Human-Centered AI Guidance for K-12 Public Schools

Building Al Foundations: A Human-Centered Approach

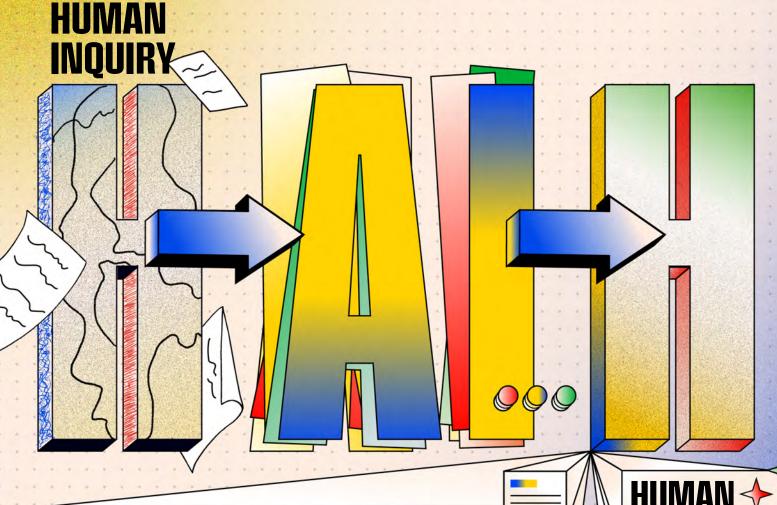
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This document introduces a human-centered approach to using artificial intelligence (AI) in educational contexts. In Washington, educators and education leaders are encouraged to use the "Human inquiry – AI – Human empowerment" framework to guide their decision-making and policy creation. This document details the structure of this framework, as well as provides definitions, lists guiding principles and values, and offers considerations for educators and education leaders who are creating human-centered AI learning environments and policies.







Our Philosophy: Embracing a Human-Centered Approach

In K-12 education, uses of AI should always start with human inquiry and always end with human reflection, human insight, and human empowerment. This model, abbreviated as "Human→AI→Human" or "H→AI→H" throughout this guidance, offers pathways for educators, school district administrators, and students to engage with AI responsibly, ethically, and safely. https://youtu.be/m9Fkw9PWPiM





Watch a video from State Superintendent Chris Reykdal

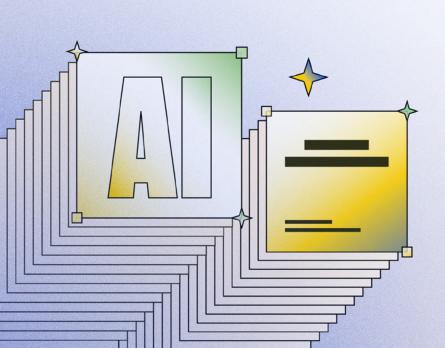


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In the last year, Washington's teachers delivered over a billion hours of instruction to our students – and technology held an important role in that delivery, as it has every year. Particularly during the pandemic, our schools took on the massive effort of establishing a technological infrastructure that allowed for each and every student and teacher to have their own device. Artificial Intelligence (AI) is emerging rapidly into the various aspects of teaching, learning, and school district operations. Washington state is remarkably positioned to integrate AI in our classrooms and campuses across our state.

It is with great excitement and appropriate caution that we distribute guidance to schools and districts now. Like many of the innovations in technology that came before it, the world of AI is evolving at lightning speed. Also like many of the technology innovations that came before it, young people are accessing these tools and wanting to use them in their daily lives. In other words, AI is here and slowing down isn't an option. Students and educators are already engaging with AI, but the key question remains: How will we use it in a way that empowers critical thinking? As this technology revolutionizes industries, communities, sciences, and workplaces, our responsibility is to prepare students and educators to use these tools in ways that are responsible, ethical, and safe.

Schools across Washington are already pioneering efforts to integrate AI into classrooms. With a full embrace of AI, Washington's public education system will be at the forefront of innovation and excellence. This initiative is not just about staying current with technology—it's about enriching the learning journey of every student and empowering our educators with the most effective tools available.

I encourage all stakeholders—caregivers, families, teachers, education partners, and community members—to join us in this groundbreaking journey. Your insights and participation are invaluable as we chart this path and learn together. Our state leads by example, setting a standard for how technology and human ingenuity can work hand in hand to prepare the next generation of leaders for success in careers, jobs, and communities that don't yet exist.

Our commitment is not just to integrate Al into the classroom; it's to do so with a vision that places our educators and students at the center of this digital revolution with a priority for human inquiry that uses Al for production, but never as the final thought, product, or paper. Al is a powerful tool, but it only enhances learning if students and educators embrace an "H→AI→H" approach. Start with human inquiry, see what AI produces, and always close with human reflection, human edits, and human understanding of what was produced. It is imperative that we empower our teachers to utilize AI as a responsible and transformative tool. This means providing educators with the necessary resources, training, and support to incorporate these technologies in ways that enhance their instruction and, more importantly, nurture our students' critical thinking.

Together, we will create an educational environment where technology supports, but where human control and inquiry lead to boundless learning, and where our children are ready to lead in a world augmented by artificial intelligence.

Chris Reykdal Superintendent of Public Instruction



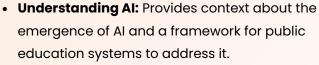
Executive Summary

Artificial Intelligence (AI) is emerging rapidly across industries—including K-12 education. To support educators and education leaders in equitable and inclusive uses of AI in classrooms across Washington, the Office of Superintendent of Public Instruction (OSPI) presents this initial guidance, which emphasizes a human-centered approach to using this ever-evolving tool.

In This Guidance







- **Definitions:** Explains what generative AI (or "Gen AI") is and is not, and identifies potential opportunities and risks for using AI in public education.
- Principles and Values: Lists the guiding principles that OSPI supports, including that uses of AI in public education should be equitable and inclusive, safe and secure, understandable, and purposeful and beneficial.
- Guidance: Provides considerations for creating human-centered Al learning environments, implementing AI in student learning, and protecting sensitive and confidential data.
- Policy: Details key components of Al usage policies, including acceptable use policies and requiring both human input and review of Al outputs.
- Academic Integrity and AI Assistance: Indicates academically honest ways to use Al, how to cite Al, and when using Al could be classified as plagiarism.
- Professional Development: Lists the topics and subjects on which local education agencies (LEAs) should provide training.

How to Use This Guidance





OSPI's guidance on integrating AI into Washington classrooms is designed to be used by stakeholders across public education:

- School district administrators should integrate this guidance into their district and school policies on AI use.
- Educators should use this guidance for recommendations on implementing AI in their classrooms.
- Students and families can refer to this guidance for suggested uses of AI and to gain a deeper understanding of Washington's statewide approach to and understanding of Al.

This guidance is designed to evolve with advances in AI and adapt to the unique needs of school communities across Washington. With the transformative power that AI presents, the overarching goal of this guidance is to empower Washington's students to lead in the world they are helping to create.





Understanding Artificial Intelligence

The integration of Artificial Intelligence (AI) in education starts with the fundamental understanding that AI is not a replacement for human intelligence or humanitarian presence in education. According to UNESCO, AI in education is expected to be a \$6 billion worldwide industry in 20241 with estimates of growth reaching \$19.9 billion by 2028². LinkedIn's Economic Graph Research Institute estimates that, by 2030, the skill sets needed for jobs will change by 65%, affecting not just tech, but all industries³. Corporate entities are moving fast to meet the need and demand for products that streamline the delivery of education, but not all products are the same. It is the responsibility of the education community to carefully and strategically understand how these products work, what data is collected, and where information is sourced.

While AI is an emerging innovation in education, Local Education Agencies (LEAs) can utilize and build on existing policies that are based on educational integrity, student safety, and proven instructional practices. In conversation, AI tools are often discussed as a holistic, outside influence on education, yet policy regarding Al should not be separately written. Key facets of these tools already apply to concerns such as student data privacy, plagiarism, cyberbullying, and digital literacy, and can be called out within existing and corresponding policies.

Whether updating policies, adopting software, delivering instruction, or analyzing outputs, the vital role each of us plays in understanding what AI is and is not cannot be overemphasized. The first step in AI integration is realizing the opportunity for AI to transform the way we access and use information as we learn and work in our world today, as well as into the future. The next step is to ensure all guidance, policies, systems, and instructional practices are grounded on ethical, equitable, and inclusive uses of AI throughout our Washington communities. LEAs must ensure educational and technology standards are applied to meet the needs of all students so that Al tools enhance education. Finally, state and local policymakers and education leaders must act to build an ethical framework of funding to support policies around every student that embraces each student's unique abilities and allows them to use existing and emerging AI tools in a safe learning environment.

¹ United Nations Educational, Scientific and Cultural Organization. (2021). AI and education: guidance for policy-makers. https://doi.org/10.54675/PCSP7350

² International Market Analysis Research and Consulting Group. (2023). Size, Share and Trends. https://www.imarcgroup.com/ai-in-education-market

³ LinkedIn Economic Graph. (2023). Preparing the Workforce for Generative Al: Insights and Implications. https://economicgraph.linkedin.com/content/dam/me/economicgraph/en-us/PDF/preparing-the-workforce-for-generative-ai.pdf



Al in Education: A Human-Centered Approach

A human-centered Al learning environment is one that prioritizes the needs, abilities, and experiences of students, educators, and administrators. An educational leader can support a human-centered learning environment by considering the following:

- Developing students' Al literacy by helping them understand the concepts, applications, and implications of AI in various domains, and empowering them to use AI as a tool for learning and problem-solving.
- Ensuring ethical, equitable, and safe use of AI by protecting the privacy and security of data, addressing potential biases and harms, and promoting digital citizenship and responsibility.
- Providing professional development and support for educators by helping them integrate AI into their pedagogy, curriculum, and assessment, and by facilitating their collaboration and innovation with Al.
- Applying human-centered design principles to the development and implementation of AI solutions, such as involving stakeholders in the design process, testing and iterating the solutions, and evaluating the impact and outcomes.
- Aligning Al solutions with the best practices and principles of learning, such as supporting learner agency, fostering collaboration, enhancing feedback, and promoting critical thinking.



Definitions: What Alls and What It Is Not

Generative Artificial Intelligence (also abbreviated as Gen AI) refers to software tools modeled on large amounts of data to produce text, images, videos, or other digital artifacts. Common, general-purpose examples include a wide range of software known for text generation through Large Language Models (LLMs) and image generation. Tools more tailored to an educational setting include personal AI tutoring programs, virtual assistants, and software with the capability to generate lesson plans within seconds or grade tasks in real-time.

As with all new tools and technologies, it is important to understand the tool itself in order to use it responsibly. Generative AI has a place in the classroom when educators and students remain at the center of instruction and learning.

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•	Generative Al is	Generative Al is not
	a means to augment teaching and learning.	a replacement for student development.
	already embedded into many technologies, as is Al more broadly speaking.	something that can plausibly be avoided or "turned off."
	permeated with flaws such as algorithmic bias that must be considered when utilized.	a source of unquestionable, factual information.
	a product of companies led by teams of humans with their own values, agendas, limitations, bias, and organizational needs.	produced in a vacuum free of societal influence.
	an algorithm that enables users to generate new content based on a pre-trained Large Language Model.	a sentient being with untethered superhuman capabilities a replacement for highly qualified educators.



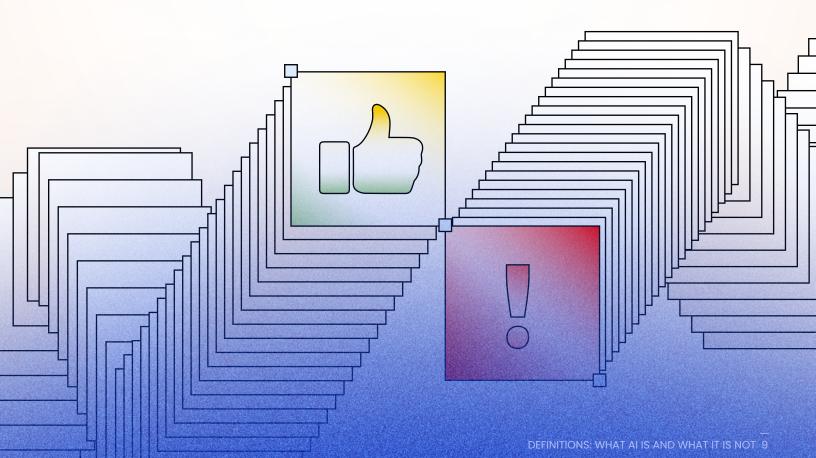
Potential Opportunities for Using AI in Education

- Personalize learning and feedback in real time
- Lesson plan and assessment design with customized planning for differentiation
- Translation between languages
- Develop critical thinking through human input, data output, and elevated human analysis
- Aid in creativity, simulation, and skill development
- Streamline operational and administrative functions

Potential Risks That Need to Be Mitigated When Using AI in Education

- Increasing and/or creating inequitable learning environments
- · Unauthorized access to protected user information and unauthorized data collection
- Perpetuating institutional and systemic biases
- Plagiarism and academic dishonesty
- Over-relying on technology and undermining the importance of human intelligence in education

Artificial Intelligence tools provide opportunities, benefits, and potential risks. It is the responsibility of every parent/guardian, policymaker, teacher, administrator, and support staff member to ensure that the use of this transformative new technology and its future is regularly reviewed to ensure equity of access, data privacy, and safe and ethical usage are maintained at all levels. It is equally critical that LEAs embrace and teach students what AI is and isn't and how to use AI technologies to enhance learning – not prevent students from developing critical skills needed to graduate with technological literacy.





Principles and Values $\stackrel{\diamond}{\leftarrow}$

The National Institute of Standards and Technology (NIST) Al Risk Management Framework⁴ outlines guiding principles regarding the trustworthiness of systems that use Al, referenced in Washington Technology Solutions' (WaTech's) own guidelines⁵. Similarly, the TeachAl Toolkit⁶ outlines principles for the use of Al in education. With these resources as foundations, OSPI supports the following principles and values for the use of Al in education in Washington:

- **New Level of Education:** Artificial Intelligence brings a new level of hope and opportunity to the delivery of education in Washington. The onset of technological tools using AI provides a new way for educators to think about how we, as humans, learn, create, and process information.
- Equitable and Inclusive: All students should have access to Al tools which are inclusively designed with all students in mind.
- **Safe and Secure:** Students should not be put at further risk by using AI nor should their personally identifying information be unlawfully shared.
- Consistent and Compliant: Al tools should be consistent in their expected capabilities and meet the needs of the education system.
- Accountable and Transparent: The companies partnering with schools to provide AI tools should be
 accountable for their products, just as schools and LEAs should be accountable for student use of AI.
- Interpretable and Understood: Though many AI systems are black boxes (too mechanically complex to
 be human interpretable), at a practical level students and educators should be literate in how AI works
 and why it produces the results that it does.
- Purposeful and Beneficial: All use of Al should ultimately provide a positive experience with intentional
 use in teaching and learning.
- Human and Machine: Al should aid in (not replace) decision-making, creativity, learning, development, growth, and productivity.
- Continuous Learning and Development: All has permeated society faster than technologies of the past
 and it is essential that Washington educators, technology specialists, and partners in school services
 provide access to All tools, while continuing to engage in conversations to learn how to effectively
 manage and develop the role All plays in shaping the future of education.

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⁴ National Institute of Standards and Technology. (2023). *Artificial Intelligence Risk Management Framework (AI RMF 1.0)*. U.S. Department of Commerce. https://nvlpubs.nist.gov/nistpubs/ai/NIST.AI.100-1.pdf

⁵ Washington Technical Solutions. (2023). Interim Guidelines for Purposeful and Responsible Use of Generative Artificial Intelligence. https://watech.wa.gov/sites/default/files/2023-09/State%2520Agency%2520Generative%2520Al%2520Guidelines%25208-7-23%2520.pdf

⁶ TeachAl. (2023). Al Guidance for Schools Toolkit. https://www.teachai.org/toolkit





A Human-Centered Approach to Al

A human-centered Al learning environment always starts with human inputs and inquiry, and always concludes with human reflection and edits. It should prioritize the needs, abilities, and experiences of students, teachers, and administrators. An education leader can support a human-centered learning environment by considering the following:

- **Developing students' Al literacy** by helping them understand the concepts, applications, and implications of Al in various domains, and empowering them to use Al as a tool for learning and problem-solving.
- Ensuring ethical, equitable, and safe use of AI by protecting the privacy and security of data, addressing potential biases and harms, and promoting digital citizenship and responsibility.
- Providing professional development and support for teachers by helping them integrate AI into their pedagogy, curriculum, and assessment, and by facilitating their collaboration and innovation with AI.
- Applying human-centered design principles to the development and implementation of AI solutions, such as involving stakeholders in the design process, testing and iterating the solutions, and evaluating the impact and outcomes.
- Aligning Al solutions with the best practices and principles of learning, such as supporting student agency, fostering collaboration, enhancing feedback, and promoting critical thinking.
- Avoiding sole reliance on the use of "Al detection" tools in checking for student plagiarism. These tools
 often use data that is biased against students who are multilingual/English language learners.

Implementing AI in Student Learning

When integrating AI into student learning, it's important to empower students in how and to what degree AI is utilized in their learning journey. By doing so, students can actively participate in shaping their educational experience with AI.

- Co-create and share an AI decision-making rubric with students (example rubric).
- Support students in taking a human-centered approach to using Al.
- Empower students in leveraging AI in scaffolding understanding, feedback, and reflection.
- Support students in critically thinking about the role of AI within their learning journey and within their preparation for college, career, and life.
- Empower students receiving special education services to use AI to personalize and increase their access to learning.
- Integrate ethics and critical thinking activities that align with grade-level and subject-level instruction.
- Use AI for differentiation and assessment, including intelligent tutoring systems that allow text to speech, translation, personalized learning, and inquiry-based learning.
- Prepare students for jobs of the future, including those in career and technical education (CTE) programs, by partnering with industry to update and integrate learning standards.



Sensitive and Confidential Data

Ensure that your LEA AI use complies with student/personal privacy and data protection laws. Be aware of and follow any age restrictions for the use of all AI tools and resources.

- Before sharing private data, ensure that the AI tool meets the following requirements:
 - Family Education Rights and Privacy Act (FERPA) requires that schools not disclose personal
 identifying information of a minor or eligible student without express written consent of the parent or
 eligible student.
 - Children's Online Privacy Protection Act (COPPA) requires schools to obtain parental consent before allowing students under 13 to use online services that collect, use, or disclose personal information.
 - Children's Internet Protection Act (CIPA) requires that schools implement an internet safety policy that includes protective measures to block or filter access to obscene or harmful content.
- Have a clear understanding of your data collection processes. Update policies to include the use of and considerations for using Al.
- · Give users options to opt-out or delete their data if they want.



Policy

Al policies must promote equitable and inclusive access to Al. Education policymakers must focus on ensuring the use of Al increases the public good, with emphasis on empowering students who are members of communities that have been historically underserved. It is important that policies, by design, enhance a human-centered approach to pedagogy and learning, and respects ethical norms and standards. Al policy and use should be geared to improving learning for every student, empowering teachers, and strengthening learning management systems.

Building Human-Centered AI Policies

Incorporate the need for human intelligence and responsibility into AI usage policies. All AI use should start, and end, with human insight.

- Responsible Use Policy: Known as an acceptable use policy (AUP) or technology use policy, this describes
 what any person authorized to utilize the district's technology system may do and not do. It describes
 the terms and conditions for educational institutions and should be updated to include the safe and
 appropriate use of AI tools. (A separate AI AUP is not needed.)
- Al Inquiry and Input Review: Require human input of data with clear mandates that staff and students should never input personal, sensitive, or confidential data, including any data related to student education records, into any Al system without first ensuring that the system meets FERPA, COPPA, and CIPA requirements. Emphasize the need for review prior to finalizing any information into a system that learns from data entered.
- Embrace the Use of Data and the Evaluation of AI Output: Invest in systems that create streamlined
 opportunities for staff and students to enter information efficiently and safely, allow them to improve
 instruction, and draw connections to better understand student thinking and learning.
- Al Output Review: Al users should review and critically assess outputs from Al tools before sharing or
 publicizing results, including in the classroom. Staff and students should not rely exclusively on Al-generated
 content without fact-checking and evaluating results. Ultimately, it is up to human users to determine how Al
 information is shared and used.
 - Bias and Misinformation: Al-generated content is based on datasets or data models that may contain biases, false information, or other inaccuracies. Al systems do not have the ability to think or verify accuracy. Therefore, verifying Al results to ensure the source is credible must occur before considering an Al output in academic work.
 - Safety and Respect: Users must never use AI tools to create misleading or inappropriate content, take someone's likeness without permission, or harm humans or the community at large. (Note: This may also be added to a student code of conduct or bullying/cyberbullying/harassment policy.)





Updates for Existing Policies

- Data Collection: Parents, guardians, and students must be informed of specific data collection activities
 or potential risk, where applicable, with consent required. All Al-driven data collection must adhere to
 local data protection regulations, best practices, and community standards.
- Third-Party Al Tools: The district's approved list of Al software and tools should always be reviewed and updated. Unauthorized Al software and tools (including updates) might not adhere to the district's data privacy standards and practices.
- Personal Information: Staff and students should never input personal, sensitive, or confidential data into
 any AI system without prior parental or guardian authorization, including any data related to student
 education records. Personnel must adhere to the FERPA, COPPA, and CIPA when entering information.

Academic Integrity and AI Assistance⁷

- Assessments: Teachers are encouraged to allow students to use AI tools as a personal tutor or studying buddy
 to prepare for assessments. When students are completing exams or quizzes, it should be at the teacher's
 discretion to determine whether an AI tool is used, and it should be explicitly stated whether this is allowed.
- Assignments: Teachers should have the responsibility of clarifying appropriate or inappropriate uses of
 Al tools when students are completing assignments. Teachers might allow the limited use of generative Al
 on entire assignments, parts of assignments, or as a brainstorming tool. Teachers should be encouraged
 to articulate why they do or do not allow its use in other assignments or parts of assignments.
- Bias and Critical Thinking: All users of Al software should review and evaluate Al output for accuracy and
 potential bias. Students must develop the critical thinking skills needed to successfully use and navigate
 the world of Al. Limitations of Al systems and the data used to develop Al content can, and sometimes do,
 amplify human bias. Use caution and human review prior to using Al outputs in classrooms, publications,
 data analysis, etc.
- Citations, Disclosures, and Attributions: Al-generated content is considered plagiarism, unless
 appropriately cited in assignments or publications; any use must be referenced. Instruction should
 emphasize the importance of ethical use of Al and the role of using sources in assignments.
- The following resources provide a sample of how to appropriately cite the use of AI in any publication or assignment:
 - MLA Style Generative Al
 - APA Style ChatGPT
 - Chicago Style Generative Al
- Plagiarism: Staff and students should be encouraged to use AI tools for brainstorming, creative stimulations, or preliminary research. Using AI tools to generate answers, stories, essays, or other publications, and/or complete assignments without proper citation, is plagiarism.
- Use of AI Detection Tools: Software companies that claim products can detect content developed by another AI tool, or its own AI tool, are currently not reliable and should not be used as the sole way to determine whether cheating and plagiarism have occurred.

Adapted from TeachAl. (2023). Al Guidance for Schools Toolkit. https://www.teachai.org/toolkit



Professional Development

As Gen AI continues to evolve and impact all aspects of industry, LEAs need to provide training on and understanding of Gen AI for all educational stakeholders. The appropriate use of AI always begins with human inquiry and ends with human engagement with the AI output. LEAs must ensure users of Gen AI understand the safe, responsible ways to utilize these tools in a human-centered approach.

LEA leadership should prioritize staff understanding of how to utilize the technology in the following areas:

- Improve organizational awareness, productivity, and effective use of AI tools
- Understand the pedagogical changes that Gen AI has for learning
- Promote student empowerment in the use of AI in work and assessments
- Establish a shared understanding about the importance and equity concerns when using AI
- Promote access to appropriate AI tools for learning
- Create a shared understanding of academic integrity in the era of AI
- Emphasize ethical use of AI
- Promote understanding of AI and AI tools across the wider educational community
- Empower teachers to generate curriculum using open educational resources provided by OSPI (Washington OER Hub)



Acknowledgements

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Al Advisory Group:

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- · Cindy Cromwell, Principal in Kelso School District
- Dr. Trevor Greene, Superintendent of Yakima School District
- · Kris Hagel, Executive Director of Digital Learning for Peninsula School District
- Travis Rush, Technical Education Lead for the Association of Educational Service Districts (AESD)
- Dr. Min Sun, Associate Professor at the University of Washington's College of Education
- · Shahan Ali Memon, PhD student at the Information School at the University of Washington
- · Maxwell Richards, student representative from the Bainbridge Island School District

OSPI Staff:

- · Mikhail Cherniske, Senior Policy Analyst at OSPI
- · Linh Duong, Visual Communication Strategist at OSPI
- Terron Ishihara, Computer Science Program Supervisor at OSPI
- Holli Kalaleh, Business and Marketing Program Supervisor at OSPI
- Dr. Jon Ram Mishra, Assistant Superintendent of Elementary, Early Learning, and Federal Programs at OSPI
- Zac Murphy, Director of Multimedia and Information Strategy at OSPI
- Bre Urness-Straight, Director of Educational Technology at OSPI
- Rebecca Wallace, Assistant Superintendent of Secondary Education and Postsecondary Pathways at OSPI

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Al Use Disclaimer

In crafting this guidance, OSPI harnessed the power of Large Language Models (LLMs). Anchored in the "Human → AI → Human" paradigm, this document aims to foster and model responsible and ethical engagement with AI technologies. Educators are encouraged to leverage AI as an augmentation tool, preserving human insight and creativity.



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