Artificial Intelligence in Education

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SUMMARY

Across California, Artificial Intelligence (AI) is becoming exceedingly prevalent, especially within the context of schools. However, educators and administrators are often unprepared to effectively use AI due to insufficient instructional teaching resources and comprehensive guidelines. This proposal seeks to utilize existing technology-related grants, incentivizing teachers to take professional development courses on AI. Following their newfound knowledge, teachers would then be required to disseminate this knowledge to other teachers around the school and district to promote awareness and knowledge about understanding about AI.

BACKGROUND

Artificial Intelligence (AI) – the simulation of human intelligence by machines–primarily computerized systems – has increased exponentially in use throughout various fields, such as corporate professionalism, screenwriting, and education. Specifically, using AI in the classroom has received varied responses between teachers and schools. Some teachers permit students to utilize artificial intelligence programs such as ChatGPT (a language model that uses advanced natural language processing to generate human-like text and engage in interactive conversations on various topics), while others outright ban AI tools. For example, ChatGPT, a computer program developed by OpenAI, allows users to ask questions and receive human-like responses from the virtual bot. Unfortunately, many students utilize tools like ChatGPT to engage in academic dishonesty; ChatGPT can write eloquent 5 paragraph essays, give test answers, and even analyze entire books.

The California Department of Education (CDE) currently provides a limited hub of technology education-related resources for students and teachers alike. The technology resources the California Department of Education offers are limited to the CDE's tips on creating a more secure IT environment. However, these tips do not include sufficient information on the everchanging use of AI in students' daily lives and the academic work they produce. Additionally, the CDE provides information on how technology can be used for students from preschool through college through Computer-Using Educators (CUE), an instructional technology mailing list, and a Technology Information Center for Administrative Leadership. However, all of these resources lack a comprehensive overview of how teachers can properly utilize AI, thus limiting the spread of such knowledge throughout schools, districts, and the state.

PROBLEM

With artificial intelligence rapidly evolving and guidelines stagnant, the gap between the technology and its regulation has steadily increased. This leads to most educators

struggling to understand how to utilize AI optimally, which has shown to be a powerful resource to boost learning. Some examples of ways to use AI are simulating one-on-one experiences between teachers and students and generating flashcards based on notes.

SOLUTION

The Student Advisory Board on Legislation in Education recommends the alteration of professional development days for staff in schools across California, with the primary purpose of implementing a new curriculum framework for such development days regarding educating school staff on how to strategically utilize AI as a tool in the classroom. By incentivizing teachers with technology-related grants such as the Google AI Education and STEM-related grants provided by the California Department of Education, staff from across the state will undergo these revised development days, and knowledge about AI will be disseminated via peer coaching. Once teachers receive this training from these modified professional development days, teachers will be well-equipped with knowledge in regards to how AI can be beneficial inside and outside of the classroom, and this information will spread district-wide, thus gradually working to impact the state as a whole.

LEGISLATIVE PRECEDENT

- Mississippi HB 633
  - The State Department of Education (SBE) is directed to implement a K-12 computer science curriculum including instruction in AI and machine learning.
- California Education Codes 44470 - 44472
  - Standards for Professional Development discusses the proposals conditions and requirements held forth by the SBE.

RATIONALE

Artificial intelligence, otherwise known as AI, is a series of programs that are constantly evolving in this era of technological revolution. Unfortunately, due to the novel nature of AI technology, teachers are left unsure and unable to effectively implement AI into the classroom without students using it to cheat. Thus, our solution provides teachers with the techniques necessary to incorporate AI into the classroom as a resource without a lack of academic integrity. Rather than antagonizing AI due to the lack of understanding of the programs, our proposal aims to encourage educators to comprehend the benefits and detriments of AI better, ultimately interweaving the use of AI into K-12 education.

PROVEN RESULTS

- Georgia: Launched in 2021 by the Georgia Department of Education, the AI4GA initiative focuses on enhancing AI knowledge among middle school teachers. It includes an online professional development course, aiming to build AI fluency and confidence in educators. The course offers a mix of hands-on demonstrations, guided experimentation, and project-based learning, with a strong emphasis on culturally responsive teaching. This program is part of a broader effort to integrate AI into the middle school curriculum, demonstrating a commitment to preparing educators for teaching AI in diverse classroom settings.
- Florida: Focused on professional development in AI for educators, this initiative, led by the University of Florida, offers seminars, workshops, and modules to equip teachers with AI teaching skills. The program aims to prepare educators for teaching AI, emphasizing the importance of integrating emerging technologies into education.