**Here are some benefits of Artificial Intelligence in Education which improves the learning experience:**

**1. Personalization**

This is one of the benefits that AI is expected to have as far as education is concerned. In a class, it can get really difficult for a teacher to meet the expectations of each and every student out there. After all, there are so many different kinds of students that teachers have to deal with!

There are remedial students, ESL students, advanced students, and students with special needs, to name a few. In this day and age, it is very important that all of them have the same kind of access to education and learning. The beauty of AI systems is that they are able to adapt quite easily to the individual learning related requirements of a student. As such it can also target instructions that are based on their relative strengths and weaknesses. It also reduces the meaningless work that teachers have to do every now and then. This also means that the learning experience is a lot more meaningful for the students.

**2. Teaching**

In fact, this is one effect that is already being seen evidently. AI is already being used in order to teach students. There are so many ways in which machines are starting to play the same role that was once being played by humans and this includes tutors as well. Just like human tutors can do, intelligent tutoring systems are able to understand the style of learning preferred by students. They are also able to gauge the amount of knowledge that a student already has. All this data and analysis is being used to deliver instructions and support that is created specifically for that student.

**3. Grading**

This has got to be the best benefit that AI can have in this particular domain. As far as tasks that teachers are supposed to do this is supposed to be the most boring. At the same time, this is the one task that takes the maximum away from them. It is because of work like grading that teachers are unable to devote more time to more purposeful and meaningful work such as professional development and lesson planning.

These days, machines have become a lot more advanced than what they were earlier. They are now capable of performing a lot more than just grading an examination by using an answer key. They are capable of compiling data regarding how students have been performing. In fact, they can also grade on assignments that are as subjective as essays.

**4. Constructive feedback on course quality**

Nowadays, AI has the capacity to find out gaps in course content on the basis of how students are performing in the assessments.  Let us say that most of the students in a class have failed to answer a question the right way.

Now AI can actually look into that pattern and see if certain information or concepts are missing from the program’s curriculum or not. This, in turn, can help teachers provide better materials or use better methods of learning so that students can improve in those areas.

**5. Providing meaningful feedback to students**

This is the age when most of the people around the world are communicating by way of text messages. These days, students are also growing increasingly insecure about asking questions or clearing doubts with their teachers in front of their peers. For them, it is a risk better not taken.

They are also worried about receiving critical feedback on a public forum. By using AI students would be more comfortable when it comes to making mistakes that are necessary for them to learn well. As a bonus, they would also get the suggestions that they need in order to improve.

**Recap:** [Run Your Educational Institution Like a Fortune 500 CEO](https://fedena.com/blog/2018/03/run-your-educational-institution-like-a-fortune-500-ceo.html)

**6. Creating a global classroom**

With AI it would be possible for schools to create global classrooms, as it were. From now on it would no longer matter as to where a student is. If she or he is unable to attend a class due to some reason or the other all she or he would need to do is visit a link, click on it, and the student can join the live classroom. Similarly, thanks to this technology it would also be possible for them to interact with their peers even if they were a thousand miles apart from each other.

There can be no doubt about the fact that technology such as AI is making education a lot more efficient and easier than what it was. In fact, as [Hadley Ferguson – the executive director of the Edcamp Foundation](https://www.fastcompany.com/3043387/5-big-ways-education-will-change-by-2020) – says, students can actually use such technology in order to interact with their teachers as well as famous authors, experts, and scientists, whose books they may be reading in class. It is expected that in the days ahead some of these kids, so adept at technology, will grow up and become teachers themselves. They can push this change along even further.

**7. The role of skilled teachers**

No matter what one may think skilled teachers would always have a role to play even in the AI age and beyond.

Experts such as Shannon May, who has founded the Bridge International Academies, say that technology would never drive teachers completely out of the fray. Rather it would be teachers, skilled in the ways of using technology, driving the usage of AI based on the needs of their students. Education technology such as AI would be used more to supplement the best ways of teaching and learning that exist already.

Jake Schwartz, co-founder and CEO (chief executive officer) of General Assembly, feels that with the advancement of technology there would be better ideas regarding what its limits are. He says that there is no way that going online completely is going to solve all the problems with education now. However, at the same time, he does acknowledge that it could make access to education a lot easier. According to him, when combined with school curricula and programs AI could become a powerful tool. He signs off by saying that the human factor would always be important.

**8. Making education a lot more interesting than before**

There are many ways in which AI can make education a lot more interesting. It can create the sort of immersive experience that you need in order to get students hooked on to their class and understand all that is being said. Things such as game technology and simulation are expected to play major roles in this regard. It can actually make education a lot more adaptive and intuitive. In fact, such technology can actually be used in order to encourage students to come together and develop knowledge themselves. This is something that you need so badly in this day and age of short attention span.

**9. Monitoring performance**

AI makes it a lot easy for teachers and school management to keep track of how well or poorly the students are performing. Such systems can be used to deal effectively with the vast volume of data and statistics that these schools and colleges normally have. They can use these to create definite reports that help them understand the progress being made by various students. The best part of all this is that such reports can be created as many times as needed. The quality of data can be enhanced as well.

**Conclusion**

It is not uncommon for educators has to fear how their role would be diminished by the use of technology such as leading school enterprise resource planning (ERP) systems. It is true that when systems are changed en masse there are always some bad things that can happen. In some instances, there are actually logically justifiable reasons for such fears. However, at the same time, it would be absolutely foolish to ignore the improvements and possibilities that AI can offer in the domain of education. It is actually supposed to bring about a dramatic improvement in the overall educational experience with AI. In fact, as has been said already, when you have the right teacher using it AI can actually do wonders that traditional methods of education may not be able to do.

**1. Artificial intelligence can automate basic activities in education, like grading.**  
In college, grading homework and tests for large lecture courses can be tedious work, even when TAs split it between them. Even in lower grades, teachers often find that grading takes up a significant amount of time, time that could be used to interact with students, prepare for class, or work on professional development.

While AI may not ever be able to truly replace human grading, it’s getting pretty close. It’s now possible for teachers to automate grading for nearly all kinds of multiple choice and fill-in-the-blank testing and automated grading of student writing may not be far behind. Today, essay-grading software is still in its infancy and not quite up to par, yet it can (and will) improve over the coming years, allowing teachers to focus more on in-class activities and student interaction than grading.

**2. Educational software can be adapted to student needs.**

From kindergarten to graduate school, one of the key ways artificial intelligence will impact education is through the application of greater levels of individualized learning. Some of this is already happening through growing numbers of adaptive learning programs, games, and software. These systems respond to the needs of the student, putting greater emphasis on certain topics, repeating things that students haven’t mastered, and generally helping students to work at their own pace, whatever that may be.

This kind of custom-tailored education could be a machine-assisted solution to helping students at different levels work together in one classroom, with teachers facilitating the learning and offering help and support when needed. Adaptive learning has already had a huge impact on education across the nation (especially through programs like Khan Academy), and as AI advances in the coming decades, adaptive programs like these will likely only improve and expand.

**3. It can point out places where courses need to improve.**

Teachers may not always be aware of gaps in their lectures and educational materials that can leave students confused about certain concepts. Artificial intelligence offers a way to solve that problem. Coursera, a massive open online course provider, is already putting this into practice. When a large number of students are found to submit the wrong answer to a homework assignment, the system alerts the teacher and gives future students a customized message that offers hints to the correct answer.

This type of system helps to fill in the gaps in explanation that can occur in courses, and helps to ensure that all students are building the same conceptual foundation. Rather than waiting to hear back from the professor, students get immediate feedback that helps them to understand a concept and remember how to do it correctly the next time around.

**4. Students could get additional support from AI tutors.**

While there are obviously things that human tutors can offer that machines can’t, at least not yet, the future could see more students being tutored by tutors that only exist in zeros and ones. Some tutoring programs based on artificial intelligence already exist and can help students through basic mathematics, writing, and other subjects.

These programs can teach students fundamentals, but so far aren’t ideal for helping students learn high-order thinking and creativity, something that real-world teachers are still required to facilitate. Yet that shouldn’t rule out the possibility of AI tutors being able to do these things in the future. With the rapid pace of technological advancement that has marked the past few decades, advanced tutoring systems may not be a pipe dream.

**5. AI-driven programs can give students and educators helpful feedback.**

AI can not only help teachers and students to craft courses that are customized to their needs, but it can also provide feedback to both about the success of the course as a whole. Some schools, especially those with online offerings, are using AI systems to monitor student progress and to alert professors when there might be an issue with student performance.

These kinds of AI systems allow students to get the support they need and for professors to find areas where they can improve instruction for students who may struggle with the subject matter. AI programs at these schools aren’t just offering advice on individual courses, however. Some are working to develop systems that can help students to choose majors based on areas where they succeed and struggle. While students don’t have to take the advice, it could mark a brave new world of college major selection for future students.

**6. It is altering how we find and interact with information.**

We rarely even notice the AI systems that affect the information we see and find on a daily basis. Google adapts results to users based on location, Amazon makes recommendations based on previous purchases, Siri adapts to your needs and commands, and nearly all web ads are geared toward your interests and shopping preferences.

These kinds of intelligent systems play a big role in how we interact with information in our personal and professional lives, and could just change how we find and use information in schools and academia as well. Over the past few decades, AI-based systems have already radically changed how we interact with information and with newer, more integrated technology, students in the future may have vastly different experiences doing research and looking up facts than the students of today.

**7. It could change the role of teachers.**

There will always be a role for teachers in education, but what that role is and what it entails may change due to new technology in the form of intelligent computing systems. As we’ve already discussed, AI can take over tasks like grading, can help students improve learning, and may even be a substitute for real-world tutoring. Yet AI could be adapted to many other aspects of teaching as well. AI systems could be programmed to provide expertise, serving as a place for students to ask questions and find information or could even potentially take the place of teachers for very basic course materials. In most cases, however, AI will shift the role of the teacher to that of facilitator.

Teachers will supplement AI lessons, assist students who are struggling, and provide human interaction and hands-on experiences for students. In many ways, technology is already driving some of these changes in the classroom, especially in schools that are online or embrace the flipped classroom model.

**8. AI can make trial-and-error learning less intimidating.**

Trial and error is a critical part of learning, but for many students, the idea of failing, or even not knowing the answer, is paralyzing. Some simply don’t like being put on the spot in front of their peers or authority figures like a teacher. An intelligent computer system, designed to help students to learn, is a much less daunting way to deal with trial and error. Artificial intelligence could offer students a way to experiment and learn in a relatively judgment-free environment, especially when AI tutors can offer solutions for improvement. In fact, AI is the perfect format for supporting this kind of learning, as AI systems themselves often learn by a trial-and-error method.

**9. Data powered by AI can change how schools find, teach, and support students.**

Smart data gathering, powered by intelligent computer systems, is already making changes to how colleges interact with prospective and current students. From recruiting to helping students choose the best courses, intelligent computer systems are helping make every part of the college experience more closely tailored to student needs and goals.

Data mining systems are already playing an integral role in today’s higher-ed landscape, but artificial intelligence could further alter higher education. Initiatives are already underway at some schools to offer students AI-guided training that can ease the transition between college and high school. Who knows but that the college selection process may end up a lot like Amazon or Netflix, with a system that recommends the best schools and programs for student interests.

**10. AI may change where students learn, who teaches them, and how they acquire basic skills.**

While major changes may still be a few decades in the future, the reality is that artificial intelligence has the potential to radically change just about everything we take for granted about education.Using AI systems, software, and support, students can learn from anywhere in the world at any time, and with these kinds of programs taking the place of certain types of classroom instruction, AI may just replace teachers in some instances (for better or worse). Educational programs powered by AI are already helping students to learn basic skills, but as these programs grow and as developers learn more, they will likely offer students a much wider range of services.

### Examples Of Artificial Intelligence In Learning

Here are 4 ways AI is changing the learning industry:

#### 1. Smart Learning Content

The concept of smart content is a trendy theme now as AI can create digital content with the same degree of grammatical prowess as their human doppelganger. Smart learning content creation, from digitized guides of textbooks to customizable learning digital interfaces, are being introduced at all levels, from elementary to post-secondary to corporate environments.

One of the ways to use this in an organization is when AI can condense the content in burdening troubleshooting guides into more digestible study guides with troubleshooting steps summary, flashcards, and intelligent simulations.

Smart learning content can also be used to design a digital curriculum and content across a variety of devices, including video, audio, and an online assistant.

#### 2. Intelligent Tutoring Systems

AI can do more than condense a lecture into flashcards and smart study guides as it can also tutor a learner based on the difficulties they’re having. This involves something known as "Mastery Learning". Mastery learning is a set of principles largely tied to the work of Educational Psychologist Benjamin Bloom in the 1970s. This supports the effectiveness of individualized tutoring and instruction in the classroom.

There are now smart tutoring systems that use data from specific learners to give them the feedback and work with them directly. For instance, an Intelligent Tutoring system called "SHERLOCK" is being used to teach Airforce technicians to diagnose electrical system problems in aircraft. Another advanced version of Intelligent Tutoring Systems is avatar-based training modules which were developed by the University of Southern California to train military personnel being sent on international posts.

While this AI application is still in its early stages, it will soon be able to work as a full-fledged digital platform that helps learners with their educational needs in just about any area of need. Also, these platforms will soon be able to adapt to a wide variety of learning styles to help every educator and learner.

#### 3. Virtual Facilitators And Learning Environments

With AI, an actual lecturer may soon be replaced by a robot. Well, not entirely! But there are already virtual human mentors and facilitators that can think and act like humans. But, how does a virtual facilitator think or act like a human?

A new trending technology is known as the "touchless technology" or "gesture recognition technology" gives virtual facilitators the ability to respond or act like humans in a natural way, responding both verbal and nonverbal cues.

Smart learning environments and platforms use AI, 3-D gaming, and computer animation to create realistic virtual characters and social interactions. This initiative includes more than virtual facilitators as Augmented Reality may soon be a part of the training.

#### **4. Content Analytics**

Content analytics refers to AI (specifically machine learning) platforms that optimize learning modules. Through AI, content taught to learners can be analyzed for maximum effect and optimized to take care of learners needs. Content analytics enables educators and content providers to not just create and manage their eLearning content, but also gain important insights into learner progress and understanding through a powerful set of analytics.

### Paving New Learning Pathways In The Coming Decade

Learning is a domain largely ruled by human-to-human interaction. The assimilation of AI has been slower to develop the necessary human-like attributes of receptivity, versatility, and understanding. Yet, there are plenty of areas where AI’s inherent strengths help fill high-need "gaps" in learning and teaching.

AI’s ability to analyze large amounts of data in real-time and automatically provide new content or specified learning parameters helps meet learners’ need for continual, targeted practice and feedback. This allows teachers or trainers to better understand the learner’s performance and orchestrate more effective personalized learning plans.

### Conclusion

To conclude, it is the apparent fear that human educators can or will be replaced by AI technologies in the coming decade. As AI advances in education and training, it seems there is more evidence to support the idea that both intelligent systems and humans are needed to manage different aspects of learners’ academic and social competencies. I feel AI will likely not replace but will serve as a support system to the human expert!