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Submitter Information

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General Comment

See attached file(s)

Attachments

SETDA Response to NSF AI RFI MAY 29



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State Educational Technology Directors Association (SETDA)

Response to the RFI on the 2025 National Artificial Intelligence Research and Development Strategic Plan (Docket ID No. NSF–2025–OGC–0001), Submitted via [Regulations.gov](https://www.regulations.gov)

Introduction

[SETDA](https://www.setda.org) is the national professional association representing U.S. state and territorial educational technology leaders. We support state education agencies in advancing digital learning, strengthening technology infrastructure, and shaping the integration of artificial intelligence (AI) into education policy and practice. As the National Science Foundation updates the *National Artificial Intelligence Research and Development Strategic Plan*, we urge you to prioritize AI's role in public education and invest in research that ensures safe, inclusive, and evidence-based use of AI in America's classrooms.

SETDA and our members support a national AI research and development (R&D) agenda that ensures AI tools used in education are:

- **Safe and Private:** Compliant with the Family Educational Rights and Privacy Act (20 U.S.C. §1232g et seq.), the Children's Online Privacy Protection Act (15 U.S.C. §6501 et seq.), state privacy laws, and aligned with K-12 cybersecurity best practices.
- **Evidence-Based:** Evaluated according to the Elementary and Secondary Education Act's (20 U.S.C. 6301 et seq.) evidence tiers to verify impact on learning outcomes in specific contexts.
- **Inclusive:** Designed to meet the needs of all learners, including students with disabilities.
- **Usable:** Seamlessly integrated into teaching and learning without increasing educator burden.
- **Interoperable:** Aligned with open standards to support secure, efficient data exchange across systems.

These five principles reflect SETDA's [EdTech Quality Indicators](#) and echo many of the education-focused recommendations in the *Bipartisan House AI Task Force Report* (2024), which emphasizes the urgency of promoting AI literacy, achieving universal digital access, and expanding and sustaining professional learning.

Proposed Research Priorities and Recommendations

1. Advance Research on Safe and Private Use of AI for Education

AI R&D should include a focus on shielding students from online harms and protecting confidential student, family, and school personnel data. SETDA recommends that NSF continue and expand investments in R&D that explore:

- **Federated learning approaches** that enable AI educational uses without transferring raw student or educator data.
- **Differential privacy techniques** designed for longitudinal education datasets, including those used by local and state education agencies.
- **Verification and auditing strategies** that assess AI vendor compliance with FERPA, COPPA, and state privacy laws.
- **Threat assessment** to anticipate how AI systems might be exploited in education-specific cyberattacks.

These priorities align with the *House AI Task Force Report's* emphasis on the ethical deployment of AI and the importance of ensuring safety and accountability in public systems.

2. Evaluate the Efficacy of AI Tools for Teaching and Learning

As schools' use of AI tools expands in K-12 education, policymakers must ensure the technologies are backed by robust, independent evidence of impact. SETDA urges NSF to:

- **Establish a National Center for AI in Education Research** to consolidate findings, publish evidence syntheses, and inform education policy and procurement decisions.
- **Fund large-scale, multi-site studies** that assess the impact of AI-powered interventions on academic achievement, student engagement, and well-being, particularly for underrepresented and high-need student populations.
- **Support rapid-cycle evaluation pilots** to allow real-time feedback and iterative refinement of AI use cases such as tutoring systems, formative assessment tools, and AI-assisted grading.

With appropriate staffing, the U.S. Department of Education's *What Works Clearinghouse* and the Office of Educational Technology could play a critical role in guiding the evaluation and effective use of AI tools in schools.

3. Invest in Inclusive and Human-Centered Design

AI systems must be designed to serve all learners. SETDA recommends R&D investments to ensure that AI tools support all student populations:

- **Inclusive design methodologies**, including co-design with students with disabilities, multilingual learners, and historically marginalized communities.
- **Seamless integration with assistive technologies**, such as text-to-speech, captioning, and switch-based controls, to enhance accessibility.
- **Research on differential impact**, examining how AI tools may unintentionally reinforce bias or create accessibility barriers—and identifying effective mitigation strategies.

There is a clear need for sustained R&D to ensure all students, regardless of background or ability, can access and benefit from AI-powered tools that accelerate learning.

4. **Prioritize Usability and Human-AI Collaboration in Classrooms**

For AI to meaningfully enhance instruction, it must be usable, trustworthy, and aligned with the realities of classroom practice. SETDA urges NSF to support research that:

- **Designs educator-facing tools**, such as dashboards, alerts, and personalized recommendations, that are intuitive, actionable, relevant, and reduce rather than increase teacher workload.
- **Explores teacher-AI teaming models** in which AI supports differentiated instruction, real-time formative assessment, and student engagement while preserving teacher agency and professional judgement.
- **Develops robust professional learning frameworks** that empower educators to critically assess AI tools and understand their design, function, and limitations.

According to the *Task Force Report*, 71 percent of K–12 teachers have received no training on AI. SETDA supports the report’s recommendation to leverage ESEA Title II-A and Title IV-A funds to invest in AI-specific professional learning and build educator capacity.

5. **Promote Interoperability and Open Standards**

Without interoperability, schools risk fragmented systems, hidden costs, and diminished trust in AI systems. To support sustainable and scalable implementation, SETDA recommends that NSF:

- **Invest in R&D for AI systems aligned with open standards**, ensuring that tools can securely and seamlessly integrate into diverse education environments.
- **Develop benchmarking tools and certification models** to evaluate vendor compliance with data standards and assess long-term costs and feasibility of integration.
- **Advance infrastructure research** to enable secure, efficient interoperability between AI tools, state longitudinal data systems, and digital learning platforms.

These efforts directly support the House AI Task Force’s call to modernize education-industry partnerships and expand regional innovation networks, ensuring that AI investments in education are future-ready and accessible to all communities.

6. Expand Access to AI Infrastructure for K–12 Systems

The *Task Force Report* highlights unequal access to computing power and datasets as a barrier for small, rural, and under-resourced institutions. To ensure all communities can participate in the AI era, NSF should:

- **Expand the National AI Research Resource (NAIRR) pilot or related models** to include K-12 education stakeholders, including school districts, regional service agencies, and education cooperatives.
- **Support development of edge computing and lightweight AI tools** designed for offline, low-bandwidth, or device-limited school environments.
- **Collaborate with state broadband offices and education networks** to close the infrastructure gaps and enable universal access to AI-powered learning tools.

7. Support Regional Innovation and Public-Private Partnerships

NSF should fund R&D initiatives that bring together education agencies, industry, higher education, and nonprofit partners to co-create AI solutions tailored to local contexts. Building on models like P-TECH, as highlighted by the House Task Force, these partnerships can:

- **Develop region-specific tools** that reflect local workforce demands, student demographics, and policy landscapes.
- **Establish and support applied research hubs** where educators, vendors, and researchers collaborate on AI implementation frameworks, product evaluation models, and continuous improvement cycles.
- **Strengthen school-to-workforce pipelines** by embedding AI literacy, ethics, and practical applications into career and technical education (CTE), dual enrollment programs, and work-based learning experiences.

Strategic public-private collaboration will be essential for scaling effective AI integration while ensuring relevance, adaptability, and long-term sustainability.

Conclusion

To advance responsible innovation for every learner, NSF must center public education within its AI research strategy. Regardless of geography, ability, or background students deserve AI tools that enhance learning, protect privacy, and promote inclusion. The *Bipartisan House AI Task Force Report* offers a powerful roadmap which emphasizes educator training, curriculum development, equitable infrastructure, and ethical safeguards.

SETDA urges NSF to incorporate these priorities into the 2025 National AI R&D Strategic Plan to recognize the pivotal role of K-12 education in the nation's AI future.

We welcome the opportunity to collaborate and ensure that AI enhances—not supplant—educators and drives academic success and opportunity for all students.

For further information, please contact Ji Soo Song, SETDA's Director of Projects & Initiatives or visit www.setda.org.