

## What is UN SDG #4?

The Sustainable Development Goals (SDG) have been adopted by UN member states to provide “a shared blueprint for peace and prosperity for people and the planet, now and into the future.”<sup>5</sup>

Goal #4 plans to increase the number of people who learn skills and knowledge from quality education, since education can improve people’s lives and accelerate the completion of other SDG’s.<sup>3</sup> Goal #4 focuses on allowing equal access to education for all genders, ethnicities, and identities.<sup>3</sup>

## AI’s role in equal education

AI can help excluded groups by making materials that cater to the “needs, disabilities, and specific preferences of learners (e.g., readability, level of language, speaker speed, etc.).”<sup>2</sup> It could make translations and transcriptions to assist those who have a hard time hearing or understanding the class’s primary language.<sup>2</sup> AI can allow the content to be personalized to the student by “simplifying video and audio content [as well as] rephrasing.”<sup>2</sup> Being able to customize learning material can be significantly helpful to those who struggle more to obtain knowledge in the classes they have. Out of 11 students that we surveyed, 10 said that they use AI for explanations or tutoring for difficult topics. However, AI may not be able to solve the large amount of exclusion caused by war and poverty, where children may be expected to help work for the family or hide from local conflicts.<sup>2</sup> Many issues with implementing the technology involve political and social issues outside the realm of AI.

### Works Cited

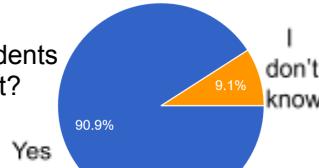
- <sup>1</sup> “Ai-Assisted Literature Reviews.” Office of Teaching, Learning, and Technology - The University of Iowa, 5 Mar. 2024, [teach.its.uiowa.edu/news/2024/03/ai-assisted-literature-reviews](https://teach.its.uiowa.edu/news/2024/03/ai-assisted-literature-reviews).
- <sup>2</sup> Bulathwela, Sahan, et al. "Artificial Intelligence Alone Will Not Democratise Education: On Educational Inequality, Techno-Solutionism and Inclusive Tools." *Sustainability*, vol. 16, no. 2, Jan. 2024. Gale Academic OneFile, [dx.doi.org/10.3390/su16020781](https://doi.org/10.3390/su16020781).
- <sup>3</sup> “Goal 4: Education - United Nations Sustainable Development.” United Nations, [www.un.org/sustainabledevelopment/education/](http://www.un.org/sustainabledevelopment/education/).
- <sup>4</sup> Lin, Chien-Chih, Huang, An-Yi Qing, and Lu, Oi-Hong Tzeng. "Artificial Intelligence in Intelligent Tutoring Systems toward Sustainable Education: A Systematic Review." *Smart Learning Environments*, vol. 10, no. 41, 2023, <https://doi.org/10.1186/s40561-023-00260-y>.
- <sup>5</sup> “The 17 Goals | Sustainable Development.” United Nations, [sdgs.un.org/goals](http://sdgs.un.org/goals).
- <sup>6</sup> Tuhin, Muhammad. "How AI Is Shaping the Future of Education and Learning." *Science News Today*, 27 Mar. 2025, [www.sciencenewstoday.org/how-ai-is-shaping-the-future-of-education-and-learning](https://www.sciencenewstoday.org/how-ai-is-shaping-the-future-of-education-and-learning).

## AI’s role in UN SDG #4: Quality Education



Do you feel that AI tools are equally accessible to all students in your learning environment?

11 Responses



## AI Alone will not Democratise Education

There have been talks that AI will not democratise education. It could be discussed that the principles underlying contemporary educational AI, such as individualism, mastery-based learning, and teaching automation, run counter to many of the fundamental ideas of democratic education that educationalists like John Dewey (1902, 1916) have discussed over the past century.

## Personalized Learning: Tailoring Education to Individual Needs

The potential of AI in education to provide individualized learning experiences is one of its most intriguing features. Each kid has a different pace, learning style, and combination of strengths and weaknesses. Due to class size, budget constraints, and the one-size-fits-all methodology, traditional educational systems frequently find it difficult to address these specific demands. That could be altered by AI.

AI-powered learning platforms allow students to study at their own speed. AI is used, for instance, by Coursera, Khan Academy, and Duolingo to assess a student's progress and provide customized exercises, tests, and information.<sup>6</sup> AI can provide feedback and modify lessons to fit the learner's comprehension level by monitoring performance data in real-time.

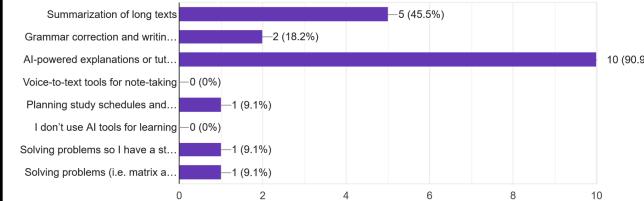
## AI Tutoring Systems

Using AI to create an Intelligent Tutoring System (ITS) is one way to achieve SDG #4. One implementation of this would be to use AI to “[analyze] students’ learning patterns and [develop] a customized learning process that will assist students in achieving their best academic performance.”<sup>4</sup> This leads to tutors being able to “identify students’ strengths and weaknesses” to tailor the lessons for the student.<sup>4</sup> Such a system would be very helpful in giving more students an education and keeping students from dropping out.

In a survey, we recorded that 10 out of 11 students find AI explanations or tutoring for difficult topics most useful for learning.

In addition, an interviewee stated that they “sometimes use AI to simplify stuff”, showing the demand of such a function for students.

Which of the following AI features do you find most useful for learning?



However, challenges such as lack of devices, lack of network bandwidth and strength, extra training for teachers, less interaction with other people, privacy concerns, security concerns, bias correction, and a possible lack of transparency are issues that make introduction of an ITS to classrooms around the world difficult.<sup>4</sup> If people are willing to make meaningful workarounds or collaborate to eliminate some obstacles, then in the future we could observe the realization and the effects of an ITS in each classroom.

## Academic Research Support

AI helps faculty and students work smarter, not harder, which revolutionizes the research process. Every step of academic study is streamlined by AI tools, from creating literature reviews to analyzing complex data. They may arrange citations, find pertinent sources, summarize academic papers, and even help with data visualization and hypothesis testing. By incorporating AI into research, students may concentrate more on critical thinking, creativity, and discovery; this converts data into insight more quickly than in the past.

## AI-Assisted Literature Review

ChatGPT is known for producing erroneous information or hallucinations. Can one rely on an AI platform to help with a literature review, then? Yes, provided that the tool you are employing is appropriate for the task at hand.<sup>1</sup> Accurate citations are not intended to be provided by ChatGPT or Copilot. Rather, use them to generate ideas for study inquiries. Be on the lookout for false information, delusions, and prejudice in the generative AI's reactions. Make careful to record the tools you use, why you use them, and the results of your interactions. Be ready to reveal the datasets, AI tools, and selection and analysis criteria. Keep in mind that you are ultimately in charge of anything you do; generative AI is merely your helper.

