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Understanding teachers' perspectives on ethical concerns and skills to use AI tools

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ABSTRACT: This poster paper explores teachers' perspectives on the integration of artificial intelligence (AI) tools in education, focusing on ethical concerns and the requisite skills for effective implementation. A survey of 48 educators from 32 countries revealed widespread familiarity with AI (92%) and personal use (85%). Ethical concerns, notably about decision control and biases, were expressed by 57.5% of participants. The majority (90%) expressed interest in AI training, highlighting a need for professional development. Educators emphasized the importance of possessing practical skills in lesson preparation, student engagement, and prompt engineering. Moreover, it is important to note that the insights presented in this study are derived from self-reported knowledge and experiences of educators, providing a subjective perspective on their engagement with AI tools in education.

Keywords: AI ethics, AI tools, AI skills, AI in education, AI literacy

INTRODUCTION

While there are innovative emerging technologies and tools in the education field, during the last five years, most educators have encountered challenges in keeping up with these updates. Because each new technology requires time to learn and find the most efficient way to implement it in the classroom, this applies particularly to the great advancements in artificial intelligence (AI) (Karimov et al., 2023). AI applications in education have shown promise in personalizing learning experiences, enhancing student engagement, and optimizing learning outcomes (Magomadov, 2020). Within the implementation of AI tools, the educators' role is important since they are one of the main stakeholders in the learning process (Celik et al., 2022). Prior research has primarily concentrated on understanding teachers' perspectives on specific AI tools, often overlooking their broader motivations, skills, and concerns associated with these AI tools (AlAfnan et al., 2023). Nonetheless, the integration of AI tools into educational settings is a complex field influenced by the different reasons and concerns of educators (Chounta et al., 2022). In this study, our main focus was to identify the key ethical concerns of educators and explore the skills they believe are necessary for effectively incorporating AI tools into their teaching methods.

METHODOLOGY

To understand teachers' perspectives on the integration of AI tools in their teaching process, we developed a survey that was shared across 54 teacher communities on social media platforms such as Facebook and LinkedIn, garnering responses from 48 educators spanning 32 different countries (Figure 1). The respondents had varying levels of teaching experience, with the majority (78.3%) having more than 10 years of teaching experience. Almost all respondents (92%) indicated that they are familiar with the concept of AI in education (Table 1). Moreover, 85% of educators reported that

they have personally used AI tools or applications as part of their teaching. Furthermore, the participants' diverse teaching backgrounds cover a broad array of subjects, including science, language, technology education, social studies, computer studies, mathematics, and literature.

Figure 1: Participants' country demographics

Table 1: Summary of survey responses regarding ethical concerns, interest in training, familiarity and utilization of AI tools in education

Question	Yes (%)	No (%)	Maybe (%)
Familiarity with AI in education	92	8	0
Use of AI tools in education	60	40	0
Concerns about ethical implications	57.5	22.5	20
Interest in receiving AI training	90	0	10

RESULTS

In the initial section of the survey, teachers detailed the AI tools they employ and the driving factors behind their utilization. Teachers mentioned that they utilize different AI tools such as ChatGPT, AIforslides, Canva, Huggingface, Curipod, and Grammarly. 90% of participants expressed interest in receiving training or professional development related to the use of AI tools in education, while 10% are uncertain or may consider it, and none indicated a lack of interest. Moreover, the responses to our research question regarding the topics teachers are interested in for AI as required skill reveal a diverse range of preferences. Educators expressed interest in practical applications of AI, such as utilizing it to teach languages and integrating it into the science curriculum for enhanced learning and engagement. Notably, participants seek to learn the functionalities of AI tools, emphasizing their application in the humanistic and scientific domains. Beyond the application spectrum, teachers are interested in the broader context of AI in education, with some highlighting the importance of inclusive teaching and the potential role of AI in making education more accessible. Furthermore, educators demonstrate a practical outlook by expressing interest in topics related to lesson preparation, student engagement, and prompt engineering. This suggests a desire for hands-on knowledge and strategies for integrating AI seamlessly into day-to-day teaching practices. Moreover, there is an interest in fostering student-AI interaction within the classroom, underlining educators' recognition of AI as a tool for formative evaluation and engagement.

The answers to the question about ethical worries related to using AI in education show that many participants are aware of and concerned about this issue. Approximately 70% of respondents express clear concerns about the ethical implications of using AI in education, with 20% indicating uncertainty or a "Maybe" response. In contrast, 20% of participants explicitly stated they have no concerns about the ethical aspects of AI integration in education. A major worry is the perceived lack of control over

AI decisions (see, e.g., Saarela et al., 2021), with 19 teachers sharing this concern. Close behind is the issue of bias in AI algorithms, mentioned by 18 educators who fear potential biases impacting educational outcomes. Furthermore, 11 teachers highlighted the importance of understanding how AI systems make decisions, expressing reservations about their interpretability. The exclusion of practitioner expertise is a significant concern for 16 respondents, indicating worries about sidelining the valuable insights and experiences of educators. Other concerns raised by individual participants include worries about the accuracy of AI tools, student access, lack of experience in using AI, privacy concerns involving data collection and age restrictions, potential loss of original thought, societal division due to AI utilization, and overlooking learning aspects like autonomy and socialization.

CONCLUSION

The study emphasizes educators' strong interest (90%) in AI training, underscoring the need for further professional development. Educators stress the importance of practical skills for effective AI integration into teaching, particularly in lesson preparation, student engagement, and prompt engineering. Ethical concerns related to AI implementation are evident, with 57.5% expressing worries. Key concerns encompass issues of control over AI decisions, biases in algorithms, and potential exclusion of practitioner expertise. Subsequently, we would like to highlight the importance of introducing the concept of AI for educators. Therefore, as a preliminary step before delving into the discussion of core AI skills, it is crucial to provide educators with foundational AI literacy skills.

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