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AI @ School

Philosophy - Policies - Competencies

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Introduction

The growing powers and pervasiveness of artificial intelligence technologies require schools to develop AI use policies, literacy standards, and training programs for students, faculty, administrators, and staff.

However, without an AI philosophy, schools cannot ensure that these responses to the disruptions (both positive and negative) created by AI will be effective, comprehensive and coordinated. An AI philosophy helps schools ground their strategies in a true understanding of the technology and its impact on human actions and interactions. This makes it possible to derive policies that are not only logical and systematic, but also go beyond mere compliance, as they invite all members of the school community to develop the necessary competencies, as well as a shared AI mindset.

It is, indeed, another strength of an AI philosophy that it holds equally true for all (students, faculty, administrators, and staff). Laid out in simple terms below, it explains the questions that AI raises in a school context, as well as the knowledge, understanding, skills, and habits needed to answer them. Appendices also include examples of applications of this philosophy to some of the most common questions related to the use of AI in a school context, such as:

- How can we prevent AI plagiarism?
- Should teachers be allowed to use AI for grading and reporting purposes?

The AI age is still very young, and continuous changes are to be expected. Fortunately, contrary to a traditional policy, the final strength of a philosophy is that it provides a direction that is both more robust and more flexible – because it relies on fundamental principles, the implementation of which is open to ongoing adaptations.

Philosophy

In schools, just like in life in general, human beings use means to achieve ends, transforming inputs into outputs in accordance with certain values. Such means include physical (e.g., natural resources), psychological (e.g., motivation), intellectual (e.g., knowledge and skills), cultural (e.g., values) and technological resources; but the distinctive characteristic of human action is that it is conscious: as they transform inputs into outputs, human beings do so with understanding.

A particular technological resource available to human beings is artificial intelligence, which is the ability of non-conscious systems to transform inputs into outputs in ways that imitate and automate human cognition. As such, AI tools are unlike any other. If humans "think as they do things", traditional tools are extensions of our body and augment its powers by doing part of the doing for us. AI systems, however, are extensions of our minds and augment its wonders by doing part of the thinking for us. This also means that, while traditional tools are useful for specific purposes, AI can potentially assist any human action.

Policies and Competencies

Logically, if human beings use means to achieve ends in accordance with certain values, and if artificial intelligence can imitate and automate this capacity to transform inputs into outputs based on their meaning, then this technology and its growing capabilities and pervasiveness create both great opportunities and great risks, which are as follows:

AI can help us

- Be more efficient, i.e., achieve similar results faster and more easily;
- Be more effective, i.e., achieve better results;
- Be more innovative, i.e., achieve new , previously inaccessible goals.

However, AI use might also

- Contradict our values in the way it collects and/or processes inputs into outputs and automates human thinking;
- Undermine our goals and/or other means and overall ability to achieve them;
- Call for the development of new competencies

To harness the potential of AI all while mitigating its risks, we should thus ask ourselves and be able to answer the following questions as we do our school-related work.

I. Can AI help perform this task more efficiently and/or more effectively? Can it help obtain similar results faster and more easily? Can it help obtain better results?

Knowing and understanding that and what AI-based technologies can be useful to perform tasks that would otherwise require human intelligence on large amounts of information and at very high speed.

Skills and habits of improving efficiency and/or effectiveness by using AI-based tools and proper techniques to act faster, with better information, and/or in a more customized way.

II. Does AI make this task obsolete and call for innovation? Does it challenge and/or allow us to do new things in new ways?

Knowing and understanding that, because it can imitate and automate human cognition, AI might make certain tasks obsolete, all while making new means and goals accessible.

Skills and habits of leveraging AI-based technologies to innovate and update our methods and goals.

III. Does using AI in this way contradict our values? Is it legal, ethical, safe, equitable, and sustainable?

Knowing and understanding that, because it can collect and process vast amounts of data in ways that imitate human cognition, but is not capable of true understanding, is not always accessible to all, and is energy-intensive, AI use creates risks related to privacy, safety, honesty, equity, and sustainability.

Skills and habits of following school policies, providers' terms of service, relevant legislations, as well as one's own values, when using AI.

Legal and Ethical use of AI

III.1. Does using AI in this way respect privacy and intellectual property by collecting and processing data:

- Exclusively through validated AI providers
- In accordance with copyrights
- After obtaining appropriate consent
- After removing all identifiable information

III.2. Does using AI in this way respects principles of academic and intellectual honesty (transparency)?

- Does academic honesty require that I refer and cite this use of AI, as I would any other source?
- Does intellectual honesty require that I clarify:

- The nature and extent of my use of AI in the generation of inputs (e.g., research, brainstorming)?
- The nature and extent of my use of AI in the generation of outputs (e.g., rewriting, translation)?

III.3. Does this use of AI follow school rules applicable to specific contexts (e.g., demonstration and assessment of learning, internal and external communication)?

Safe use of AI

III.4. Does this use of AI respect age restrictions? Should I refraining from using AI in this way because it can be expected to cause harm to myself and/or others, notably:

- Exposure to biased, discriminatory, and/or hurtful content
- Impersonation and/or harassment

Equitable use of AI:

III.5. Does this use of AI increase or decrease accessibility and fairness compared to alternative options?

Sustainable use of AI:

III.6. Is this use of AI justified, given the amount of natural resources it consumes and its impact on the environment?

IV. Does using AI in this way undermine our goals and agency? Do I have the competencies needed to use AI appropriately in this way?

Knowing and understanding that, because it is so powerful, AI might

- Be used, at times, only because it is more efficient, dictating the way we do things, and marginalizing other means to reach our ends, even when they are more effective or important in their own right;
- Undermine our intellectual resources (understanding, skills) by replacing rather than enhancing them;
- Erode our sense of agency and accountability
- Have unpredictable and unintended long-term consequences
- Require the development of new competencies

Skills and habits of using AI (only) when and as appropriate, including critically and adaptively.

Appropriate use of AI

IV.1. Does this use of AI take the place of other methods that are as effective or important in their own right, such as:

- Real-world observations and experiments
- Human interactions (exposure to human creations, modeling, discussions)
- Independent thinking, whether unaided or with the use of non-AI technologies

IV.2. Does this use of AI undermine:

- Psychological resources, including motivation (sense of autonomy, control, and support)
- Intellectual resources, such as understanding and/or fundemantal skills, including: learning skills and skills targeted in the school curriculum (e.g., cognitive, creative, critical thinking, communication, collaboration, and social-emotional skills), teaching skills, leadership skills, and operational skills.

Critical and adaptive use of AI

IV.3. Did I evaluate the outputs of this use of AI before adopting them, sharing them with others, and/or acting on them, with a particular consideration for potential limitations related to:

- Insufficiencies
- Inaccuracies
- Biases
- Limited and privileged perspectives embedded in underlying algorithms or training data

IV.4. What new knowledge, understanding, and skill need to be developed to leverage the benefits of AI all while mitigating its risks?

IV.5. Do I have a system in place to monitor and respond to the continuous progress and impact of AI technologies by:

- Assessing impact and adapting as needed, including by collecting input and feedback from stakeholders, on relevant outcomes (e.g., learning, well-being, relationships)
- Updating approaches based on new developments and anticipated long-term implications, including new risks and opportunities

Conclusion

Although derived from a philosophy of AI, the policies above are presented in a marginal-practical way: the approach is one where a member of the school community considers whether and how they should be using AI for a particular task. It would be possible to take a different, more systematic and strategic approach: starting with the end in mind, the mission and vision of the school, deriving all the goals, objectives, actions and interactions that make up the life of the school, and analyzing when and how AI can and should be used in each instance - or whether it calls for an update of these very mission and vision. Either way, the “policies” and literacy standards would be the same.

In a school, everything should ultimately derive from its mission and vision. Such is the case of its AI philosophy, which should either leverage these guiding statements to respond to the opportunities and challenges of AI and put this technological progress at their service; or lead to a redefinition of this mission and vision, if they prove insufficient for the task and in need of an update.

Schools are thus encouraged to tailor the questions and answers above to ther unique identity.

Examples and references for efficient, effective, and innovative uses of AI in a school context

“AI makes it so easy to cheat - should I go back to in-class essays?”

Generative AI might make traditional home-written essays obsolete, but it also makes it possible to reinvent this form of assessment:

By assessing the process (formatively) more closely

- Rethinking assessment for the AI age (J. Rostan)
- Post-AI assessment design (P. Hardman)

By assessing (summatively) understanding and skills in new ways, e.g., by using tools such as Sherpa to scale oral defenses.

“What are some examples of efficient, effective, and innovative pedagogical uses of AI?"

- Guidance for generative AI in education and research (UNESCO)
- ChatGPT and artificial intelligence in higher education (UNESCO)
- AI-Powered UDL strategies (J. Rostan)
- LUDIA, a UDL thought partner (J. Rostan and B. Stark)
- Learning foreign languages (J. Rostan)
- Chatting with videos (J. Rostan)
- Visual thinking (J. Rostan)
- Research skills(J. Rostan)
- Good teaching practices(J. Rostan)
- AI as a more knowledgeable other (J. Rostan)

- AI concept-based adventure (J. Rostan)
- AI-powered skill practice (J. Rostan)

“What are examples of useful AI tools for teaching and learning?”

- AI Toolbox (J. Rostan)
- AI aggregators (J. Rostan)

“How can school leaders use AI?”

- Using AI to improve recruiting systems and practices (J. Rostan)
- Using AI to scale instructional coaching, using tools such as Edthena or free tools such as EdCoach
- Using AI to analyze student data(J. Rostan)
- AI adaptive response guidelines for school leaders (J. Rostan)

Examples and references for international legislations relevant to AI use (from TeachAI)

""What relevant legislations should I follow when using AI?"

United States

- FERPA - AI systems must protect the privacy of student education records and comply with parental consent requirements. Data must remain within the direct control of the educational institution.
- COPPA - AI chatbots, personalized learning platforms, and other technologies collecting personal information and user data on children under 13 must require parental consent.
- IDEA - AI must not be implemented in a way that denies disabled students equal access to education opportunities.
- CIPA - Schools must ensure AI content filters align with CIPA protections against harmful content.
- Section 504 - This section of the Rehabilitation Act applies to both physical and digital environments. Schools must ensure that their digital content and technologies are accessible to students with disabilities.

International

- GDPR (EU) - Strict data protection and privacy regulations for individuals in the European Union.
- Data Protection Act (UK) - Governs the use of personal data in the United Kingdom.
- PIPL (China) - The China Personal Information Protection Law protects student data privacy.
- DPDP (India) - The Digital Personal Data Protection Act proposes protections for student data.

"How can I make data private on ChatGPT?"

- ChatGPT's hidden incognito mode

Examples of AI tools validation protocols

“What protocol should we follow to validate AI tools?”

- AI educational tool evaluation guide (J. Rostan)
- The DOMS AI-ED tools evaluation rubric (P. Hardman)

Appendix D

Examples and references for the citation of generative AI tools (from TeachAI)

“How should I cite AI-generated content?”

MLA Style - Generative AI

APA Style - ChatGPT

Chicago Style - Generative AI

Examples and references for strategies that can be used to ensure appropriate uses of AI in a school context

“How can I ensure that AI use serves rather than dictates my goals and methods?”

The TPACK framework explained (Powerschool)

“How can I use generative AI effectively?”

- Thinking outside the bots (J. Rostan)
- Effective prompting methods for generative AI (J. Rostan)

“What are examples of AI use policies I can use in my class?”

The AI assessment scale: no AI to full AI (L. Furze)
AI Intensity and AI Competency scales (J. Rostan)

“Should I use AI detectors to prevent plagiarism?”

- AI technologies, including AI detectors, are not entirely reliable.
- The way they work and the meaning of their results are often misunderstood, leading to misuses. Once understood, they can be used to identify students with whom a clarifying conversation might be needed.
- They can easily be tricked, only detect “poor” plagiarism, and can discriminate against certain students.
- Their use might also prevent the development of proper AI literacy competencies by both students and teachers (such as designing AI-rich and AI-proof assessments)
- They might also send the wrong message, failing to prepare students for a future where the use of AI is ubiquitous (TeachAI).

“Can I use generative AI tools to mark student work?”

No. Proper AI use should always “keep humans in the loop”. AI should support and enhance, but not replace human judgment. Just like students should always evaluate AI outputs, so do teachers. AI should NEVER be used to make final decisions (UNESCO).

“Can I use generative AI tools to write student reports?”

- If the school allows it, and if this use is transparent and communicates student learning as (or more) effectively and reliably - yes. Otherwise, no.
- Should the school allow it? This depends on its answer to the questions above. Can it be done legally and without contradicting the school values? Can it be done without undermining the school's mission and teachers' skills? Note that AI outputs should also always be reviewed.

“How can students learn about AI?”

Ready-made lessons about AI (J. Rostan)

AI @ School: Philosophy, Policies, Competencies

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