

HOW AI HAS CHANGED THE ASSESSMENT OF STUDENTS IN MATHEMATICS

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In recent years, artificial intelligence has become one of the most discussed technologies in the world. AI refers to computer systems that can perform tasks which normally require human intelligence, such as learning, problem-solving and decision-making. While AI offers many advantages, it also brings certain challenges to society.

One of the main benefits of AI is that it makes our lives easier and more efficient. For example, AI is widely used in healthcare to help doctors diagnose diseases more accurately. In addition, companies like Tesla use AI technology to develop self-driving cars, which may reduce traffic accidents in the future. AI is also used in education, business and even social media platforms to improve user experience.

However, there are also some disadvantages of AI. Firstly, many people worry that AI will replace human workers. Robots and automated systems can perform tasks faster and cheaper than humans, which may lead to unemployment. Secondly, there are concerns about privacy and security. AI systems collect large amounts of personal data, and this information could be misused.

In my opinion, AI is a powerful tool that can greatly benefit society if it is used responsibly. Governments and companies should create clear rules to control how AI is developed and applied. By doing so, we can enjoy the advantages of AI while minimizing its negative effects.

Artificial Intelligence has significantly transformed the way students are assessed in mathematics. In the past, math assessment mainly depended on traditional methods such as written exams, quizzes, and homework checked manually by teachers. Although these methods were useful, they often focused only on final answers and did not always show how students thought through a problem. Today, AI is changing this process by making assessment faster, more personalized, and more detailed.

One of the biggest changes brought by AI is **instant feedback**. AI-powered platforms can check students' answers immediately and show whether they are correct or incorrect. More importantly, some systems can explain mistakes step by step. This helps students understand where they went wrong instead of simply seeing a low score. As a result, assessment becomes part of learning, not just a way to measure performance.

Another important change is **personalized assessment**. AI can analyze a student's level, strengths, and weaknesses, then provide tasks that match their needs. For example, if a student struggles with algebra but performs well in geometry, the system can offer more practice in algebra. This individualized approach makes math assessment more effective because it reflects each student's actual learning progress rather than comparing everyone in exactly the same way. AI has also improved **data collection and progress tracking**. Teachers can now use AI tools to monitor students' performance over time. These tools can identify patterns, such as repeated errors in fractions, equations, or word problems. With this information, teachers can better understand students' difficulties and adjust instruction accordingly. In this sense, assessment becomes more informative and supports better teaching decisions.

In addition, AI makes it possible to assess not only final answers but also the **problem-solving process**. Some advanced systems can evaluate the steps students take to solve a mathematical

task. This is especially important in mathematics because reasoning, logic, and method are just as valuable as the final result. By focusing on the process, AI encourages deeper understanding and critical thinking.

However, the use of AI in math assessment also brings some challenges. One concern is that students may become too dependent on technology and use AI tools to get answers without real understanding. Another issue is fairness, because not all students have equal access to digital devices and internet connection. Teachers also need to make sure that AI does not replace human judgment completely, since motivation, creativity, and classroom context still require a teacher's personal evaluation.

In conclusion, AI has changed the assessment of students in mathematics in many positive ways. It provides immediate feedback, supports personalized learning, tracks progress efficiently, and evaluates problem-solving processes more deeply. Despite some challenges, AI has the potential to make math assessment more accurate, supportive, and student-centered. For this reason, it is becoming an important part of modern education.

References

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