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Request for Information: Development of a 2025 National Artificial Intelligence Research and Development Strategic Plan

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Submitter Information

Organization: Advanced Education Research & Development Fund (AERDF)

General Comment

See attached file(s)

Attachments

FINAL AERDF OSTP RFI

The United States stands at a pivotal moment. While we have made significant investments in computational capabilities and algorithms, we have yet to realize AI's potential to address what may be our greatest competitive advantage: developing human capital capable of leading and thriving in an AI-enhanced economy - something [McKinsey](#) estimated could improve US GDP by up to \$705 billion. This is about more than improving our education system—it reflects a strategic imperative to ensure Americans can effectively leverage AI for enhanced productivity and innovation, securing our economic leadership while creating pathways for everyone to experience economic prosperity.

However, our education system was not built for today's world, or to prepare our children to thrive in AI-augmented workplaces where economic mobility increasingly depends on the ability to work alongside intelligent systems. We have an opportunity to position K-12 education at the center of our AI R&D strategy **alongside** workforce development, and fundamentally reimagine how we ensure every learner - from early childhood through adulthood - has the opportunity to reach their full potential and successfully compete in the global economy. More specifically, by using AI to transform how we understand and unlock human learning - through advanced research environments that more effectively translate discovery and invention into scalable classroom practice - the U.S. could establish an insurmountable global lead while meeting the Administration's goals to accelerate innovation, enhance national security, promote human flourishing, and maintain U.S. AI dominance.

Incentives in the K-12 education market result in private sector investment primarily targeting products with near-term commercial potential rather than upstream research and development. This creates a critical gap where federal investment is essential to catalyze leading-edge innovation. Over the next 3-5 years, the federal government should prioritize funding high-risk, high-reward research at the intersection of learning sciences and AI, developing R&D infrastructure that enables breakthrough methods adapted from other sectors, and creating policies and practices that ensure benefits reach all communities.

My organization, the Advanced Education Research and Development Fund (AERDF), is the only national nonprofit with proven expertise in advanced R&D - specifically at the discovery and invention stage of the education R&D continuum - focused on unlocking

breakthrough innovations within K-12 education. Having successfully managed complex, multi-year programs that demonstrate measurable impact, we have established infrastructure and methodologies for discovering, inventing, and developing breakthrough innovations that translate research into practice.

Recommendations to Enhance the National AI R&D Plan

Based on AERDF's five years of experience successfully managing \$200 million in advanced education R&D programs, we see a clear path for federal investment to rapidly increase the capacity for more effective and efficient education R&D on pace with what other industries, like medicine, are already undertaking. Below we recommend five strategic enhancements to the National AI R&D Plan where federal investment can accelerate breakthroughs.

1. Reposition K-12 education as the foundation of our AI R&D strategy - developing extraordinary human capital is necessary to maintain AI leadership and economic competitiveness, moving from a central focus on efficiency to how GenAI can make our education system more effective at preparing Americans for an AI-enhanced economy.
2. Accelerate learning research through AI - invest in systems that reduce the time it takes to move from research findings to classroom application, increasing the efficacy of both products and research findings by using AI to identify learning patterns and predict outcomes more rapidly.
3. Create research-practice feedback loops - establish AI systems that connect educators, practitioners, researchers, policymakers, and industry partners enabling all participants to shape research priorities based on real-world needs, while making research findings more accessible and actionable across learning environments.
4. Develop personalized learning at scale - fund AI research that identifies individual learning patterns and matches them with optimal, personalized instructional approaches, moving beyond our current one-size-fits-all education model to prepare learners for AI-enhanced work environments where adaptability and continuous learning are essential for economic mobility.
5. Establish education-focused AI testbeds - create GenAI powered, synthetic environments to validate how AI enhances learning across various populations

before deploying in classrooms at scale, accelerating evidence-based innovation while managing risks.

Our recommended approach would strengthen America's economic competitiveness by closing achievement gaps that limit human capital development, accelerating learning mastery that prepares workers for AI-enhanced roles, establishing US leadership in applying AI toward human development, safeguarding national security through technological leadership, and creating clear pathways to economic mobility for every learner. By positioning human learning *and* workforce development at the center of our AI R&D strategy, America can establish leadership that fulfills the deeper promise of AI—enhancing human potential for economic prosperity while securing our technological advantage.

Sincerely,

Auditi Chakravarty

CEO, Advanced Education Research & Development Fund (AERDF)