Ultimate Guide to Using Artificial Intelligence for Good in K–12 Schools

FEATURING

3 'BIG IDEAS' TO HELP YOU BALANCE THE RISKS OF EMBRACING A NEW TECHNOLOGY WITH THE POTENTIAL REWARDS

Everybody's talking about artificial intelligence — and schools are no exception.

But while almost everyone agrees that A.I. harbors immense implications for the future, the jury appears split on whether the technology in its current form presents more risk or reward as a viable tool for learning and decision-making in today's schools.

Just look at the numbers.

A recent Pew Research Center report found that nearly 25% of U.S. teachers felt that A.I. would do more harm than good.

While teachers and others are understandably concerned about the prospect of some students using the technology for things like plagiarism and cheating, an even higher percentage of teachers (56%) expect that artificial intelligence use in schools will increase this year and into the future. (Source: EdWeek Research Center, 2023).

1 in 4 teachers

said A.I. would do more harm than good in K-12 schools

Source: Pew Research Center, 2024

56%

Percentage of educators who expect A.I. use to rise in schools

Source: EdWeek Research Center survey, December 2023
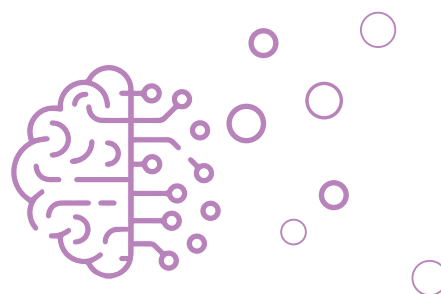

Educator, speaker and Wall Street Journal Best-Selling Author of Adaptable A.J. Juliani has emerged as a leading voice for school leaders looking to better understand the implications and use cases for A.I. as a source for good in education.

His take: There's no putting the genie back in the bottle. The technology is here. What's more, like it or not, A.I. will forever be a part of students' lives, which means we need to teach them how to use it.

The good news? Used responsibly, Juliani contends, the benefits of A.I. as a tool for school decision-making and instruction far outweigh the risks.

"One of the best things about teaching is interacting and engaging with students. One of the most challenging things about teaching is the paperwork," says Juliani. "That's one place where artificial intelligence comes in. It can help us do that paperwork at a much faster speed. A.I. can be a very easy tool to help plan lessons and do some of the things that take a whole lot of time off your plate."
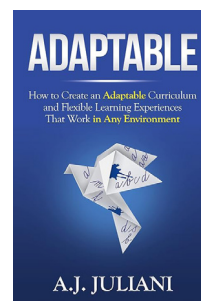
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A.J. Juliani, educator, speaker, author of Adaptable

Adaptable, A.J. Juliani

If you're an administrator, technology leader, instructional coach or classroom teacher and you're interested in leveraging the power of A.I. to save time and help students, while managing the risks, this guide features research and practical ideas from Juliani and other experts that you can use when integrating the technology effectively in your schools.

READ-ON TO CONSIDER

1. **What artificial intelligence is & how it works**
2. **Developing policies & balancing the risks of A.I. in schools**
3. **Applications for saving time & boosting students outcomes**

Ready to get started? Let's get into it.

1 Understanding what artificial intelligence is & how it works

Before we can consider how A.I. can be used in schools, it's important to understand what the technology is and how it works.

Where school leaders are used to purchasing and implementing new products, A.I. is more likely to find its way into products you and your students are already using. By all accounts, this has already happened, whether using Google (Gemini) to conduct research for a project, or Microsoft Word (Copilot) to write a term paper.

While large-language models (LLM) like ChatGPT and others may seem complicated on their face, every LLM is composed of just three parts, explains Juliani.

3 Ways AI & LLMs Typically Work

1. **The training data** information we feed the A.I. — text, images, videos — to make it "intelligent"
2. **The algorithm** puts training data into perspective, so the A.I. can make decisions & perform tasks
3. **The prediction** computer-generated statistical analysis presented in the form of an outcome
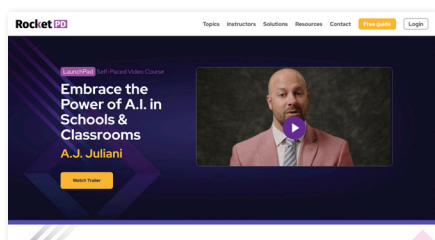
Why this is important

When we, as educators, begin to understand how A.I. and LLMs work, Juliani says, we're able to make informed decisions about how (and when) to deploy these resources in our decision-making and/or in the classroom with students.

We can use our knowledge of these technologies to deter misuse and abuse, keep students safe online and in their work with the technology, and more effectively leverage the benefits of these tools in line with broader strategic and academic goals.

"When we understand how A.I. works, it's no longer just some fairy in the sky helping us out," says Juliani. "It becomes a tool that we use, like a hammer or screwdriver. Both are really important if you're building something, but you're not going to use the same tool for the same purpose. It's the same with different A.I. We start to understand how we can use different applications for different tasks. That's the goal of any great teacher."

"When we think about artificial intelligence, we may think of some kind of thing in the sky that's doing whatever it wants. Or, maybe you think about something on the ground, like a robot, like C-3PO, but artificial intelligence is actually just three parts, and these three parts are built into all the A.I. systems that we use right now, and all the A.I. systems for the future."

A.J. Juliani, educator, speaker, author of Adaptable

(2) Developing policies & balancing the risks vs. rewards of A.I. in schools

While some schools have attempted to ban certain A.I., like ChatGPT and others, advocates say that approach is short-sighted. Like trying to stop a boulder rolling downhill. No matter how hard you try, eventually the boulder wins.

"I like to tell folks that I'm not pro A.I. or anti A.I. I'm more of a realist. I understand that A.I. is here. I also understand that there are some potential negatives that we have to go into understanding," say Juliani.

Longrunning education technology stalwart eSchool News lists the following five potential drawbacks of A.I. in schools:

1. **Privacy concerns** — A.I. learns by collecting data. As more students use A.I., it will unapologetically collect more data. Safeguarding this is a primary concern.

2. **Technology dependence** — If students rely too heavily on A.I., some say that reliance will result in a decrease in critical thinking and analysis in the classroom.

3. **Implementation costs** — Technology costs money. A.I. burns cash and could get expensive. Are we creating another have vs have-nots moment in schools?

4. **Potential for bias** — A.I. learns from the data humans feed it. Humans are inherently biased. It stands to reason that the A.I. we use in school will reflect this.

5. **Staff (& student) resistance** — Educators (and students) need proper training to use these tools effectively, responsibly and confidently for bona-fide learning purposes.

Source: eSchool News, 2024

Limiting these risks is a matter of policy. Unfortunately for schools, there is not much precedent when it comes to regulating A.I.

For his part, Juliani recently produced a short course on using A.I. in schools, in which he highlights a simple 3-part protocol, which he credits to fellow educator and technology director Sam Mormando, who, at the time of this writing, is director of technology at Pennsylvania's Garnet Valley School District.

3-Step A.I. Traffic-Light Protocol

As Juliani explains it, the so-called traffic-light protocol has three stages:

RED — with this assignment you **cannot use A.I.**

YELLOW — with this assignment you **have to ask for permission to use A.I.**

GREEN — with this assignment you **can use A.I. without asking for permission**

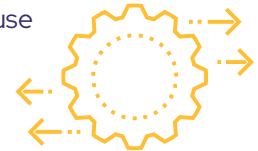# 3 Applications for saving time & improving students outcomes

The thinking goes that, if we can develop reasonable policies to help blunt some of the inherent risks of A.I. in schools, that students and teachers can more freely avail of its benefits.

Says Juliani: "The idea that we want to create learning experiences that are meaningful, relevant, authentic and engaging has been around forever. Now we have a tool that can be a creative learning partner, where if I have a boring unit coming up, I can dive in, go use an A.I., get some ideas, create a lesson plan, and actually put something together that's going to be meaningful and relevant for my students. Previously, that might have taken 20 hours to plan out with another teacher."

Where compliance has sapped creativity in the classroom, the contention is that A.I., when used responsibly, might actually start to return some of that creative freedom in the form of time.

For teachers and staff, it comes down to identifying the right tools or applications and learning to use them in an effective way.
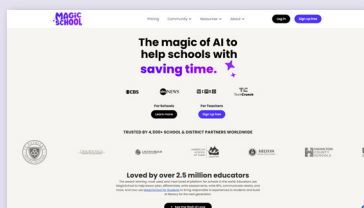
3 Free A.I. Tools for Education

While ChatGPT is perhaps the mostwell-known and talked about A.I., several education-specific applications have cropped up in recent years. Julianihighlights three as part of his RocketPD course.
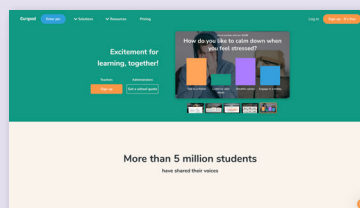
MagicSchool.ai

Library of A.I. tools to save time, generate assessments and improve outcomes
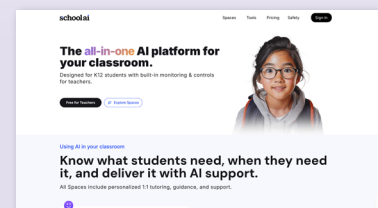
Curipod.com

Use A.I. to create interactive and personalized student lessons

SchoolAI.com

Designed to help moderate and manage A.I. use in classrooms

Looking to the future

While educators continue to wrestle with the potential to use A.I. for nefarious and disruptive purposes — and that potential is definitely there — A.J. and other technology watchers say a growing stable of A.I.-powered applications built specifically for use in schools and classrooms should at least partially allay those concerns.

The question is not to use A.I. or not to use A.I. But rather, which school-specific A.I.-powered applications have the highest degree of potential benefit for teachers and staff and how do we choose?

8 TIPS FOR INTEGRATING A.I. RESPONSIBLY

To help schools avoid chaos and leverage the benefits of A.I. for good,
an Education Week Special Report on the topic lists the following eight recommendations:

1	Align A.I. with the district's overall mission & goals
2	Develop students' A.I. literacy
3	Provide adequate professional development
4	Develop a clear acceptable-use policy
5	Protect student and adult data privacy
6	Develop a thorough process for vetting A.I. tools
7	Assess the impact of your A.I. investment
8	Communicate effectively with parents & others

Source: Education Week, Special Report, 2024

"When we learn to harness and use tools like these, we can go from being that teacher that is struggling with the amount of work on our plate, or the school leader that's just putting out fires, to being that leader that you always wanted to be," says Juliani, "whether it be in the classroom or with your staff."

Ready to embrace artificial intelligence and use it as a force for good in your schools?
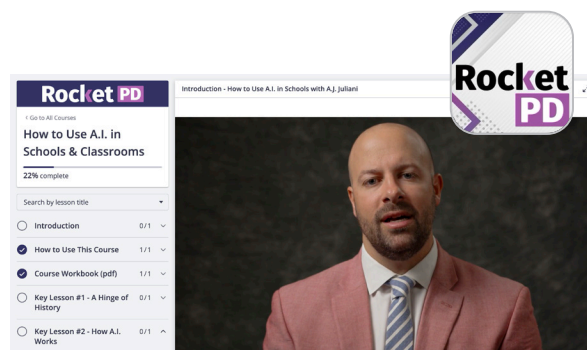
Catch A.J. Juliani on The RocketPD Podcast

Catch Corey's interview with A.J. Juliani on The RocketPD Podcast. Listen to the full episode: **How to Use A.I. for Good in Schools.**

Subscribe to RocketPD on YouTube, or download wherever your favorite pods are found!

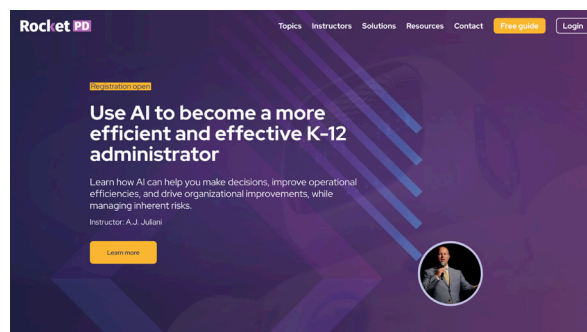## Take A.J.'s 60-min. Course on A.I. in Schools & Classrooms

Download the RocketPD app and join A.J. over 5 short video lessons with practical job-embedded outcomes. Video-based course includes a downloadable workbook and a Certificate of Completion.

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Download on the App Store

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