

## **Another Missed Opportunity?**

**Michael Selkis**

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The announcement of AERDF's new initiative focusing on artificial intelligence (AI) in K-12 education is both exciting and reflective of the broader challenges in our educational ecosystem. AERDF has a track record of engaging in innovative, research-driven solutions to improve learning outcomes, and I commend their commitment to advancing the field. The promise of AI in education is undeniably compelling—automation, personalized learning, and differentiated instruction all hold significant potential. However, despite the allure of AI, I am deeply skeptical that this initiative, or any technology-centered initiative, will meaningfully close the achievement gap, improve teacher effectiveness, or address the systemic inequities that define our education system.

My concerns are rooted in a long-standing pattern within the field of education: a tendency to chase the “shiny” solutions while neglecting the foundational issues that truly drive student success. Education is filled with brilliant, passionate, and well-intentioned individuals, yet we continuously divert resources toward emerging trends rather than reinforcing the core structures of teaching and learning. AI may indeed improve efficiencies, aid in content differentiation, and provide adaptive assessments, but it will not teach teachers how to teach. It will not build the complex skills required for effective instruction, nor will it fundamentally change the way educators engage with students in meaningful ways.

I write this not as a critic of AERDF's work but as a practitioner who has lived the realities of the classroom, school leadership, and educational systems. I personally applied for this grant with a proposal aimed at improving teacher quality by integrating quantitative and qualitative measures with a more humanistic approach to professional development. My approach sought to connect teacher support to the macro system of Multi-Tiered System of Supports (MTSS), recognizing that true educational transformation occurs when instructional quality is improved at scale. My proposal advanced through initial stages but was ultimately not selected. I hold no ill will—rather, I share this to underscore the sincerity and clarity of my argument.

### **Why AI Will Not Close the Achievement Gap**

The achievement gap is a deeply rooted issue that stems from systemic inequities—economic disparities, racial biases, funding imbalances, and access to high-quality instruction. AI, no matter how sophisticated, cannot fundamentally change the conditions in which many students learn. Research has consistently shown that teacher quality is the most significant in-school factor affecting student achievement (Chetty, Friedman, & Rockoff, 2014). If the goal is to close the achievement gap, then efforts should be centered on ensuring every student has access to highly effective teachers, not on implementing technology that, at best, supplements instruction and, at worst, exacerbates inequities.

AI-driven solutions are often developed with an idealized version of education in mind—one where all students have access to devices, stable internet connections, and educators who are trained to integrate technology effectively. However, the reality is starkly different. A 2021 study from the **Center on Reinventing Public Education** found that remote learning and digital tools, often heralded as equitable solutions, disproportionately harmed low-income students who lacked the necessary resources to engage fully. AI risks further widening this digital divide, as economically disadvantaged students are more likely to receive passive, tech-driven instruction while their affluent peers benefit from teacher-led, interactive, and personalized learning experiences (Reich & Ito, 2017).

## **The Foundational Issues That AI Cannot Address**

If we are serious about improving student outcomes, we must focus on **teacher preparation, professional development, and instructional support**. The interaction between the teacher, the student, and the content remains the most powerful lever for educational change (Lemov, 2010). Yet rather than directing substantial funding toward research-based improvements in pedagogy, we continually invest in technological solutions that do not address the root causes of educational disparities.

Despite widespread acknowledgment that teacher quality matters, professional development in the U.S. remains fragmented and inconsistent. The **Learning Policy Institute** (2019) found that most teachers do not receive sustained, high-quality professional learning experiences, and those who do often lack structured support to implement new strategies effectively. Teaching is a technical skill that requires deliberate practice, feedback, and ongoing development. AI does not currently—and likely never will—replace the human, relational aspects of effective teaching.

Moreover, many of these large-scale educational initiatives, including those spearheaded by well-funded organizations like AERDF, are often led by individuals with impressive academic and professional backgrounds but little to no direct experience as classroom teachers or school administrators. This disconnect often results in idealistic solutions that fail to account for the real-world challenges educators face. Schools are not merely sites for implementing new technology; they are dynamic, complex environments where learning is deeply social and influenced by countless contextual factors. Until we center **teachers and instructional practice** in our conversations about educational improvement, we will continue to see well-intentioned initiatives fail to deliver transformative results.

## **The Danger of Prioritizing the "Shiny" Over the Substantive**

Education is not immune to fads, and history has shown that new technologies rarely live up to their initial promise. Interactive whiteboards, 1:1 laptop program, and personalized learning software have all been touted as game-changers, yet they have not led to significant improvements in student outcomes (Cuban, 2020). The AI revolution in education is following the same trajectory: high expectations, significant investment, and a lack of rigorous evidence that it will address the most pressing educational challenges.

AI can and should play a role in education—but only as a **tool to support foundational improvements**, not as a substitute for them. If organizations like AERDF truly want to drive systemic change, they should focus on strengthening the **brick and mortar of our educational ecosystem**:

- **Teacher preparation and induction programs** that ensure all new teachers enter the classroom with strong pedagogical skills.
- **Sustained, research-based professional development** that is embedded in practice and connected to student learning outcomes.
- **MTSS frameworks** that integrate academic, behavioral, and emotional supports to meet the needs of all learners.
- **Instructional leadership development** that ensures school leaders are equipped to support teachers and drive continuous improvement.

These areas are not as flashy as AI, but they are the bedrock of effective education systems. Ignoring them in favor of technology-driven solutions is, at best, a missed opportunity and, at worst, a misallocation of resources that could be used to drive lasting, meaningful change.

### **A Hopeful but Cautious Outlook**

I sincerely hope that AERDF's AI initiative succeeds in creating **new pathways for all students**, particularly those who have been historically marginalized. If AI can be leveraged to improve access to high-quality instruction, then it has a place in the conversation. However, I remain deeply concerned that without a corresponding investment in **teacher quality, instructional rigor, and systemic support structures**, we are once again placing the cart before the horse.

The promise of AI is exciting, but it cannot replace **the most powerful mechanism for improving education: great teaching**. Until we shift our priorities away from the "shiny" and toward the **substantive**, we will continue to see well-funded initiatives fall short of their transformative potential. It is time for organizations, policymakers, and educational leaders to commit to strengthening the **human element of teaching and learning**—because real equity and access begin with the people who stand in front of students every day. Just one person's opinion.