NSF Award: 2334172

Understanding Perceptions and Use of AI in K-12 Education Using a Nationally Representative Sample

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Executive Summary

Digital technology has become an integral part of the learning environment, with students in the US encountering an average of 45 unique digital tools during the 2023-2024 academic year (Instructure, 2024). These technologies are increasingly powered by artificial intelligence. Yet little is known about how parents, educators, and youth themselves perceive and engage with AI. Key questions remain about how youth and adults use AI, the potential risks and benefits they perceive to incorporating AI in their lives, and how these impacts vary across demographic and socioeconomic groups.

The rapid emergence of generative AI technologies has captured public attention, fueling widespread concerns about the potential negative effects of AI on youth's safety, learning, and development. As AI becomes more prevalent in classrooms and homes, parents and educators are eager for guidance on how to navigate this rapidly evolving landscape safely and responsibly. Policymakers and product developers need evidence-based guidelines to develop and regulate AI technologies in ethical and developmentally appropriate ways. Understanding AI's role in K-12 education is both timely and essential to support these efforts.

We conducted a national, mixed-methods investigation of parents', teachers', and adolescents' perceptions, use, and experiences with generative and more traditional forms of AI. The results of this work provide a foundational understanding of how adolescents and adults perceive and engage with AI amidst ongoing debates about its integration in schools and homes.

Our findings illustrate the emerging, but not yet central role, of AI platforms in the lives of adolescents. While almost half (45%) of adolescents reported using ChatGPT or similar applications in the past month, use of other, more specialized AI tools, such as virtual friends or mental health chatbots, was much less common (ranging from 10% to 28%). Adolescents did not report using AI tools frequently in their daily routines, with, for example, only 7% reporting daily use of ChatGPT and related applications. Similarly, AI tools were not widely integrated into parents' routines at home, with fewer than a quarter of parents reporting family use of AI tools. Importantly, few adolescents (< 6%) reported experiencing negative social or academic impacts from their use of AI. We further describe these and other key findings in the attached fact sheet.

Methods

- Quantitative data was drawn from two national samples: **1,510 adolescents** (ages 9-17) and a probability-based panel of **2,826 parents** of K-12 students in the U.S.
- Adolescent data was collected in November 2023 by Hart Research on behalf of the National 4-H Council.
- Parent data was collected between November 2023 and May 2024 by NORC at the University of Chicago on behalf of CERES.
- Qualitative data was collected through focus groups with parents, teachers, and adolescents, in collaboration with Foundry10 and CERES from June to September 2024.

Key Findings

1. **Nearly 1 in 2 adolescents reported using ChatGPT or similar applications in the past month, while more specialized tools, such as image generators and mental health chatbots, were less commonly used.**[1]

   Almost half of adolescents (45%) said they had used ChatGPT or similar applications in the past month. More specialized tools like image generators, AI companions, and mental health chatbots were less frequently used (10-28%). Only 6% of adolescents were unfamiliar with any AI tools.

   Demographic differences emerged in tool usage. For example:

   - Boys were more likely than girls to report using ChatGPT or similar applications (48% v. 40%), as were older (ages 13-17) compared to younger (ages 9-12) adolescents (48% v. 49%).

   - Black (50%) and Latinx (47%) adolescents were also more likely to report using ChatGPT or similar applications than their White peers (40%).

2. **Adolescents did not report using AI tools frequently in their daily routines.**

   Adolescents reported using AI tools about once a week on average. Only 17% of adolescents reported using any AI tools daily (7% reported using ChatGPT or similar applications daily). There were no significant differences in reported daily usage between boys and girls (17% v. 16%) or between younger (ages 9-12) and older (ages 13-17) adolescents (21% v. 19%). However, Black (27%) and Latinx (25%) adolescents were more likely than White adolescents (17%) to report using at least one AI-powered tool daily.

3. **Most adolescents reported using AI for entertainment or schoolwork.**

   The most common reasons adolescents reported using AI were for entertainment (72%), homework (63%), and classwork (40%). Fewer adolescents reported using these tools for social connection (30%). Older adolescents (ages 13-17) were more likely than younger adolescents (ages 9-12) to use AI tools for homework (44% vs. 35%) and classwork (66% vs. 58%). Black adolescents were more likely than White adolescents to use AI tools for social connection (44% vs. 30%).

[1] AI tools included: Apps that answer questions or write text (e.g., ChatGPT), learning apps/games (e.g., Prodigy), apps that act as virtual friends (e.g., Replika), apps that read out loud (e.g., Speechify), apps that create images or music (e.g., DALL-E), apps that listen and type what you say to text (e.g., Otter AI), and chatbots that help with mental health (e.g., Woebot).

4. **Few generative AI users reported negative academic and social impacts resulting from their use of AI.**

   Among adolescents who reported using generative AI tools in the past (*n* = 697), most (69%) reported that generative AI had helped them learn something new. Few users reported negative academic or social experiences resulting from their use of generative AI, such as getting into trouble at school or conflicts with parents or peers (< 6%). Although it was rare, boys were more likely than girls (5% vs. 2%) to report AI-related conflicts with parents, as were younger (ages 9-12) versus older (ages 13-17) adolescents (6% vs. 2%).

5. **We did not find strong evidence for an "AI divide" among adolescents.**

   Adolescents from lower versus higher SES families reported lower awareness and use of AI tools, and a lower likelihood of adult support in learning to use AI tools (including ChatGPT-platforms). However, these differences were small in magnitude, explaining only 2% to 4% of the variation and no significant SES-related differences were observed across several other AI engagement metrics. Findings were replicated with a college-aged (ages 19-25) community sample.

   Results suggest that, at present, AI may not be widening existing inequalities among adolescents, though continued research is needed as AI evolves and become integrated into adolescents' daily lives. *For more information, see attached paper by Dickerson et. al.*

6. **AI was largely absent from parents' digital practices at home.**

   Less than a quarter of parents reported that their family used other AI tools in the home. ChatGPT-like applications (24%) and learning applications (19%) were the most commonly used, while virtual friends (7%) and mental health chatbots (1%) were the least used. However, some demographic differences emerged in use. For example:

   - Parents with lower versus higher education levels (high school degree or less) were less likely to report using most AI tools at home (5% - 14% versus 9% - 33%) – except for virtual friends (12% vs. 4%) and mental health chatbots (3% vs. 1%), which they were *more* likely to use.

   - Black (12%) and Latinx (9%) parents were more likely to report using virtual friends than White (5%) parents.

   - Black parents were more likely than White parents to use image generators (13% vs. 8%) but less likely to use ChatGPT or similar platforms (20% vs. 25%).

7. **Parents' perspectives on generative AI varied widely, as did their approaches to integrating AI in family life.**

   Parents shared their perspectives on generative AI in a series of focus groups. Their views ranged from enthusiasm about its educational benefits and new opportunities for their children to concerns about its potential impacts on children's cognitive, social, and moral development.

   Parents approaches to generative AI reflected differing levels of experience, knowledge, and expectations. Four parent profiles emerged, each with distinct patterns of parent-child communication, considerations around child development, and expectations about generative AI's role in family life:

   - The Curious Newcomer
   - The Discerning Optimist
   - The Concerned Critic
   - The Tech-Savvy Enthusiast

For more information on these profiles and parents' perspectives on generative AI, see attached white paper by Rubin et al.

8. **Parents, teachers, and adolescents showed a general preference for EdTech that involves human tutors over AI-based solutions.**

   Focus groups and A/B testing with parents, teachers, and adolescents revealed a preference for human involvement in education. Participants emphasized the importance of teacher-student communication and expressed discomfort with the idea of becoming too reliant on AI as an active educator. Concerns about educational quality and effectiveness were coupled with concerns about moral education pertaining to attribution, plagiarism, and other complex social and ethical concerns.

   For more information, see attached paper by Min et al.

Conclusion

Our findings illustrate the emerging role of AI platforms in the lives of young people and their families. Importantly, we found that adolescents perceived *few* negative impacts resulting from their use of generative AI technologies. These results suggest that, at present, the rapid introduction and uptake of generative AI may not be significantly widening existing inequalities among adolescents. However, as AI continues to evolve, it will be crucial to monitor young people's use, experiences, and perceptions of AI over time. This includes assessing the impact of AI-related policies on youth engagement with AI and ensuring equitable access and benefits of AI for all youth.

References:

Dickerson et al. under review. The Digital Divide and Artificial Intelligence: Evidence from Two Adolescent Samples.

Rubin et al. 2025. White Paper. Navigating AI as a Family: Caregivers' Perspectives and Strategies.

Min et al. revise and resubmit. Perceptions of AI-Driven EdTech: Nationwide Survey and Focus Group Insights from Key End Users. CHI 2025 Conference Proceedings.