Fostering AI Literacy Through Educational Workshop: Understanding and Ethical Perspectives Among High School Students (Poster)

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Abstract

The study examining the impact of an artificial intelligence (AI) workshop on high school students reveals improvements in their understanding and comfort with AI technologies, while highlighting concerns about ethical implications. The research, conducted with outstanding Israeli high school students aged 16-18, combined technical instruction with ethical discussions to provide a comprehensive introduction to AI concepts.

The structured three-hour workshop introduced students to fundamental AI concepts through a lecture and hands-on experience with machine learning tools. This approach aligns with research emphasizing the importance of experiential learning in AI education (Xu et al., 2023). Students engaged in practical exercises using the Machine Learning for Kids platform, where they created and trained their own models, gaining firsthand experience with AI systems.

Analysis of pre- and post-workshop questionnaires showed improvements in several areas. Students reported increased familiarity with AI concepts, with 80% indicating better understanding after the workshop. Additionally, 41% of participants felt more comfortable interacting with AI technologies.

The workshop also positively influenced students' perceptions of AI's potential benefits, with 65% reporting a more positive outlook regarding AI's applications in science, education, and industry. However, the results revealed concerns about AI's societal impact, particularly regarding job displacement. While 30% of students reported reduced concerns about AI's effect on future job opportunities, many remained cautious about this aspect.

Interestingly, student skepticism about AI's decision-making capabilities remained relatively high even after the workshop. While there was a modest 8% increase in confidence levels, many students maintained a neutral or cautious stance toward AI's role in making important decisions.

The findings emphasize the importance of incorporating both technical knowledge and ethical discussions in AI education, supporting work by Kajiwara & Kawabata (2024). While single-session workshops may effectively introduce AI concepts and improve technical understanding, addressing deeper ethical concerns may require more sustained educational efforts. As AI continues to shape various aspects of society, providing students with comprehensive AI literacy

programs becomes increasingly crucial for preparing them to engage responsibly with these technologies.

The research findings contribute to the growing body of knowledge on AI education, highlighting the need for AI educational programs that balance technical proficiency with ethical awareness, ensuring future generations are well-equipped to navigate an AI-driven world.

Keywords: AI Literacy. High School Education, AI Ethics, AI Perceptions, Student Engagement with AI.

References

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