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General Comment

See attached file(s)

Attachments

HMM Comments on AI Research and Development Strategic Plan

Comments of HMH Responding to the Networking and Information Technology Research and Development National Coordination Office Request for Information on How to Update the National Artificial Intelligence Research and Development Strategic Plan

Introduction

HMH appreciates the opportunity to submit comments on the Networking and Information Technology Research and Development (NTRD) National Coordination Office's (NCO) request for information on how to update the previous administration's National Artificial Intelligence (AI) Research and Development Strategic Plan (Strategic Plan). As a leading provider of educational content, technology, and services, HMH has been at the forefront of integrating AI into education to unlock student potential, empower educators, and support economic competitiveness. We commend the NTRD NCO for spearheading this effort, which we are confident will have a wide-ranging impact on AI development and deployment across the education sector.

AI has quickly permeated classrooms and schools, transforming the way students learn, educators teach, and administrators manage resources and interpret data. Advances in AI algorithms, human-computer interaction and hardware systems, and the development of "intelligent" computer-based assessments and instruction have moved from laboratories to more widespread classroom adoptions with positive results. Now is the time to harness AI's power to ensure we maximize its promise and limit unintended consequences.

Data from both [national](#) and [international](#) assessments indicate that students are not progressing at the rate they should be to achieve mastery of critical knowledge and skills. Given the urgent need to raise students' literacy and math achievement nation-wide, harnessing innovative yet effective instructional methods, like using AI, is essential and can help scale the impact of our investment in K-12 education. The initiative and leadership of the federal government is critical in this endeavor. A well-educated citizenry is vital to continued innovation and application of AI fueling the transformation of every aspect of our lives: economic, health, and civic engagement.

The current Strategic Plan includes important ideas for responsibly developing AI. As an organization dedicated to K-12 education, our recommendations focus on the use of AI in our education system specifically, though many build on themes already articulated in the current plan. Though teachers are increasingly seeing the benefits of AI and beginning to implement AI into their classrooms, more can be done to refine its application, address potential challenges, and maximize its effectiveness in supporting teaching and learning objectives. Empowering teachers to leverage AI tools in the classroom is crucial for the

continual improvement of educational practices, as doing so allows teachers to stay at the forefront of educational innovation and address the diverse learning needs and abilities of their students. As you update the Strategic Plan, we encourage you to include an explicit focus on education and consider the following recommendations.

ENCOURAGE THE ADOPTION OF HUMAN-CENTRIC AI PRINCIPLES

Recommendation: AI should empower teachers and other education professionals to most effectively help students prepare for academic and workforce success after graduation. AI should augment teachers' capabilities, rather than replace them, and help educators with tasks that take time away from instruction and other direct learning support for students. This approach is not dissimilar to other economic sectors where future AI integration must respect and support human expertise. Building off Strategy 2 in the current plan, the Strategic Plan should acknowledge the vital importance of promoting human-in-the-loop systems in educational AI applications so that emerging AI innovations support, not supplant, human roles in teaching and learning.

DEVELOP AND STUDY STATE-OF-THE-ART TOOLS FOR TEACHING AND LEARNING

Recommendation: Teachers are currently using AI in numerous ways. However, its application is piecemeal, the quality of implementation is highly inconsistent, and there are areas where the AI functionality requires more improvement to fully meet the needs of all learners with various backgrounds. The Strategic Plan can encourage more research on AI tools that support teachers by streamlining tedious tasks and processes such as grading and lesson planning, which would free up their time to focus on high-quality instruction. Increased AI use can enhance student engagement across all subject domains and grade levels. In addition, AI can personalize learning experiences, adapt to individual needs and preferences, and offer immersive and interactive content, which can captivate students' interest to optimize their learning. Increased efficiency of time spent on high value instruction will help increase the efficacy of AI-integrated programs, which will ultimately yield higher student outcomes.

RESEARCH AND ENCOURAGE EFFECTIVE AI PROFESSIONAL DEVELOPMENT

Recommendation: The Trump Administration's Executive Order Advancing Artificial Intelligence Education for American Youth highlights the need to teach students and educators how to use AI effectively. Despite the increasing presence of AI in education, many educators feel unequipped to maximize its benefits. Left without proper training and guidance, teachers struggle to grasp the capabilities and functionalities of AI tools. To

tackle these issues, districts and schools need comprehensive professional development training and clear policies for implementing AI tools. Building off Strategy 7 in the current plan, the Strategic Plan can encourage investment in AI literacy research and professional development that supports educator training.

RESEARCH WAYS TO STREAMLINE THE EDUCATION INFRASTRUCTURE

Recommendation: Teachers and administrators find themselves juggling an array of tools, platforms, and resources that each serve a specific function within their teaching practice. While these tools enhance teaching and learning experiences, the fragmented nature of the educational-technology landscape can overwhelm teachers and hinder their ability to leverage these resources effectively. In response to these challenges, many teachers express a strong desire for a universal platform—a one-stop solution that consolidates all essential tools and functionalities into a single interface. The Strategic Plan can encourage more research to make this a seamless integration and widespread implementation in school districts nationwide.

PRIORITIZE SCHOOL SECURITY AND STUDENT PRIVACY

Recommendation: Despite the benefits of AI, it also introduces new security risks that make stronger protections essential. There is a need for stronger protection of student data as AI systems collect and process numerous information such as students’ behavioral and learning data patterns, students’ speech, and identifying information. It is also crucial to prevent the misuse of AI tools, such as cheating, generating inappropriate content, or circumventing school policies, so having secure AI-driven infrastructures are needed to enhance school network and data security. Building off Strategy 4 in the current plan, the Strategic Plan can encourage the strengthening of existing privacy frameworks (e.g., Family Educational Rights and Privacy Act (FERPA) and the Children’s Online Privacy Protection Act (COPPA)) and encourage Congress to address AI-specific concerns. The Strategic Plan should also encourage sector-wide AI ethical standards, emphasizing transparency, accountability, and online safety.

INVEST IN INTEROPERABLE K-12 AI DATA COMMONS

Recommendation: Breakthrough AI requires longitudinal, representative datasets—but today’s student data live in separate curriculum, assessment, and SIS silos. Federal investment should advance a “data commons” that “layers” privacy enhancing technologies (federated learning, differential privacy, synthetic data) on top of widely adopted interoperability standards such as OneRoster, Ed FI, and LTI. The Strategic Plan can encourage research that tests governance models in which districts retain control

while trusted platform providers broker deidentified, standards-based data exchanges. The priorities could include debiasing techniques across demographic slices, mechanisms for license aware data sharing (so entitlements follow the learner), and evidence that such infrastructures accelerate learning gains without compromising FERPA/ COPPA compliance. This work would lower barriers for schools already using integrated rostering and single sign on solutions, letting them activate safer, more powerful AI features within their existing ecosystems.

RESEARCH AI ENABLED CLASSROOM ORCHESTRATION ENGINES

Recommendation: Classroom logistics—grouping students, pacing rotations, launching digital resources, and surfacing behavior supports—consume valuable instructional minutes. The Strategic Plan should encourage research to develop privacy preserving “orchestration engines” that plug directly into comprehensive, standards aligned curriculum platforms so the AI always knows what is being taught and when. When the system detects friction (e.g., device log ins lag, a group finishes early), it can automatically queue the next vetted activity, display timers, or recommend real time regrouping—all while keeping the teacher in control. Key questions include edge based multimodal sensing that protects student privacy, human AI interfaces that respect teacher judgment, and metrics that quantify recovered instructional time, equitable participation, and student engagement. Demonstrating impact here would accelerate adoption of integrated curriculum ecosystems already in wide district use, amplifying their effectiveness rather than adding another standalone tool.

ENCOURAGE AI FOR MULTIMODAL LEARNING RESOURCES

Recommendation: Generative AI can transform a single standards aligned lesson into multiple and accessible formats—simplified texts, bilingual “read alouds”, inquiry prompts, VR scenes, tactile graphics. The Strategic Plan could encourage research that explores model architectures that reference authoritative curriculum sources to ensure factual accuracy and alignment, then export derivatives back into the original platform’s version control workflow. Key areas of focus could include guardrails that preserve licensing/IP integrity for publishers, automatic tagging to state standards, real time academic vocabulary translation, and adaptive scaffolding for emerging readers or students with disabilities. Advances here would let districts extend the reach of high-quality instructional materials they already license, meeting diverse learner needs without multiplying teacher prep time—thereby driving both equity and efficient curriculum implementation at scale.

ENSURE ACCESSIBILITY AND ACCESS TO AI

Recommendation: As learning tools and supports evolve to be on the cutting edge of technology and innovation, it is important to attend to how increasing technological advancement in education must also coincide with the development of infrastructure to support all students' access to technology. With an existing digital divide in our country in which access to computing resources differs substantially by income, education, and residential location, the proliferation of AI-based learning tools and supports could potentially exacerbate educational inequalities between students with reliable access to computing equipment and internet speed and students without. The Strategic Plan should encourage research on AI in K-12 education to not only examine the benefits to students who use AI learning supports, but the state of the digital divide amongst U.S. students and what investments in infrastructure would be needed to minimize differential access to technology needed to use and benefit from AI.

CONCLUSION

These recommendations address the areas where more AI research would be beneficial to improve the efficacy and efficiency of education today and to inspire the next wave of innovation in our schools, which ultimately affects the workforce of the next generation. HMH is committed to advancing responsible AI integration, particularly in education, and we look forward to contributing to your efforts as they evolve.

Sincerely,

Lindsay Dworkin
SVP, Policy & Government Affairs
HMH

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