

AI IN EDUCATION

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Traditional education typically relies on paper textbooks. However, South Korea is working to integrate AI textbooks into its public education system. The country is training teachers and aims to implement this system by 2025. While the Ministry of Education has stated that this initiative will provide students with a customized learning experience and help bridge the gap between varying student proficiency levels, several significant concerns warrant attention. But according to the research conducted by the Educational Policy Design Institute, 86.6% of 106,448 parents and teachers said that they oppose AI textbooks as substitutes for the original textbooks. Therefore, it is essential to critically assess the potential benefits and drawbacks.

Firstly, there is the issue of over-reliance on digital technology. According to the Ministry of Science and ICT, 40.1% of Korean teenagers (ages 10-19) are at risk of smartphone over-reliance. Unlike traditional e-learning platforms, AI textbooks rely on continuous interaction and analysis, which could further amplify students' already high screen time. Critics argue that excessive screen time for students may potentially resulting in negative effects on their physical and mental health. Prolonged use of digital devices is known to cause problems such as eye strain, poor posture, and a decline in face-to-face social interactions among young learners.

\Additionally, there are concerns regarding the decline in students' literacy. In fact, Sweden and Norway, which introduced digital education early on, are reverting to the use of paper books due to issues such as decreasing literacy levels. According to the Progress in International Reading Literacy Study (PIRLS), Swedish students' literacy skills dropped by 11 points following the implementation of AI education.

Furthermore, Swedish teachers have reported a decline in students' reading comprehension skills as digital education has been adopted. Additionally, many countries, including France, Finland, the Netherlands, and Italy, are pursuing policies to ban the use of digital devices. These findings could serve as a cautionary tale for South Korea, underscoring the need to balance digital learning with traditional methods.

Next, the implementation of AI textbooks raises significant questions regarding data privacy and security. These systems typically require the collection and analysis of extensive student data to

function effectively. Both parents and educators express concerns about how this data will be managed and protected. The potential for the misuse of sensitive information is a major issue that must be addressed before any widespread deployment. The Ministry of Education discussed the procedures for collecting personal information, the scope of its use, and the establishment of protective measures regarding AI textbooks with the Korea Education and Research Information Service (KERIS). However, meticulous measures and precise solutions still need to be put in place. Moreover, the shift toward AI-based learning tools may exacerbate the educational gap rather than reduce it. Not all schools have equal access to advanced technology, particularly in rural or underfunded areas. This digital divide may lead to uneven adoption of AI textbooks, putting some students at a disadvantage. Additionally, since AI textbooks offer customized content, there are concerns that this curriculum may exacerbate the disparities among students.

Lastly, students may encounter misinformation without even realizing it. Because AI systems are trained on data, they can inadvertently collect and learn from false information available on the internet. As a result, students may be exposed to inaccurate knowledge. In light of these potential drawbacks, it is essential for the government to collaborate with educators, parents, and students to address the concerns associated with the implementation of AI textbooks. Experts have indicated that proceeding hastily and recklessly, without adequate review and consensus among educators, parents, and students, poses significant risks. Establishing pilot programs, conducting thorough impact assessments, and fostering open dialogues with stakeholders can ensure a more cautious and informed rollout.

Works Cited

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