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international society for transforming education

# Profile of an **AI-Ready Graduate**

## AI to Deepen Human Skills

As artificial intelligence (AI) becomes ubiquitous, we face the challenge and responsibility of preparing students for a world where they'll be expected to use AI to deepen their thinking, expand their creativity, and solve harder problems. This future makes uniquely human skills increasingly valuable, and knowing how to leverage AI to support them essential. To be prepared for this future, it isn't enough for students to know about AI (e.g., AI literacy). They need to understand how to use AI to augment their abilities.

This includes recognizing which skills are uniquely human, so they can distinguish between when it would be irresponsible to use AI and when it would be equally problematic not to. They must know how to draw upon their knowledge and experience to use AI in the service of their goals, while maintaining their own judgment, agency, and creativity.

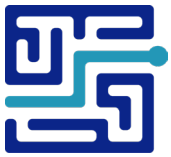
The Profile of an AI-Ready Graduate highlights six essential human roles: Learner, Researcher, Synthesizer, Problem-Solver, Connector, and Storyteller. It outlines the specific skills students need to use AI to thrive in each role, and it shows how teachers can model those skills in the classroom so students can practice them and develop proficiency by the time they graduate from high school or college.

## ISTE Standards Provide the Foundation for the Profile

The ISTE Standards provide prerequisite skills for using technology and have been widely adopted globally. Backed by research and practitioner-tested, they address vital foundational skills that apply when using AI. The standards include safe, responsible, and ethical use; healthy boundaries with technology; and critically evaluating online resources. The Profile of an AI-Ready Graduate builds on the groundwork set by the ISTE Standards.

### LEARNER

Use AI to set learning goals, create plans for learning new skills, identify strategies to get unstuck, and seek targeted feedback to improve performance and understanding.



### PROBLEM-SOLVER

Use AI as a brainstorming partner to clarify challenges, generate new ideas, explore a wide range of possibilities, and evaluate potential solutions.

### RESEARCHER

Use AI to strategically investigate and analyze topics, evaluate claims, and compare sources of information.

### CONNECTOR

Use AI to increase human collaboration, including overcoming language barriers and finding common ground among divergent perspectives.

### SYNTHESIZER

Use AI to synthesize, remix, and refine information into formats and levels of complexity that best meet their unique needs and capabilities.

### STORYTELLER

Use AI to craft compelling narratives and communicate complex ideas through text, image, audio, video, and other media.

# LEARNER

**Students know how to use artificial intelligence (AI) to set learning goals, create plans for learning new skills, identify strategies to get unstuck, and seek targeted feedback to improve performance and understanding.**

AI-ready graduates know how to use artificial intelligence to help them identify skills needed to meet their future learning and career goals, and plan pathways for learning those skills that match their unique needs and interests. Learners know how to use AI to get "unstuck" when learning a new skill becomes overwhelming or leads to a dead end.

They also know how to seek performance feedback from AI that is immediate, specific, and actionable (e.g., suggestions for improving writing, identifying weaknesses in reasoning, correcting pronunciation in language learning).

## Skills & Practices

### 1. Self-Directed Goal Setting and Planning

A. Students use AI to focus loosely defined goals into more actionable ones.

B. Students use AI to identify learning pathways aligned to knowledge or skills that match their needs and interests.

### 2. Getting Unstuck

A. Students use AI to help identify specific areas of confusion (e.g., using AI to ask a series of diagnostic questions, analyze a photo of their work to help identify areas of struggle).

B. Students use AI to get targeted help to increase their understanding or improve performance (e.g., request simpler explanations, different approaches, possible next steps).

### 3. Seeking Feedback

A. Students use AI to seek feedback on the structure of their work that may need improvement (e.g., organization, strength of evidence, effectiveness of design).

B. Students use AI feedback to iteratively revise and improve their work until they are satisfied with the outcome.

# RESEARCHER

**Students know how to use AI to strategically investigate and analyze topics, evaluate claims, and compare sources of information.**

AI-ready graduates know how to use artificial intelligence as a research assistant that helps them think more comprehensively and critically about complex topics. Researchers use AI to investigate topics systematically, draw from diverse sources, and recognize various points of conflict and areas of agreement.

## Skills & Practices

### 4. Planning the Inquiry

A. Students use AI to identify topics of interest and shape them into questions worth exploring.

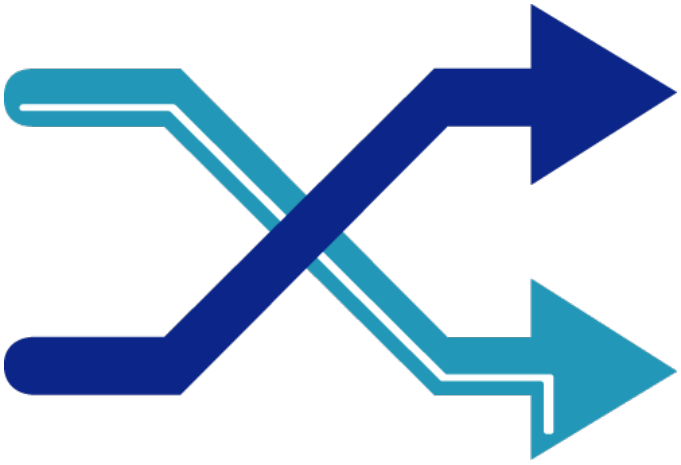
B. Students use AI to explore a variety of approaches for starting their research (e.g., reviewing basic concepts, tracing historical development, grounding it in real examples).

### 5. Evaluating Sources and Claims

A. Students use AI to locate a variety of sources on a complex topic (e.g., research studies, expert opinions, news, policies) and identify viewpoints that might be underrepresented.

B. Students use AI to identify key arguments from a variety of sources and investigate where experts agree or differ.

# SYNTHESIZER



**Students know how to use AI to synthesize, remix, and refine information into formats and levels of complexity that best meet their unique needs and capabilities.**

AI-ready graduates know how to use artificial intelligence to bring information together from various sources to increase understanding and illuminate connections. Synthesizers also know how to use AI to re-level information to match their understanding, and determine when it is appropriate to stretch themselves to match the level of the material. They use AI to adapt information for different contexts. This includes changing media formats (e.g., audio to text, text to video) to get information in a format that is most appropriate for a given context.

### 6. Remixing to Gain Deeper Insights

A. Students use AI to convert content between different media formats to best match their learning needs.

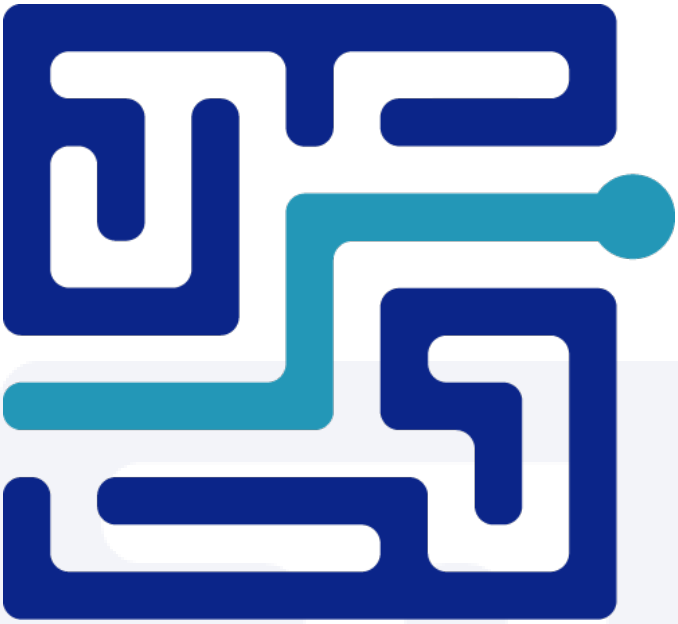
B. Students use AI to adjust the complexity of content to best align to their level of understanding.

### 7. Finding Patterns

A. Students use AI to gather and illuminate patterns across a wide range of data types and formats.

B. Students test patterns they have discovered to see if they hold true across different contexts.

# PROBLEM-SOLVER



**Students know how to use AI as a brainstorming partner to clarify challenges, generate new ideas, explore a wide range of possibilities, and evaluate potential solutions.**

AI-ready graduates know how to use artificial intelligence to spur their own thinking, break through creative blocks, and explore alternative perspectives they may not have otherwise encountered on their own. Problem-Solvers engage in generative conversations that help them define problems and identify potential solutions and processes to solve problems. Throughout, they maintain critical judgment about which AI-generated insights to accept, adapt, or reject.

## 8. Refining Problems

A. Students use AI to frame a problem worth solving and define it clearly to guide the search for solutions.

B. Students use AI to analyze evidence (e.g., data, interviews, prior attempts) to better understand the problem's complexity, causes, and constraints.

## 9. Generating and Evaluating Ideas

A. Students use AI as a brainstorming partner to expand their thinking and push them to identify more potential options before selecting a path forward.

B. Students use AI to probe their most promising approaches for weaknesses, risks, and implementation challenges.

C. Students use AI to identify human and simulated experts, as appropriate, to provide feedback on potential solutions.

# CONNECTOR

**Students know how to use AI to increase human collaboration, including overcoming language barriers and finding common ground among divergent perspectives.**

AI-ready graduates know how to use artificial intelligence to facilitate deeper human connections. This includes using it to break down barriers between people who speak different languages and come from different backgrounds. Connectors use AI to elicit diverse perspectives, including, for example, from historical figures or digital personas. They also strengthen teams by identifying shared values, recommending additional team members, and making teams more effective and accountable.

## 10. Expanding Perspectives and Networks

A. Students use AI to communicate and collaborate with people who speak different languages, including using language translation to preserve cultural nuances and emotional tone.

B. Students use AI to simulate divergent cultural, geographic, and intellectual viewpoints that may otherwise be out of reach (e.g., historical figures, experts, critics) as a starting point for increasing empathetic understanding.

C. Students use AI to suggest potential mentors, volunteer opportunities, or apprenticeships that align with their needs, interests, and aspirations.

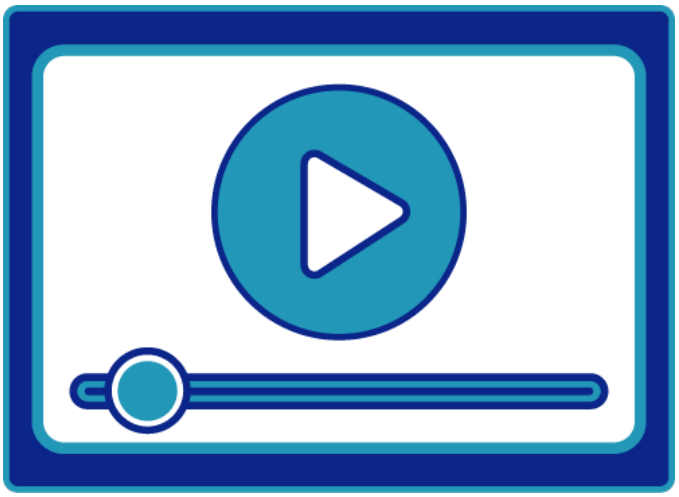
## 11. Improving Team Collaboration

A. Students use AI to suggest people who would strengthen a team based on their role (e.g., mentor, teammate, collaborator), shared interests, complementary skills, and unique perspectives.

B. Students use AI to suggest streamlined team structures and processes, coordinate tasks, and track responsibilities.

C. Students use AI to practice navigating difficult, complex, or high-stakes conversations to prepare for more productive human interactions.

# STORYTELLER



**Students know how to use AI to craft compelling narratives and communicate complex ideas through text, image, audio, video, and other media.**

AI-ready graduates use artificial intelligence to enhance their ability to tell compelling stories and connect with others, sharpening their narratives, improving their presentations, and finding new ways to visualize complex concepts in formats beyond text. Storytellers might collaborate with AI to create visual metaphors for abstract ideas or use it to generate media to convey information in ways that resonate more powerfully with their intended audiences.

## 12. Sharpening the Message

A. Students use AI to refine their messaging, anticipate potential misunderstandings and objections, and establish a call to action that fits their target audience.

B. Students use AI to identify language, tone, and examples (e.g., case studies, anecdotes, metaphors) to create a compelling message.

C. Students use AI to identify outreach strategies and suitable channels to effectively reach their target audience.

## 13. Creating Visual and Audio Content

a. Students use AI to visualize abstract concepts through diagrams, analogies, interactive media, and other explanatory formats.

b. Students use AI to generate suggestions for tone and media format (e.g., slideshow, video, infographic, podcast) for their intended audience and message.

c. Students use AI to produce and refine media content (e.g., images, audio, video) that compellingly communicates their message.

## The Profile in Practice

The following examples bring the Profile of an AI-Ready Graduate to life, providing diverse examples of how these skills and practices can be integrated across grade levels and subject areas.

### Synthesizer: Historical Inquiry

#### Middle School

Eighth graders studying the Civil Rights Movement use AI to generate their own inquiry questions. Working within a teacher-provided framework, students start with questions they are curious about. They use AI to summarize primary sources, compare perspectives of regional news coverage from the time, and analyze photographs. A student team might work together to develop AI avatars based on historical figures and interview them. As they develop deeper understanding, their discoveries will lead to new questions. For example, adjusting from "What did Rosa Parks do?" to "How did media coverage of the Montgomery Bus Boycott differ between Northern and Southern newspapers, and what does that tell us about regional attitudes?"

### Learner: Personalized Feedback on Language Learning

#### High School

A high school student taking a Spanish elective wants to improve her skills so she can speak Spanish on her upcoming school trip to Mexico. Her goal is to make sure she can speak effectively in the past tense. She prompts AI to ask her to talk in Spanish and identify where she is struggling. AI identifies that, while she has good proficiency, she struggles to talk about things using the past tense. It then identifies some activities to help her better understand the rules for past-subjunctive. She expands her proficiency and increases the difficulty to challenge herself to expand her conversational Spanish.

### Problem-Solver: Tackling Infrastructure Challenges

#### Community College

Community college students are preparing to use their engineering knowledge to analyze the town's aging bridge infrastructure and design potential solutions. Student teams use AI to summarize technical engineering reports and analyze data. They research case studies from similar rural communities and interview local engineers. With AI, they create scenarios (e.g., repair vs. replace, cost-benefit analyses) and model designs, prompting it to help identify gaps or weaknesses and develop visualizations.

### Storyteller: Student Teams Pitch New Ideas

#### University Business School

In a sports business undergraduate class, students engage in semester-long projects where they develop new products. Student teams participate in a "Shark Tank-style" competition, using AI to generate and test ideas for new products and do market research. Developing and iterating on prototypes takes most of the semester. When preparing their pitch, each team wants to develop a compelling presentation to ensure their pitch stands out. In addition to using AI to create infographics that elevate complex concepts, they also create messaging for videos that are relatable and inspirational to the target audience, yet also persuade the competition's judges to select them for a statewide competition.

## Call to Action: Adopting the Profile

**Based on your role, use the profile to introduce and guide your school in meaningful use of AI for learning.**

### For Secondary Educators

The *International Society for Transforming Education* (ISTE) encourages educators to use the Profile of an AI-Ready Graduate to support the intentional and strategic use of AI in learning. Begin where it makes sense to achieve early wins and know that by doing so, educators are helping prepare students for the workforce. To start:

- **Consult your guidelines:** Review school or district's AI policies on safety, security, and privacy, and apply effective digital citizenship practices.
- **Start small:** Choose a few profile skills that will serve students across content areas, then design, implement and evaluate the results of an activity where students use AI.
- **Engage younger students:** Use "unplugged" or tech-free lessons to build profile concepts and vocabulary before introducing AI tools.
- **Think beyond computer science:** The Profile of an AI-Ready Graduate can be used in every subject and in age-appropriate ways across grade levels.
- **Collaborate with peers:** Connect with colleagues to pilot the profile together, share learnings, and grow a community of practice.

### For School Leaders

Leaders have many urgent priorities. AI isn't one more thing. At this inflection point, AI is a generational shift that will shape the future of every student. The decisions made now will matter for decades. Here's where to begin:

- **Set the foundation:** Bring educators, families, and students together to develop clear, practical AI guidelines that everyone understands and trusts.
- **Pilot with early adopters:** Have early adopters design activities with the profile for students to use AI, identify areas of friction and become model classrooms for colleagues.
- **Create a community of practice:** Grow the number of educators engaged with the profile in a community of practice to learn from each other and showcase their work.
- **Build educator capacity:** Provide ongoing professional learning opportunities for educators that are differentiated based on readiness so they can grow their AI confidence by experimenting in low-stakes situations.

School leaders are key to building trust with students and families around AI in education. We encourage you to share the profile with them to demonstrate how AI can be used intentionally and with purpose for learning.

## For Faculty

Faculty must prepare students for success in an AI-integrated workforce. Most students arrive in post-secondary classrooms with technology skills, but are not necessarily equipped with skills to use technology professionally. Faculty should:

- **Review institutional or departmental policies and guidelines:** Check for acceptable and responsible use documentation.
- **Update syllabi:** Reflect acceptable uses and the documentation required by students who use AI in assignments, including identifying assignments where AI is not allowed.
- **Update assessments:** Develop assessments that require higher-order thinking and other skills that cannot be easily done by AI.
- **Integrate profile skills in assignments:** Review courses to identify activities that build students' skills and practices outlined in the profile.
- **Share with colleagues:** Create a community of practice with peers to accelerate the responsible and ethical use of AI in curriculum program-wide.

## Continue Learning with ISTE

ISTE has been at the forefront of AI professional learning, having launched our AI work in 2017. Since then, we've trained tens of thousands of educators around the world to use AI for teaching and learning. Visit our AI in Education webpage to learn more.

## Conclusion

To succeed in today's world, students not only need to know how to use AI but also how to navigate it responsibly and harness it to amplify their uniquely human skills. This requires agency and the ability to think more deeply, use judgment, and discern good information from bad. The Profile of an AI-Ready Graduate offers educators a model to help students develop those skills that will enable them to succeed in learning and life.

## Citations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