From Fragmentation to Coherence:

Lessons Learned from Education First's AIxCoherence Academy

October 2025

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Generative AI has rapidly entered K12 education, with promises to personalize learning, reduce teacher workload and enhance instructional design. Yet **without trusted guidance** on tool quality, alignment and impact, **education leaders are left making high-stakes decisions** about tools, time and instruction **without a compass**. Emerging analyses warn that districts lacking coherent training, policies and support are more likely to see inconsistent implementation and outcomes, particularly in under-resourced schools. **The result is fragmented adoption and the risk of widening educational inequities**. This deck summarizes lessons learned from working directly with system leaders through AIxCoherence Academy—a multi-district initiative that supports school systems in adopting AI in ways that strengthen, rather than disrupt, core instructional priorities.

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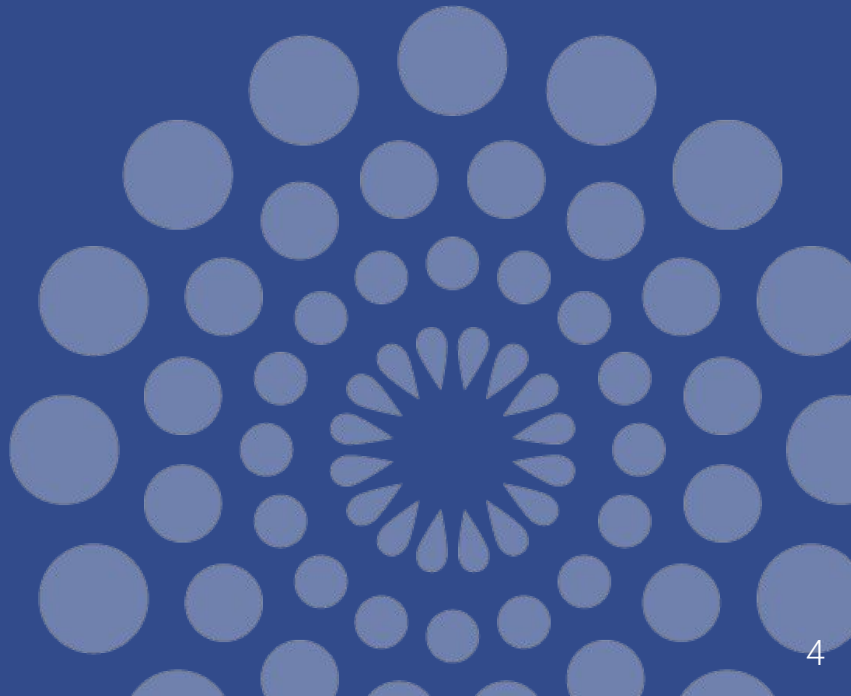
Who we are

Education First is a seasoned team of trusted advisors to the leaders responsible for delivering what many Americans want most: public education that effectively prepares all students for success in college, careers and a world of constant change. We devote our energy and expertise to improving opportunities for all children, especially students experiencing poverty and students of color.

What is the AIxCoherence Academy?



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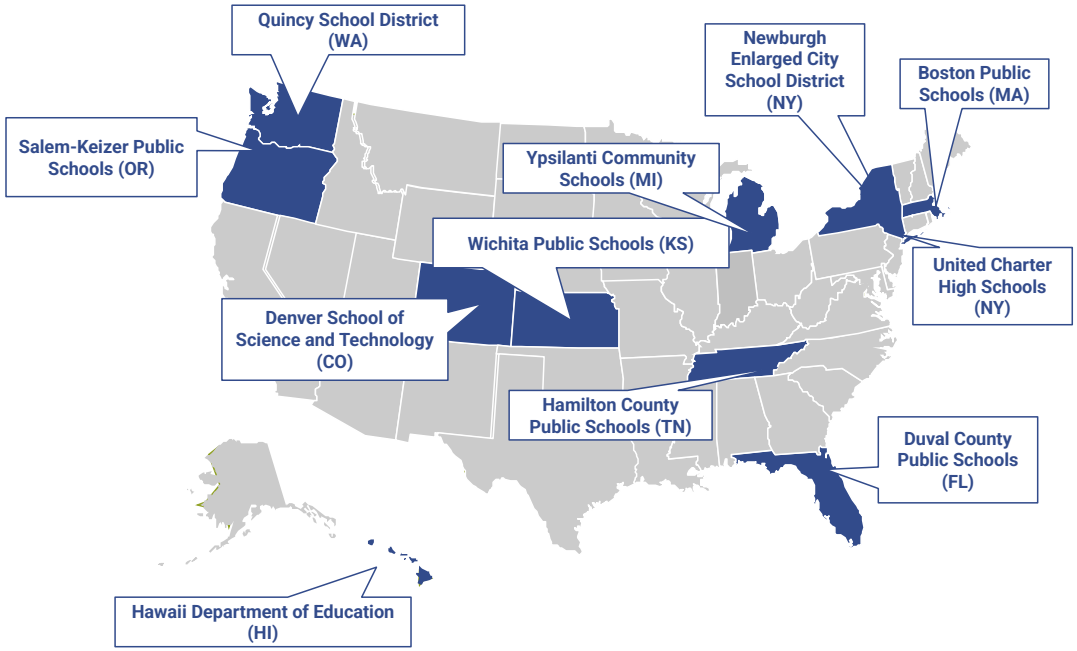
Launched in 2024 with a cohort of 11 districts



Over 30 applications were reviewed on a variety of data

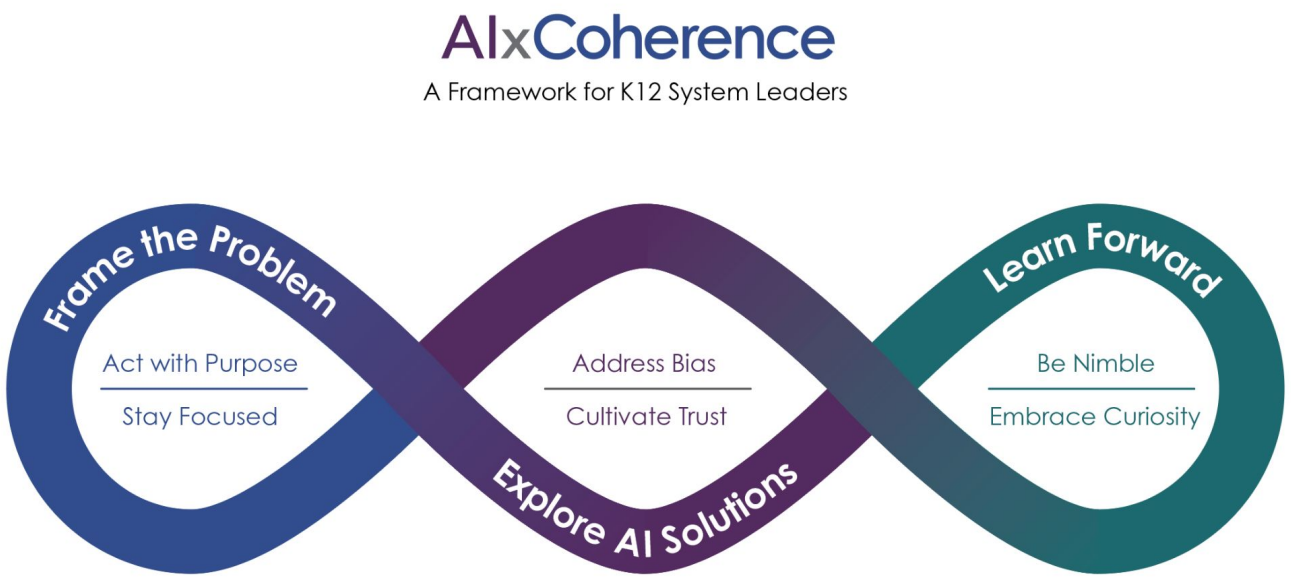
Primary considerations:

- The LEA can commit to **forming and engaging a robust cross-functional team** to participate in the work
- The LEA is poised to **explore** the **adoption of AI-based tools** for one or more specific use cases
- The LEA serves a population that is **majority students of color** and/or **living in low-income communities** (using FRPL as a proxy)

Click here for more information about the AIxCoherence Academy.

The Framework

Designed for systems leaders to explore, pilot and implement AI with intention within their teaching and learning systems



Click here for more details about the AIxCoherence Framework.

The Academy

Supports cross-functional district teams to explore, pilot and implement AI with intention within their teaching and learning ecosystems

Should we?

Frame the Problem:
Identifying High-Leverage Problems

Cultivate Trust:
Prioritizing AI Solutions With User-Centered Insights

Could we?

Defining Use Cases with Clarity and Purpose

Prioritizing AI Use Cases for Impactful Change

How do we?

Tool vetting:
Due Diligence and Coherence Analyses

Stress-Testing Solutions:
Refining Use Cases for Purpose and Impact

Rapid-cycle R&D:
Planning for Adoption and Implementation

Prioritize & Plan:
Mapping the Path Forward

What did AIxCoherence LEAs grapple with around AI integration?

Many districts feeling the need to respond to the new technology with urgency

Districts are grappling with what it means to teach *with* AI and teach *about* AI as part of a broader AI integration strategy.

Whether large or small, urban or rural, system leaders experienced similar external pressures

- Teachers and students were **already experimenting** with AI
- Districts fielding a **steady stream of pitches** ("Check out this shiny new free tool that will solve all your problems!")
- System leaders being frequently asked, **"What's your AI strategy?"**

…with common challenges in responding to them

- Keeping up with actual usage and deciding **what should be "tight" vs "loose"**
- **Lack of resources** to help **assess quality**, alignment to use cases and how to decide what to pilot
- **Little time to collaborate effectively** across teams to think through strategy
- Districts are at **varying levels** on AI literacy and policy development

The Academy pushed district teams to deeply interrogate the problem they sought to solve before jumping to solutions

I used to think...

- “About solutions first”
- “Framing a problem was simple”
- “One size fits all”
- “Specificity only applies at the tool level”
- “Trying to define a problem would be easy”

Now I think...

- “We need to stop assuming and get to the root”
- “Framing the problem is one of the most important parts”
- “There can be more individualized solutions”
- “There are so many layers... when considering the use of AI”
- “Having a well-articulated problem without a solution in the statement is the key to efficiently using AI”

Starting with the problem rather than the solution

Districts found that “defining the problem” first instead of “finding the tool” was the key and led to surprising conclusions about their use cases.

Teams shifted from vague AI ambitions to specific challenges, such as:

How can these tools **improve alignment to increase student access** to grade-level content while addressing unfinished learning?

How can AI help teachers **plan and adapt our HQIM** more efficiently and effectively?

How can AI **surface and organize student learning data** in ways that directly inform instruction?

How can AI-enabled tools **strengthen coherence** between Tier 1 curriculum and intervention supports within an MTSS framework?

Some teams even found **AI wasn't the right solution** to their learning agenda questions, avoiding wasted effort.

Instructional use cases

Focusing on problem definition led Academy districts to craft a range of instructional use cases to pilot

Use Case #1:

Lesson planning, preparation and differentiation support connected to HQIM implementation

- Generate **accessible tasks for small group intervention** that align with grade-level standards so that I can provide differentiated instruction without lowering rigor.
- **Create math fluency practice that aligns with our math HQIM's conceptual lessons,** ensuring that students build procedural fluency in a way that reinforces deep understanding and preps them for application tasks.
- Integrate our district frameworks (**culturally responsive teaching, universal design for learning**) into our HQIM program, so that we can generate conditions for learning that support all of our students.
- Create interactive and differentiated lessons from our HQIM that **foster authentic student engagement.**

Use Case #2:

Real-time instructional support and data-driven teaching

- Using real-time data insights, help us identify common student misconceptions related to our PLC learning goal or suggest targeted instructional strategies, so we **can effectively adjust and align Tier 1 instruction and interventions.**
- Leverage real-time **data insights from formative assessments,** so I can **adjust my HQIM** more effectively without adding to my workload.

Use Case #3:

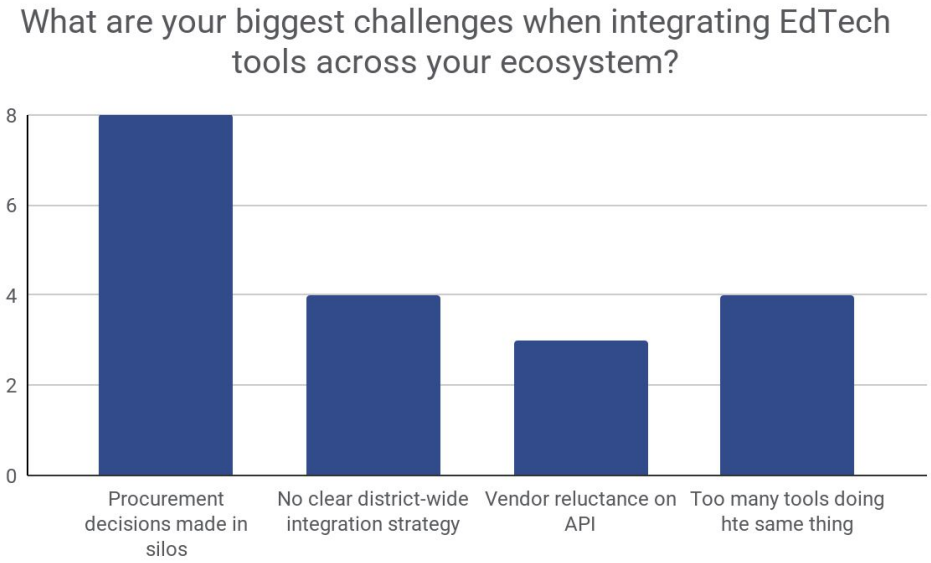
AI-enabled curriculum-based professional learning for new teachers

- Leverage AI to **help early career educators navigate and internalize high-quality instructional materials** (HQIM) by surfacing relevant scaffolds, modeling instructional decisions and offering just-in-time guidance—accelerating their development while ensuring students receive strong, differentiated instruction.

What did AIxCoherence LEAs grapple with around AI decision making?

Alignment Challenges

Overwhelmingly, districts reported that their biggest challenge in ensuring AI tools were aligned to instructional priorities is that procurement decisions are made in silos



Leaders see an opportunity to improve procurement by breaking down silos and aligning tool selection with instructional priorities

Select responses to "What, if anything, are you hoping to improve about selecting and purchasing new tools, particularly as you evaluate AI?"

"Prioritize instructional needs but incorporates technical concerns."

"The tech side defers to Curriculum & Instruction, so our instructional priorities lead the work."

"[Our approach] centers instructional practice."

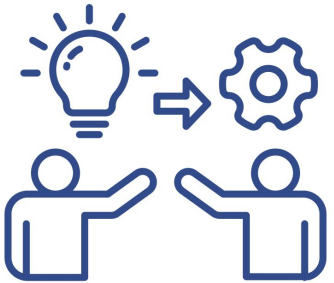
Source: Education First's survey of AIxCoherence districts; N=8

Breaking Down Silos

Bringing cross-functional teams together helped break down silos and was key to coherent decision making

Decision making on how AI is integrated into classrooms **must include both technology and instructional expertise.**

Participants highlighted that **collaborating in cross-functional teams** allowed them to create **AI use cases that directly addressed classroom needs**. For some, this was their first time working together in person across different district departments, such as curriculum, technology and school-based staff. This inclusive approach helped **bridge gaps between departments, foster trust and establish a stronger foundation** for effective AI integration



"We finally had a chance to collaborate across teams and gained valuable insights from each other's perspectives."

Including a Mix of Leaders

District teams also found it was important to have a mix of innovators and systems thinkers participating in decision making

Innovators

System Thinkers

The concept of "innovators vs. systems leaders" refers to the dynamic between those who push for new ideas (innovators) and those responsible for implementing, scaling and sustaining them (system leaders).

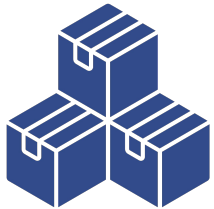
Tools Support

Teams found unique value in applying key AIxCoherence tools to make strategic, user-informed decisions about AI tool adoption

Use Case Prioritization Protocol

A tool to help districts effectively articulate their needs

AI Tool Inventory



An internal assessment of all AI enabled tools already being used

Due Diligence Checklist

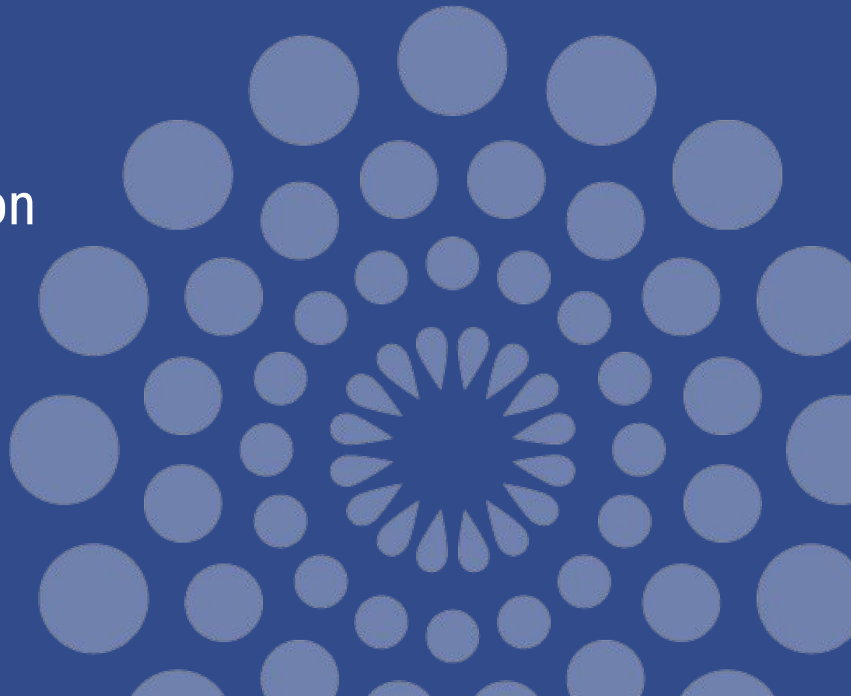
Decision-ready checklist tool to support tool selection, piloting and adoption

New Toolkit

Check out this comprehensive toolkit containing all of Education First's AIxCoherence resources for district leaders!

Where are AIxCoherence LEAs landing and why?

Patterns in District AI innovation & adoption



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Districts are favoring customizable solutions within existing tech ecosystems rather than adopting new, one-off products

Grounded in Curriculum & Frameworks	Teams learned that AI tools **disconnected from their HQIM** or instructional frameworks **produced generic, low-value outputs**. The most effective pilots were those embedded in existing instructional systems.
Easy-to-Use	Districts want tools that can fit **seamlessly within their tech ecosystems** and teachers' daily routines.
Part of Existing Partnerships	Many favored **customizing tools within current partnerships** (Microsoft Copilot, Canvas AI, Google Classroom, Panorama) rather than one off-off products, with a few exceptions.
Teacher-First, Human-Led	Most districts are **beginning with teacher-facing tools to build capacity** before introducing student-facing applications, with the exception of high school

Unlike past tech adoption waves, AI gives districts and educators greater agency to create and customize tools rather than simply choosing from pre-built options

The drive to innovate within existing platforms is also being driven by familiarity, safety concerns and budget constraints

The majority of districts have procured an AI-enabled tool in the past 12 months, but many were new tool features within the LMS or programs they already use. There is less appetite for standalone tools given budgets constraints and safety concerns, particularly for student-facing tools.

Question: "What, if anything, are you hoping to improve about selecting and purchasing new tools, particularly as you evaluate AI?"

> "There is **no money to spend** millions on one specific AI tool for large school districts. Look at the papers of our largest school districts across the country, they are cutting teachers left and right."

> "Our **biggest challenge right now is budget** and having to cut tools we have piloted and found impactful."

Source: Education First's survey of AIxCoherence districts; N=8

Early adopters are designing AI tools that extend rather than disrupt their instructional frameworks

Boston: Piloted **Solara by Panorama,** which includes IM 360, district curriculum frameworks, UDL principles, MTSS resources and detailed analytics to support Tier 1 instruction and targeted intervention as well as educator AI usage. Tool also includes option to create customized chatbots for the curriculum, tailored to district needs.

Wichita: Created **custom AI agents** within **CoPilot** to improve on what they were already trying to do (incorporate environmental themes across the content areas and within their various HQIM at an environmental-themed middle school).

DSST: Attempted to leverage **PlayLab** platform to design a custom chatbot focused on math fluency to support use of IM in math classrooms.

District Spotlight: DSST Public Schools

- LMS: Google Classroom Canvas
- 6-8 Curricula: Novel ELA; Illustrative Math; OpenSciEd
- Moderately-to-highly integrated

DECISION FACTORS	
Non-negotiables	■ Strong student data privacy and security protections ■ Ability to integrate with district SIS (Student Information Systems) ■ Alignment to instructional vision/curriculum
Values	■ Instructional alignment ■ Data integration/interoperability ■ Affordability
Driver for AI procurement	■ Belief that AI access is critical for 21st century readiness for students and that teachers influence this
Strength of current approach	■ Prioritize instructional needs but incorporates technical concerns. ■ Centers instructional practice ■ Single sign-on (SSO) reduces login fatigue for students and staff ■ Our LMS and SIS are well-aligned and regularly updated ■ Tools are user-friendly and widely adopted by staff and students ■ Tools are integrated and data flows smoothly across platforms
Opportunities for improvement	■ Collaboration between tech and teaching & learning team. ■ Clarifying our beliefs about how AI is best used - or not used. ■ Procurement decisions made in silos (e.g., tech separate from instruction) ■ Too many tools performing similar functions ■ Integration into subject matter and instructional PD

Boston Public Schools chose Solara, Panorama's AI tool, to build custom curriculum-aligned chatbots for its math use case

BOSTON Public Schools

"If an AI tool can't actively use student data and our core curricular materials to inform differentiated instruction, it's not worth adopting. We're looking for tools that accelerate and enhance our HQIM initiatives—not ones that risk reinforcing outdated or ineffective practices."

"Solara is a game changer. We have district-created resources that Solara can ingest, allowing us to use it for intervention planning, instructional tools, and program development in a way that is actually specific to the BPS context. We are using a secure AI system with our own data to inform our planning."

District Spotlight: Boston Public Schools

- LMS: Google Classroom
- K-8 Curricula:
  - ELA: EL (Elementary); StudySync (Middle)
  - Math: Illustrative Math (Elementary and Middle); Amplify (Middle)
- Moderately-to-highly integrated

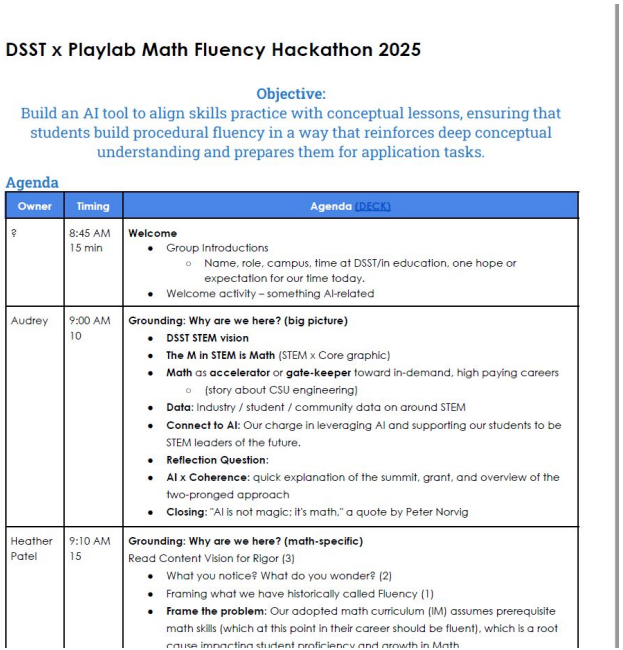
DECISION FACTORS	
Non-negotiables	■ Instructional alignment ■ Data privacy & compliance ■ Data interoperability (easy movement of data across platforms) ■ Strong student data privacy and security protections
Values	■ Accessibility ■ Universal Design for Learning ■ Affordability
Driver for AI procurement	■ Support more effective implementation of HQIM ■ "AI is here…"
Strength of current approach	■ "Our Technology Department has done a great job utilizing a process for app approvals, especially from schools reaching out and it sometimes means saying no and referring folks to our already-approved AI tools…" ■ Single sign-on (SSO) reduces login fatigue for students and staff, ■ Our LMS and SIS are well-aligned and regularly updated, ■ Tools are user-friendly and widely adopted by staff and students ■ Instructional and tech teams collaborate effectively
Opportunities for improvement	■ Lack of interoperability between platforms, ■ Procurement decisions made in silos (e.g., tech separate from instruction), ■ Vendor reluctance or lack of API/data access

DSST used the PlayLab platform to conduct a design sprint and prototype a custom AI tool for its math use case

DSST PUBLIC SCHOOLS

Playlab

"We didn't get to roll AI out, it's here."



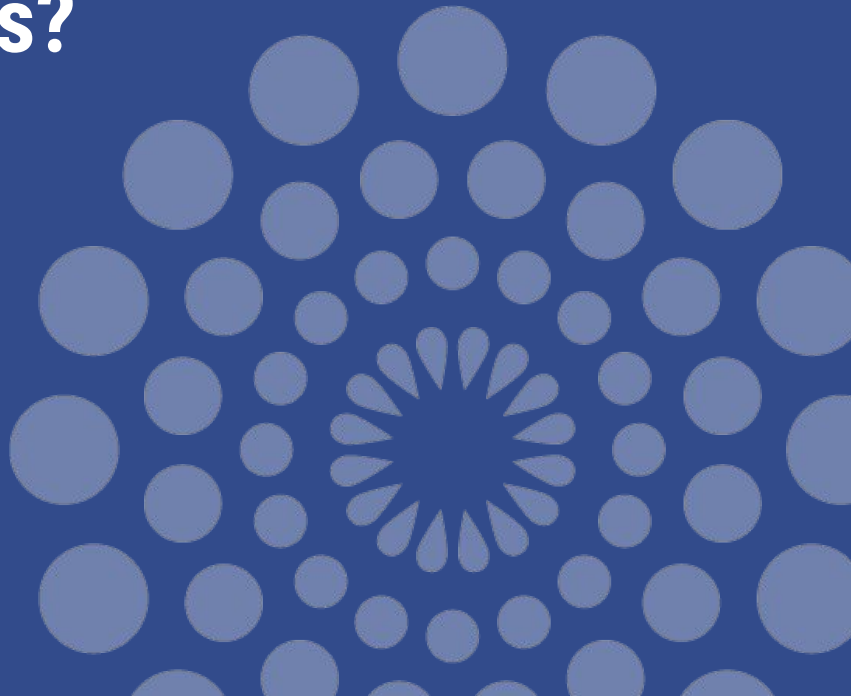
DSST x Playlab Math Fluency Hackathon 2025

Objective:
Build an AI tool to align skills practice with conceptual lessons, ensuring that students build procedural fluency in a way that reinforces deep conceptual understanding and prepares them for application tasks.

Agenda

Owner	Timing	Agenda (DECK)
?	8:45 AM 15 min	**Welcome** • Group Introductions ○ Name, role, campus, time at DSST/in education, one hope or expectation for our time today. • Welcome activity – something AI-related
Audrey	9:00 AM 10	**Grounding: Why are we here? (big picture)** • **DSST STEM vision** • **The M in STEM is Math** (STEM x Core graphic) • **Math** as **accelerator** or **gate-keeper** toward in-demand, high paying careers ○ (story about CSU engineering) • **Data:** Industry / student / community data on around STEM • **Connect to AI:** Our charge in leveraging AI and supporting our students to be STEM leaders of the future. • **Reflection Question:** • **AI x Coherence:** quick explanation of the summit, grant, and overview of the two-pronged approach • **Closing:** "AI is not magic; it's math," a quote by Peter Norvig
Heather Patel	9:10 AM 15	**Grounding: Why are we here? (math-specific)** Read Content Vision for Rigor (3) • What you notice? What do you wonder? (2) • Framing what we have historically called Fluency (1) • **Frame the problem:** Our adopted math curriculum (IM) assumes prerequisite math skills (which at this point in their career should be fluent), which is a root cause impacting student proficiency and growth in Math

Where are the gaps?
Where are the opportunities?



Opportunities to support systems

Within each of these demand-side opportunities, funders can support:

AI Readiness and Knowledge-Building

Build shared understanding of **AI capabilities**, **risks**, and **implications** for teaching and learning.

Empower leaders by creating opportunities **to develop** shared, practitioner-driven **definitions of AI tool quality**, especially as student facing AI use cases grow.

AI strategy development and capacity building

Support districts in defining clear AI use cases tied to system priorities, rather than reacting to vendor pressure.

Create structured opportunities for cross-district learning to share strategies on what works (and doesn't) and avoid reinventing the wheel.

Rapid -cycle Learning and R&D

Help systems conduct low-cost, short-cycle **pilots to test AI use cases** in their contexts.

Equip districts to collect and interpret evidence about *what works, for whom and under what conditions.*

A push for quality tools and solutions, aligned to real, high-priority use cases that integrate into existing systems and workflows

To ensure the available AI tools are meeting district needs, funders can support these supply-side opportunities:

Robust, rigorous tool development aligned to practitioner needs and use cases AND the creation of quality standards and guardrails

Time-saving or efficiency is often cited as a rationale for AI enhancements, but that **needs to be balanced against quality, excellence and equity considerations.**

More attention needs to be paid to **bringing students, families** and **educators into problem definition, design** and **piloting of use cases**, especially those furthest from opportunity

Structured opportunities for co-design with practitioners

Funders can **support the tool developers to design solutions** that **align** directly **to system leader demand**.

Building a robust ecosystem focused on impact also requires stronger fieldwide infrastructure

Within each of these ecosystem-bridging opportunities, funders can support:

Fieldwide infrastructure to accelerate shared knowledge building

Invest in **cross-sector collaboration** to create open governance models, shared definitions, metrics and aligned frameworks and processes to support a practitioner driven R&D ecosystem

Measurement frameworks to track and report on impact

Fund **external, use-case-specific and impact-focused evaluations** of AI tools and transparent review processes. These evaluations should be rooted in learning science and classroom experience to ensure they are relevant and useful

Smart AI policy making

Support SEAs and LEAs to **align procurement to practitioner-defined quality and outcomes**/impact tracking

Support SEAs and LEAs to develop **guidance and policies that advance coherence**

About Education First

We are a **national, mission-driven education consultancy** with national and place-based expertise in education improvement. We deliver **exceptional ideas, experience-based solutions and results** so all students—and particularly **low-income students and students of color—are prepared for success in college, career and life.**

APPROACH

We create more people-focused, equitable and inclusive initiatives, strategies and organizations with a focus on designing equitable strategy, research for action, and coaching, convening and building capacity.

EXPERTISE

We bring expertise across a range of issues including coherent academic and instructional systems, assessment and accountability, college and career pathways, and transforming talent and teaching.

CLIENTS

We have worked with hundreds of clients including foundations, SEAs, school districts, CMOs, and nonprofits. For foundations, we have supported strategy projects, grantees, and initiatives with Ed First as a grantee partner.

TEAM

We have deep, practical expertise with on-the-ground experience as former teachers, principals, district and state education leaders, policy advisors, strategists nonprofit leaders, and grantmakers.

Thank you!

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