

# Teaching and Learning Cybersecurity and AI Ethics in High School

## Paper Citation

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## Keywords

{cybersecurity, ai, ethics, education}

## Abstract

Today's cybersecurity and AI technologies are often fraught with ethical challenges. One promising direction is to teach cybersecurity and AI ethics to today's youth. However, we know little about how these subjects are taught before college. Drawing from interviews of US high school teachers (n=16) and students (n=11), we find that cybersecurity and AI ethics are often taught in non-technical classes such as social studies and language arts. We also identify relevant topics, of which epistemic norms, privacy, and digital citizenship appeared most often. While teachers leverage traditional and novel teaching strategies including discussions (treating current events as case studies), gamified activities, and content creation, many challenges remain. For example, teachers hesitate to discuss current events out of concern for appearing partisan and angering parents; cyber hygiene instruction appears very ineffective at educating youth and promoting safer online behavior; and generational differences make it difficult for teachers to connect with students. Based on the study results, we offer practical suggestions for educators, school administrators, and cybersecurity practitioners to improve youth education on cybersecurity and AI ethics. This study was IRB approved.

## url

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