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THE INCORPORATION OF ARTIFICIAL INTELLEGENCE (AI) TECHNOLOGY IN UNIVERSITY ENGLISH DEBATE SIMULATIONS; STUDENTS' PERCEPTIONS, BENEFITS, AND CHALLENGES

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Abstract

Debate is a cognitive activity which demands students' public speaking and critical thinking skills through structured argumentation, logical reasoning, and persuasive delivery. Nowadays, the technology of Artificial Intelligence (AI) enables every student to engage themselves in debate activity as well as develop language and public speaking skill. The research aims to explore how students perceive the usefulness, challenges, and opportunities while interacting with AI tools during debate activities. A mixed-methods approach is deployed toward the data gained through questionnaires and semi-structured interviews with university students actively participating in debate activities. The findings show that students consider AI technology a facilitator proving them with rapid feedback and brainstorming during the debate practice. They also emphasized the importance of exercising critical thought and evaluating what they read. On the other hand, they were concerned about the reliability of content produced by AI. AI should complement traditional methods of critical thinking and independent preparation rather than replace them, even though it is seen as a useful tool for enhancing debating abilities.

Keywords: Artificial Intelligence (AI), Debate, Public Speaking, critical thinking.

INTRODUCTION

The ability to speak publicly with with good critical thinking is crucial to students' academic success (Deanna, Kuhn, 1991). To cultivate these abilities, many universities worldwide have integrated academic debate into their curricula. According to Noakes, J. (2024), state schools in England should establish debating clubs and train teachers to facilitate classroom discussions, helping students improve their communication skills and develop lifelong speaking abilities. Similarly, Edward, Richard (2008) documented that almost every high school and college in America has a debate club and/or a debate team. A lot of competitions at the county and state level have been carried out in order to upgrade quality and cultivate the potential human resources through national competitions. Thus, debate practice has been believed to contribute much to students' skill development, particularly cognitive and linguistics.

Debate is a pedagogical tool which allows students to express their ideas, address opposing viewpoints, and enhance their persuasive communication abilities (AlRubaie, 2024). Debate promotes deeper cognitive engagement, active learning, and improved thought organization under duress (Goodwin, 2003). However, debate activities demand a combination of critical thinking, public speaking abilities, and linguistic competence (Akerman & Neale, 2011;

Kennedy, 2007; Zare & Othman, 2013). AI technology such as generative language models (e.g., ChatGPT), speech analyzers, and intelligent tutoring systems has been introduced to support debate activities, provide students with quick supports in constructing arguments, enriching vocabulary, and refining speech clarity (Kasneci et al., 2023; Dwivedi et al., 2023; Li, Ma, & Zhou, 2022).

Many researches have been conducted on the use of AI technology in teaching learning activities. Rahman, Salman (2025) concluded that AI-assisted learning in debate significantly improve accuracy, reduce harmful belief, and enhance confidence. Elaies, Ramadan (2025) mentioned that AI potentially give both benefits, challenges, and opportunities in academia because it boosts efficiency and access for researchers in conducting innovative academic researches regardless of some ethical consideration. Similarly, Padia, Soham (2024) confirmed that AI tools contributed more benefits than harm for students due to its accessible and effective use in public speaking.

This study explores students' perceptions related to the benefits, challenges, and opportunities of AI technology during debate activities and How AI tools assist students in learning public speaking through debate. By focusing on students who are actively engaged in debate, this research is expected to provide valuable insights for educators, developers, and policymakers in designing AI-enhanced debate training that supports both linguistic and cognitive development.

METHOD

This study deploys a mixed-methods research design, combining both quantitative and qualitative approaches to explore students' perceptions of using AI technology in debate simulations. The quantitative component involves a questionnaire with Likert-scale items to capture general trends and measurable attitudes, while the qualitative component includes open-ended questions and semi-structured interviews to gain deeper insight into students' individual experiences and reflections. The participants in this study are university-level students who have actively used AI tools—such as ChatGPT, Grammarly, or AI speech feedback systems—during their debate practice. A purposive sampling technique is used to select participants who have relevant experience with AI-assisted debate. The target sample size for the questionnaire is approximately 20 students, while 8–10 students will be selected for follow-up interviews to provide qualitative depth.

RESULTS AND DISCUSSIONS

The data presented highlights students' responses toward the inquiries dealing with AI-assisted learning include the usefulness, ease of use, learning enhancement, and overall perception. The following table presents the data of responses from the Likert-scale questionnaires with 15 inquiries which identify the students perception of interacting with AI during debate activities.

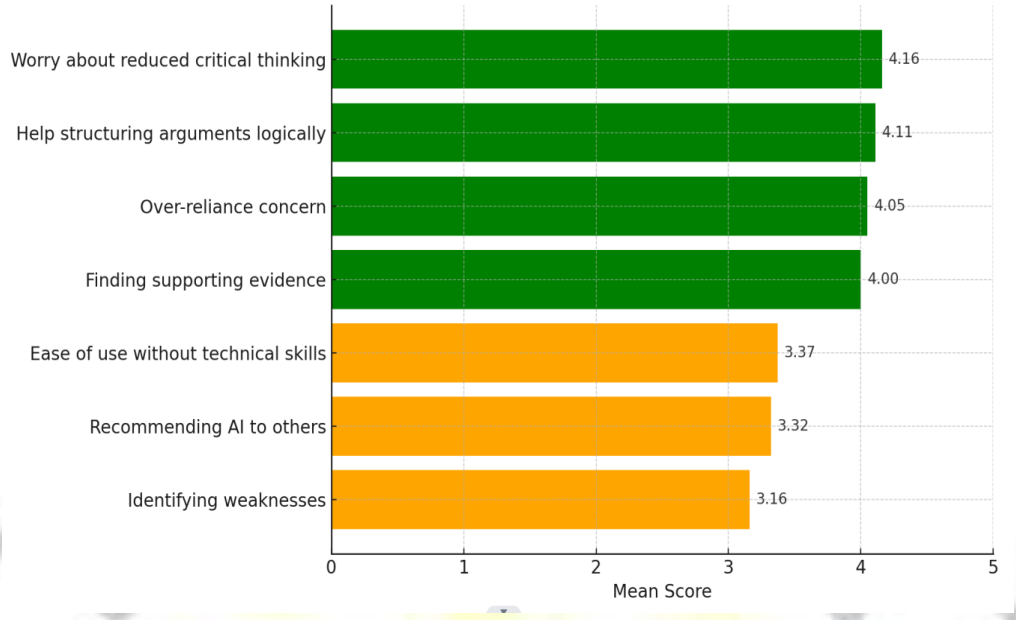
Table 1
Students' Response of Questionnaires

No.	Items	Mean	Std Dev	Min	Max
1	AI tools help me generate arguments more efficiently	3.84	0.76	2	5

2	AI helps me find supporting evidence or examples for my arguments	4.00	0.88	2	5
3	AI improves the quality of my speech content	3.53	0.90	2	5
4	AI makes me more confident during debate preparation	3.37	0.96	2	5
5	AI tools are easy to use even without technical skills	3.37	1.12	1	5
6	I can quickly understand how to use AI for debate purposes	3.79	0.98	2	5
7	I don't need much training to use AI in debate practice	3.21	0.85	2	5
8	AI helps me learn how to structure my arguments logically	4.11	0.66	3	5
9	AI helps me reflect on and improve my performance in debates	3.63	0.76	2	5
10	AI helps me identify my weaknesses in debate delivery or content	3.16	1.01	2	5
11	I am concerned about over-relying on AI during debate preparation	4.05	0.85	3	5
12	AI sometimes provides inaccurate or misleading information	3.79	0.79	2	5
13	I worry that using AI may reduce my critical thinking skills	4.16	0.83	2	5
14	AI is a valuable tool in learning and practicing debate	3.42	0.90	2	5
15	I would recommend the use of AI tools to other students for debate preparation	3.32	0.75	2	4

The table of students' responses shows the level of students' agreement toward the statements related to the AI-assisted learning in debate activities. It can be interpreted that the students commonly consider that AI technologies are useful for preparing for debates, particularly when it comes to organizing ideas (M = 4.11), locating evidence to support them (M = 4.00), and producing arguments quickly (M = 3.84). Significant worries were raised, meanwhile, about the possible harm to critical thinking abilities (M = 4.16) and the danger of being overly dependent on AI (M = 4.05). This suggests a conflict between the worry about less autonomous thought and the apparent advantages of AI in improving debate performance. Meanwhile, items such as ease of use without technical skills (M = 3.37) and the ability to identify personal weaknesses (M = 3.16) received lower mean scores, suggesting variability in students' confidence and awareness when using AI tools. The capacity to recognize one's own shortcomings (M = 3.16) and ease of use without technical expertise (M = 3.37), on the other hand, had lower mean scores, indicating variations in students' awareness and confidence when utilizing AI tools. See chart 1.1 below.

Chart 1. The level of students' agreement toward the statements related to the AI-assisted learning



The semi-structured interview with open-ended question is also conducted in order to gain deeper insight into students' individual experiences and reflections. There are 8 participants selected to be the interviewee. The questions regarding their interaction with AI tools during the debate simulations highlight perceived usefulness, challenges and concerns, suggestions and improvements. The thematic analysis is deployed to examine the data of the students' responses to the questions which is qualitatively described.

The questions dealing with the perceived benefits during the debate activities indicate that some students feel that AI tools help them in constructing arguments in a good structure and supporting evidence quickly. Therefore, they felt more confidence during the debate.

*"AI **helps** me to **strengthen** my argument and **build scripts**." (data 3, Interview)*
*"I use AI to brainstorm and **find evidence**, which saves time." (data 7, interview)*

However, they also felt that frequent interaction with AI in debate activities could make them over-independence, hindering them from enhancing critical thinking skills. Apart from that, the accuracy and credibility of AI-generated content are not always credible.

*"I'm **worried about** relying too much on AI and reducing my own thinking." (data 11, interview)*
*"Sometimes the sources from AI are **not credible**.(data 14, interview)*

Students expect that AI technology is wisely used without reducing the opportunity to sharpen and practice their critical thinking skill. Instead of relying entirely on AI, they suggest that AI tools should be used as reference only and feedback like source of verification and cross-checking facility.

"I suggest using AI to give instant feedback, but we should still analyze critically." (data 12, interview)
"Use AI for brainstorming but always verify the information." (10, interview)

CONCLUSION

The results show almost entire students feel that using AI in debate practice be a strong way to help them improve their ability to argue and speak publicly. AI is beneficial for them particularly in constructing arguments, providing evidences, and enriching vocabulary. Accordingly it enhances their confidences during the debate practice. Nevertheless, training and guidance on how to use AI tools properly are still required, making sure they understand that these tools are meant to help, not replace, real thinking. Qualitative data supported these results, as students mentioned how AI helps with brainstorming and getting quick feedback. At the same time, they also worried about the trustworthiness of content created by AI and stressed the need to think carefully and judge what they read. In general, even though AI is viewed as a helpful tool to improve debate skills, students believe it should work alongside, not take the place of traditional ways of thinking critically and preparing on their own.

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