



## **GUIDELINES FOR AI INTEGRATION THROUGHOUT EDUCATION IN THE COMMONWEALTH OF VIRGINIA**

Artificial intelligence (AI) brings tremendous potential to transform education at all levels. By enabling more efficient, universal, and deeper learning, AI can unlock new realms of knowledge that were previously unimaginable. This emerging technology promises to catalyze business innovation and economic growth for the Commonwealth.

However, AI also poses risks that must be carefully managed. As we integrate these powerful tools into our schools and workplaces, we must urgently equip students and workers with the skills, knowledge, and competencies to harness AI responsibly and effectively. Our education system must adapt to prepare a workforce that can leverage AI to its full potential while safeguarding against its risks.

While AI tools can analyze information and enhance certain aspects of learning with unmatched efficiency, we must remember that education is ultimately a human endeavor. The true art of teaching involves wisdom, judgment and interpersonal skills that machines cannot replicate. As such, AI should never fully replace teachers, who nurture students' critical thinking, values and character development.

Virginia is well-positioned for this new era. The most critical national security and military intelligence institutions in the United States are headquartered in Virginia and the Commonwealth's colleges and universities lead the nation in technology research and development. These unique factors provide Virginia with a responsibility to spearhead a policy environment that strengthens trust, safety, and security in the development and deployment of AI technologies and the opportunity to assemble experts from the workplace and education to provide ongoing guidance and assistance in the responsible and effective implementation of AI in our education, training, and workplace learning.

### **Guidelines to Support the Responsible & Effective Implementation of AI Across Education in Virginia**

These *Guidelines for AI Integration through Education* are comprised of the following three key components:

- 1) Guiding Principles**
- 2) Strategies for Success**
- 3) Roles and Responsibilities**

#### **1. Guiding Principles for the Use of AI in Education**

- **Do no harm:** All integration of AI in education must be in accordance with the policy and IT standards that are set forth in the Executive Order and in other state and federal policies. This includes ensuring the safeguarding of the privacy, security, and confidentiality of personally identifiable information, ensuring that algorithms are not based on inherent biases that lead to discriminatory outcomes, and that AI is only allowed when its use has the potential to contribute positive good/improvement to the status quo.

- **Prioritize integrity:** A core purpose of education is the development of responsible, ethical, and engaged citizens. Therefore, part of the integration of AI in education must be to teach about morality, ethics, honor, cheating, and how artificial intelligence can lead to perverse and destructive outcomes for individuals, relationships, and communities.
- **Augment, not replace humans:** AI cannot and should not ever replace human judgement. Although synthesis and analysis of information can be expedited through AI, it will never replace teachers who provide wisdom, context, feedback, empathy, nurturing and humanity in ways that a machine cannot. It also should not overpower/over-ride the critical thinking, judgement, and morality of the learner.
- **Harness AI to empower student success:** AI presents transformative opportunities to enrich instruction and enable more adaptive, personalized learning. To fully leverage these benefits, we must embrace an outlook of innovation and experimentation, while ensuring access for all learners. Rather than just digitizing traditional practices, we can reimagine education to nurture each student's unlimited potential with the assistive power of AI. Our vision should focus on possibility - AI as a gateway to expand human capacity - not conformity to conventions of the past.
- **Work in partnership:** AI researchers and experts in Virginia colleges and universities and employers are key partners and guides around building the skills and knowledge required to be successful in the new economy. This includes how to think about evolving AI systems and the practices needed to use them responsibly.
- **Be constantly discerning and responsive to the continuous expansion of AI capabilities and uses:** This is not a one-and-done. The guidelines, best practices, and tools available will constantly need to be revisited to keep pace with the changes brought by the exponential growth of AI and technology advancements in our world. Nimbleness and urgency, balanced with careful considerations, will be critical to ensuring we are as prepared for the continuous change ahead in education.

## **2. Strategies for Successful Integration of AI in Education**

At every level of education—from governing boards to individual classrooms—these strategies can improve the effective integration of AI into education.

*Encourage Exploration* — To have informed discussions about integrating AI, educators first need hands-on experience to understand these technologies' capabilities and limitations. School leaders should actively facilitate opportunities for teacher teams to directly explore various AI tools. Through guided firsthand usage, educators can discover potential applications to enrich instruction, as well as critical risks and challenges to consider. Rather than rely on rumors or superficial perceptions, we must empower teachers with deeper practical knowledge. By allocating time and resources for structured experimentation, schools can tap into educators' insights to uncover creative use cases while proactively addressing ethical concerns. This ground-up understanding, straight from classroom trenches, will produce more thoughtful and responsible approaches to adopting AI.

1. *Provide Professional Development* — As with any new tool or strategy, educators need professional development from experts in order to feel comfortable using it. Offering workshops or professional development courses, micro-credentials, or micro-badges on AI as well as meaningful follow-up implementation and application activities, discussions and opportunities to

collaborate with colleagues and experts who can help teachers understand and experience its capabilities and limitations. can help teachers understand and experience its capabilities and limitations.

2. *Spotlight Success* — Spotlight interesting examples of AI that are already being used in schools. Ensure educators have meaningful outlets to share what they are trying and whether it is working or not. Encourage teachers to collaborate in their exploration of AI to learn from each other's experiences and builds a supportive community for this new educational environment.
3. *Host Stakeholder Conversations* — Host regular conversations with business leaders, educators, governing members, leaders, and families about AI and how schools are preparing or will be preparing students with the skills to thrive in an AI-infused world. Topics could include, but not limited to, fostering ethical AI use and digital citizenship collaboration and interdisciplinary learning, and integration of AI in the curriculum.
4. *Set The Right Conditions* — When it comes to using AI or any other technologies in school, it is important to establish conditions for effective use. Clearly outline the school or system's policies and protocols around data privacy, honor code, student code of conduct, acceptable use, and ethical considerations when using AI, including those related to plagiarism and proper use of secondary sources. Teachers should know what is expected of them and the boundaries within which they should operate. These conditions might include using technology to support teaching and learning.<sup>1</sup>

### **3. Roles & Responsibilities**

Education stakeholders must understand and embrace their roles and responsibilities in an effort to integrate AI into our education institutions. This is an initial list of those roles and responsibilities which will continue to be refined by the Advisory Group.

- *State Education Agencies* – Virginia Department of Education (VDOE) and State Council of Higher Education for Virginia (SCHEV) (including Virginia Community College System)
- *Governing Boards/Leadership* – 131 K-12 school division boards of education and division leaderships and the boards of visitors/presidents/leadership teams at every public college and university
- *Higher Education Programs and Faculty/School & Classroom Leaders*
- *AI/Technology Directors*

**Specific Roles of State Agencies:** VDOE and SCHEV shall meet monthly with the SOE team to identify implementation hurdles, best practices, and areas of support needed from the field by the agencies to support implementation, accelerate what's working well, and improve oversight of AI in education in the Commonwealth.

- A. Each agency shall on an ongoing basis:

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<sup>1</sup> This list is adapted from the following report: <https://www.naesp.org/resource/5-strategies-for-success-in-bringing-ai-to-schools/>

- a. Create advisory resources, including policy and protocols best practices, for generative AI<sup>2</sup> that are continuously updated and modified.
  - b. Create processes for tiers and rules at which approval is given for use of AI tools.
  - c. Develop stakeholder training toolkits and workshops for governing bodies, educators, families, and students on AI, its capabilities, and its limitations.
  - d. Spotlight success stories where AI is being used well in schools or higher education institutions. Serve as a resource bank of what is working and provide a supportive learning community for interested educators or leaders.
  - e. Host conversations with educators, institution leaders, and governing board members on how schools can best prepare students with the skills to thrive in an AI-infused world on topics such as fostering ethical AI use and digital citizenship; integration of AI in the curriculum; or establishing policy conditions for effective use.
  - f. Modify agency staffing structure to better provide expertise to the field, including on what AI tools are most applicable and encouraged to be used for K-12 or higher education institutions.
- B. These agencies in partnership with the Virginia Community College System shall work in collaboration to design micro-badging and micro-credential training opportunities for the field to stay abreast of the latest AI technologies, ethics, and best governance leadership skills.
- C. Ongoing Roles and Responsibilities:
- a. Capacity building/training at every agency and throughout the sector to the classroom level.
  - b. Safeguarding privacy, security, and confidentiality of data.
  - c. Strengthening governance of AI through supporting capacity building and technical assistance to the boards of visitors or school division governing boards.

**Specific roles of Governing Boards/Leadership and Educators:** Education happens at the local level. The role of informed and engaged governing bodies, active leaders and informed and empowered faculty and staff at the institution or school/division level will determine how well AI is integrated and used in education in Virginia. The following roles and responsibilities will help ensure the local implementation is constantly monitored, actively managed, and continuously adjusted to address the ongoing changes AI will bring to education. These are the critical but not comprehensive roles and responsibilities at the point of education delivery:

1. Establish a culture of integrity
  - Define what this culture looks like (State Agencies and Governing Boards)
  - Build a culture of integrity by discussing the honor code often with students and parents, implementing an honor code system with real consequences (Faculty/Staff)
2. Follow an Acceptable Use Policy inside and outside the classroom
  - Codify Acceptable Use Policy (State Agencies/Governing Boards)
  - Review and discuss the Acceptable Use Policy with students and parents (Faculty/Staff)
  - Implement and hold learning community accountable for living up to Acceptable Use Policy (Faculty/Staff)
3. Design assignments and assessments that encourage critical thinking and original thought and human judgement (Faculty/Staff)

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<sup>2</sup> Similar to Oregon's [Developing Policy and Protocols for the use of Generative AI in K-12 Classrooms](#) resource or [Generative Artificial Intelligence \(AI\) in K-12 Classrooms](#) resource for K-12 and Higher Education.

4. Create opportunities for collaboration and peer review (Faculty/Staff)
5. Integrate digital citizenship with the following Standards of Learning strands (VDOE, Governing Boards, and Faculty/Staff)
  - Computer Science: The Impacts of Computing
  - Digital Learning Integration: Digital Citizen
  - English: Communication and Multimodal Literacies, Research
  - Fine Arts: Innovation in the Arts, History, Culture, and Citizenship
  - Health: Safety/Injury Prevention
  - Mathematics: Computation
  - Science: Scientific and Engineering Practices: Obtaining, evaluating, and communicating information
  - Social Studies and History: Skills
  - World Language: Interacting in School and Global Communities
6. Clarify expectations for use of AI in assignments (Governing Boards)
7. Communicate clearly and specifically when and how students can utilize Generative Artificial Intelligence in assignments (Faculty/Staff)