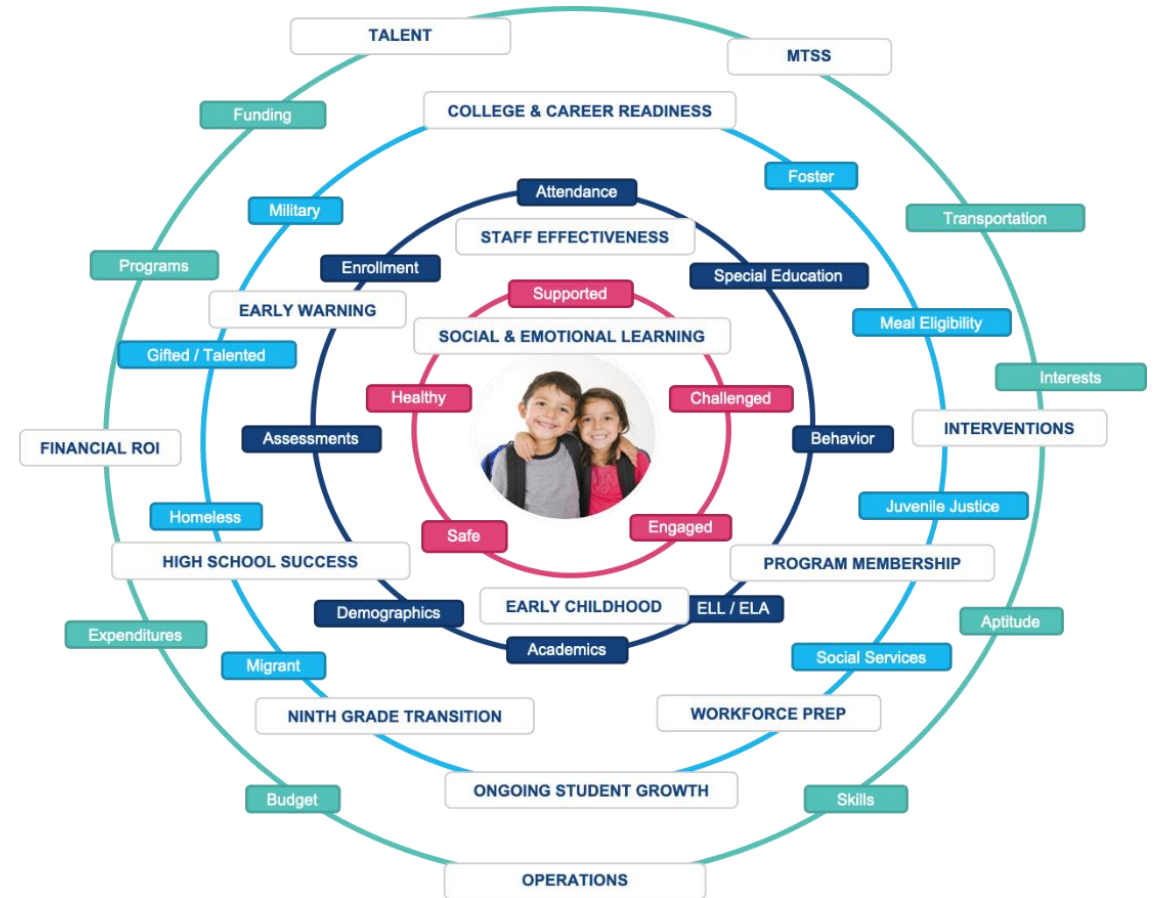
Digital Equity and
Accessibility



Ethical Use

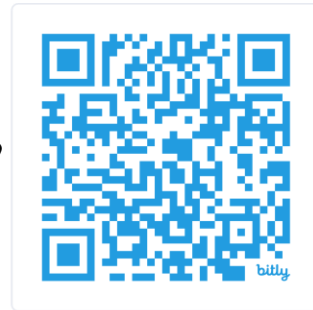
Some questions to ask when evaluating AI solutions

- **What is the quality of output?** – is it accurate, is it reliable, and does it meet your standards
- **How secure is the data?** – security, privacy, data governance
- **How easy is the learning curve?** - is AI integrated into everyday workflows
- **Does the system have 360-data context?** - to enable true AI personalization
- **Is it system agnostic?** - it works with any systems you may have, from different vendors
- **Has it worked at proven scale?** - performance, quality of response, reliability



PowerSchool's Responsible AI Rubric for AI Application Evaluation

Want access to our **checklist and interview guide** on evaluating AI applications?



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 PowerSchool

Evaluating AI Applications: Questions & Considerations

RESPONSIBLE AI CHECKLIST | 6 AREAS TO COVER



With the unprecedented surge in AI solutions for education, it's vital to consider the following factors to ensure that this new technology aligns with educational goals and benefits both students and educators and also incorporates the required guardrails for safety, ethics, and long-term sustainability.

Here are some questions to keep in mind when considering AI-based tech:

1 Data Privacy and Security

- ☐ How is student data collected, stored, processed, and protected?
- ☐ How are the security risks of data movement between transactional systems, AI models, and end-user applications mitigated?
- ☐ Describe data governance and security policies of the AI applications.
- ☐ How is the AI application compliant with data protection regulations including FERPA?
- ☐ How is student and district data used to train AI models?
- ☐ What guardrails are in place to ensure district data is not exposed across the internet for model training?
- ☐ What protections are in place against adversarial attacks?

2 Model Performance and Accuracy

- ☐ What mechanisms are in place to detect, address, and eliminate model hallucinations (when false, nonsensical, or not real information is generated)?
- ☐ How do you ensure models are able to detect the relevant patterns in unseen data?
- ☐ Describe the evaluation metrics used in optimizing model performance.
- ☐ How are the generic models made relevant to the district-specific use cases?
- ☐ How does the application allow users to provide feedback?

Responsible AI Checklist

1

Data Privacy and Security

- How is the student's data **collected, stored, processed and protected**?
- How are **security risks of data movement** between transactional systems, AI models and end-user applications mitigated?
- How is **student and district data used to train** AI models?
- What guardrails are in place to ensure district data is **not exposed across the internet** for model training?

2

Model Performance and Accuracy

- What mechanisms are in place to **detect, address and eliminate model hallucinations** (when false, nonsensical or not real information is generated)?
- How do you ensure models are able to **detect the relevant patterns in unseen data**?
- Describe the **evaluation metrics** used in optimizing model performance.
- How are the generic models made **relevant to the district-specific use cases**?
- How does the application allow users to **provide feedback**?

3

Bias and Fairness

- What mechanisms are in place to **detect, address and eliminate bias**?
- What procedures are used to ensure the **results presented are appropriate** for students, staff and parents?



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Responsible AI Checklist

4

Interpretability and Explainability

- How are **end-users able to understand** what the models are doing?
- What **controls are in place for users to override** the AI tool's recommendations?

5

Scalability and Sustainability

- What mechanisms are in place to ensure **consistent model performance and accuracy levels** with larger data sets, distribution changes, and new information?
- Describe how the application will **support data volume, user traffic and complexity** at scale.
- What mechanisms are in place to **optimize resource usage** at scale?
- Describe the **disaster recovery plan** in case of system failures.
- Describe **model maintenance procedures**.

6

Interoperability and Training

- Describe **integrations** with existing applications, databases, and user workflows.
- How is **seamless end-user experience** achieved?
- How are users **trained on the application** and informed about the correct use of AI?



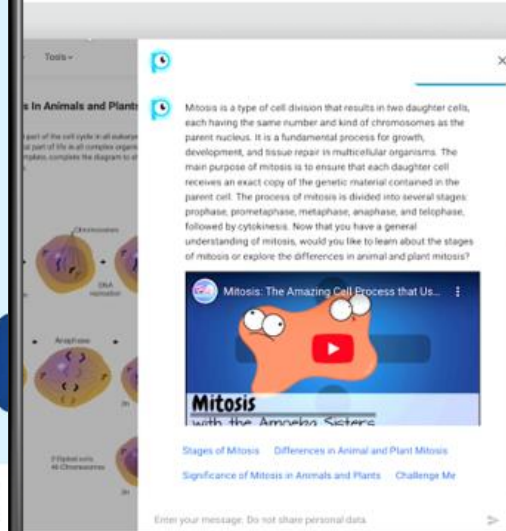
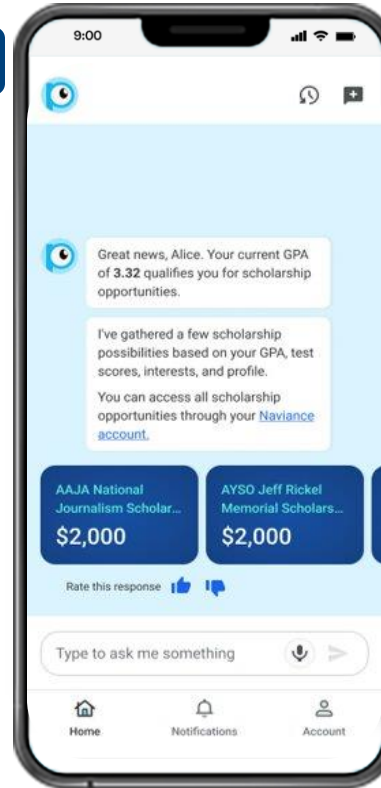
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PowerSchool AI

Transforming Education for Every Child

PowerBuddy Responsible AI Platform:

- ✓ **Data Security and Sovereignty**
We *bring AI to data*: a modern approach to AI in K-12
- ✓ **No learning curve**
with AI integrated into everyday workflows
- ✓ **360-data context, Grade appropriate**
for unparalleled AI personalization
- ✓ **System-agnostic, Curriculum aligned**
to maximize district investments and AI reach
- ✓ **Proven scale with Controls for K12**
with largest K-12 data lake powering AI



Students
Personalized digital tutor



Teachers
Personalized assistant for lesson plans & tests



Parents
Personalized resources & updates on child



Administrators
Personalized data analyst through "talk to your data"



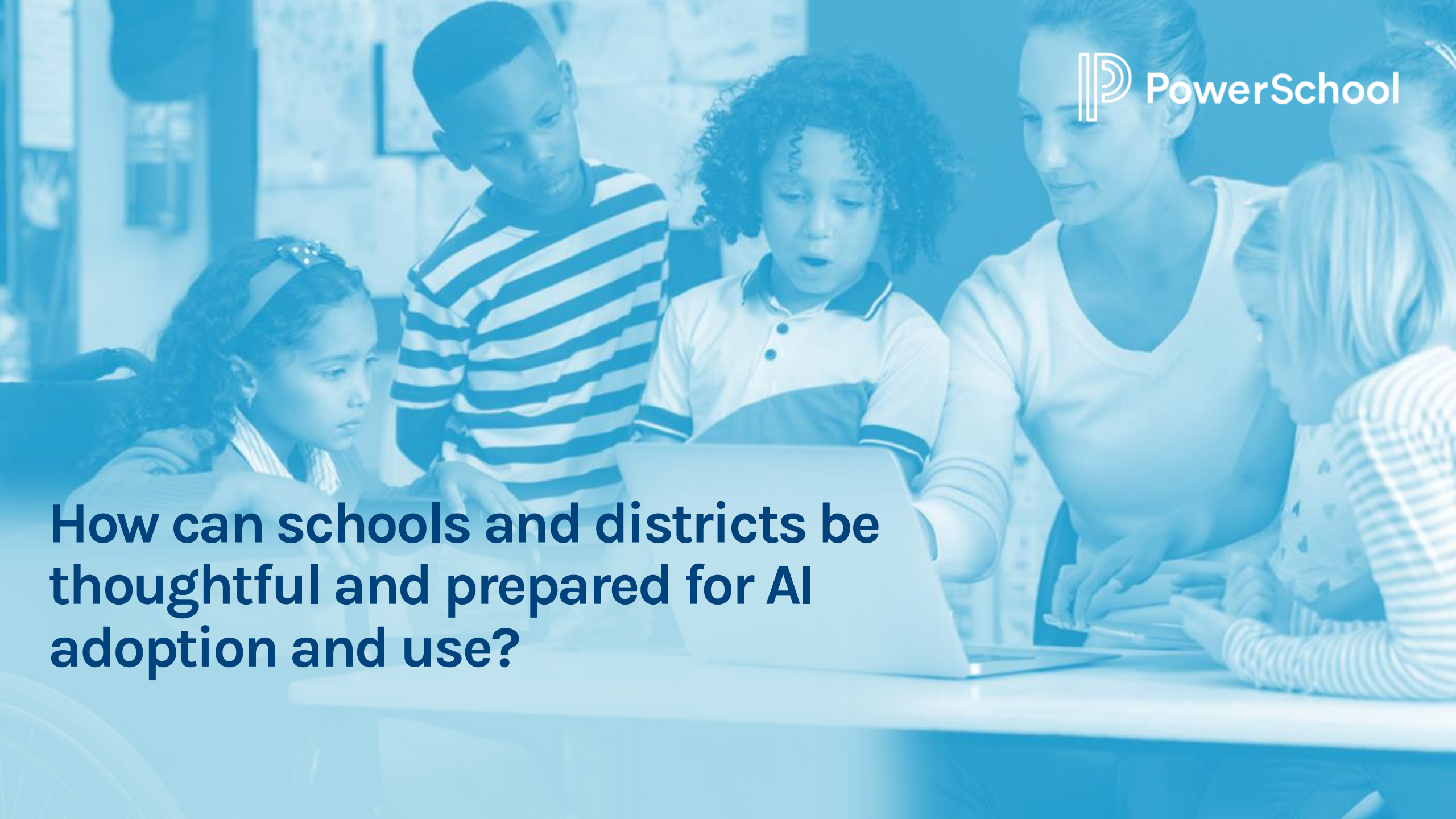
Built with Fairness & Bias Resistance



Digital Equity and Accessibility



Transparency and User Control

A photograph of a teacher and four students gathered around a laptop in a classroom. The teacher, a woman with dark hair, is pointing at the screen. Three students (two girls and one boy) are looking at the laptop, while a fourth student is partially visible on the right. The image has a blue tint.

How can schools and districts be thoughtful and prepared for AI adoption and use?

What we know from research: Change Management Matters

✓ STRATEGY 1: CREATE A CONTEXT CONDUCTIVE TO CHANGE

✓ STRATEGY 2: CREATE A SHARED VISION OF CHANGE (WHEN IDEALLY IMPLEMENTED)

✓ STRATEGY 3: INVEST IN PROFESSIONAL LEARNING

✓ STRATEGY 4: PLAN FOR IMPLEMENTATION & ALLOCATE RESOURCES

✓ STRATEGY 5: MONITOR PROGRESS

✓ STRATEGY 6: PROVIDE ONGOING SUPPORT

Hall, G.E., & Hord, S. M.
(2019) *Implementing
change: patterns,
potholes, and principles
(5th ed).*

Creating a Context Conducive to Change: 5 Areas of AI Readiness



Instructional Practices

Standards-aligned instruction

Data Literacy/Data-informed decision making

Comfort Using Technology for Instruction



Stakeholder Engagement

Communication planning

Ongoing professional learning for AI

Feedback loops with stakeholders



Technological Capacity

Enabled Support systems

Reliable and scalable data systems (data lake)

Equitable access to technology and cloud-based solutions



Strategic Alignment

Intentional approaches to change management

Cross-functional leadership structures

Alignment with guidance, procurement, and system policies



Data Governance and Policy

Modernized and secured data systems (cybersecurity)

Strong data privacy practices

Updated compliance policies

Shared Vision of Change

Change	Vision	Skills	Incentives	Resources	Action Plan
Confusion		Skills	Incentives	Resources	Action Plan
Anxiety	Vision		Incentives	Resources	Action Plan
Resistance	Vision	Skill		Resources	Action Plan
Frustration	Vision	Skill	Incentives		Action Plan
Treadmill	Vision	Skill	Incentives	Resources	

Q&A