

AI Awareness Survey of Educators

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Abstract

In the age of Large Language Models (LLMs) purportedly being used by everyone, including students, do users actually know what they’re wielding? We present a study that aims to gauge the recognition of AI assisted processes in everyday life and understand what questions and concerns people have about AI. We particularly focus on educators, as the role of AI in the classroom raises concerns around technical and information literacy and the very nature of education.

Keywords: AI education, generative AI, perceptions of AI, societal impact of AI

1. Introduction

Artificial Intelligence is more accessible than ever, finding its way into the hands of everyone from young children to elderly adults. Currently, all eyes are on generative AI while it is only a small part of the AI we use on a consistent basis. Using a three step survey, our work seeks to understand non-technical participants’ grasp of their interaction level with AI and AI assisted algorithms. This study has a special focus on determining the impact of AI use within the classroom. As questions and court cases [Tenbarger \(2024\)](#) appear following generative AI use in completing assignments - what concerns educators the most? What counts as cheating? Do teachers feel comfortable teaching students of any age what AI and algorithms are? AI in the classroom can only be effective if the instructor can guide students in the proper use of such powerful technology. As we continue to rely (knowingly and unknowingly) on AI, it is imperative to identify AI knowledge gaps in education spaces.

2. Methodology

Given the study’s particular interest in educators, we conducted our initial beta survey at Teachers College (TC) at Columbia University. TC is Columbia’s graduate school of education, psychology, and health. Our beta survey was disseminated to the Teachers College community during the fall 2024 semester, open from September 17 to November 17. 75% of respondents are current masters students at TC, 71% are female, and 37% have taught in public or private K-12 schools in the past 3 years.

For the purposes of this study, Artificial Intelligence is defined as the following: “AI is any computerized system that finds patterns in data and makes categorizations or predictions.” This definition is consistent with other definitions of AI and is intended to be an accessible explanation to those outside of computing fields. Google [Cloud \(n.d.\)](#) describes how AI works in a way that parallels this study’s definition: “While the specifics vary across different AI techniques, the core principle revolves around data. AI systems learn

and improve through exposure to vast amounts of data, identifying patterns and relationships that humans may miss.” The data comprehension within AI supports decision making algorithms that are then able to predict answers, such as with generative AI.

The AI Awareness beta survey has three parts: first, questions of frequency and perceptions of use of AI, both of self and of others. Questions include: How much do you think AI affects your decisions and decisions made about you? How much do you think your habits and online activity impact the AI and algorithms you interact with? Next, the participants engage with an activity that ascertains if they can detect AI within everyday errands. Participants read about Riley, a modern woman getting ready for her day, using many AI powered tools that users should be familiar with such as Siri, Alexa, and Google Maps. She also interacts with tools that may be less familiar such as optimized resource deployment and Amazon package delivery tracking. This exercise contains 13 AI supported processes and the story format allows participants to rely on their own knowledge to detect those processes throughout the story. No hints are available, and if they choose, participants can leave the activity blank, indicating they believe there are no AI supported processes in the story. The correct answers are shown to each participant after they submit their own answers. After the activity, participants are asked to evaluate their usage of AI, and their concerns, with their (perhaps) new found knowledge. Here we include questions like - after interacting with this activity, how much do you think AI affects your decisions and decisions made about you? What concerns you about the prevalence of AI in your workspace? Those who identify themselves as educators answer additional questions related to AI in the classroom after this portion of the survey. Additionally, three live roundtables were held with volunteer survey participants to collect qualitative feedback regarding the experience with the survey and to ask follow up questions around regulation and education.

3. Preliminary Findings

Preliminary findings indicate that participants’ ability to define AI is shockingly low, even after interacting with the activity in the survey. Most participants reported guessing when completing the activity, indicating in interviews that they struggled to parse out what could be considered AI. Many equate AI with ChatGPT and other LLMs only, unaware of its other forms. This issue was contrasted by most participants feeling concern over the growing prevalence of AI within social and political landscapes, a notable topic being the recent US election. The concept of “fake news” was referenced as being an issue exacerbated by algorithms pushing content to users that perfectly aligned with their political beliefs.

These concerns largely paralleled the educators’ concerns around the use of AI in the classroom. A current high school math teacher referred to AI as ‘AU - automated un-intelligence’, citing the hallucinations that currently plague generative AI output. Many teachers noted that detection of students using generative AI was simple, but depended on instructors’ expertise - history teachers easily identified generative AI use in history papers but not in math assignments. This ability was also attributed to having learned to write papers and complete assignments without AI help, something that teachers insisted should be taught to students prior to using AI. As students are tempted to blindly copy and paste AI-generated content, many participants agreed that technical and information literacy be taught to combat wildfires of misinformation. and prevent a decline in critical thinking

skills. However, there was little consensus on exactly what students and educators should be learning about AI, particularly in terms of technical depth, and who, governments, technology companies, academics, or others, should be responsible for developing educational standards and materials.

4. Discussion and Future Work

Other studies on AI awareness have largely focused on scenarios where participants are knowingly interacting with AI and seek to understand, for example, their perception of AI versus human decision making Jones-Jang and Park (2022); Raviv (2024). Furthermore, many studies of educators and students focus on understanding the descriptive experience of AI Dwyer and Laird (2024) and generally consider only generative AI as related to education Media (2024). Many studies of perceptions of AI assume some level of literacy with AI, while this study seeks to understand if that is a legitimate assumption. This study uniquely focuses on whether participants can even detect or describe AI and how people actually want to be educated about it.

Importantly, we find that the capacity for AI detection seems to be an unnecessary prerequisite for credulous concerns around AI impact in any field. Although not fully understanding what AI is, where it is used, and at what frequency it is used, participants still feel fear around its presence, particularly in the classroom. Our work highlights an important knowledge gap as educators consider how to guide their students in ethical use of AI and how to evaluate those students' course work while lacking a solid understanding of the technology themselves.

Our next steps involve additional general survey and item analysis to report further quantitative findings from this beta version, and to refine the AI Awareness survey for broader dissemination. Round tables uncovered some misunderstanding in the interpretation of the activity, so additional clarity is needed in instructions.

We plan to relaunch the updated survey in Spring 2025, targeting a broader population of educators including current public school teachers, community educators, and educators outside of urban centers. The ultimate goal of this research is to support advocacy around AI education and inform the development of educational materials that address people's actual knowledge gaps, concerns, and desired learning outcomes.

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