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Enhancing EFL Students' Analytical Skills in Discourse Analysis: Insights and Perceptions of ChatGPT's Effect

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This study investigated the impact of ChatGPT, an AI-powered conversational tool, on enhancing the analytical skills of EFL students and their perceptions of using AI for discourse analysis. Unlike previous studies that primarily examined AI for language learning in general, this research uniquely explored ChatGPT's role in developing higher-order analytical skills in discourse analysis within an EFL university context. Participants were students enrolled in a discourse analysis course at the College of Education, English Language Department, Majmaah University. A mixed-methods design was employed, combining pre- and post-tests with surveys and interviews. The tests measured students' abilities to identify, analyze, and interpret discourse features such as stance, maxims and politeness strategies, coherence and cohesion, online discourse, and pragmatic meanings. Findings first indicated a significant improvement in students' analytical skills after integrating ChatGPT into classroom activities. In addition, students reported positive perceptions of using ChatGPT, particularly valuing its interactive feedback and support for independent learning, although some noted inconsistencies in its responses. These results suggest that ChatGPT can be an effective tool for promoting analytical skills in discourse analysis while fostering positive attitudes toward AI in educational contexts.

Keywords: ChatGPT, EFL students, analytical thinking skills, discourse analysis, artificial intelligence, educational AI tools

INTRODUCTION

Discourse Analysis (DA) is a methodological approach that explores how language functions within specific social contexts, focusing on its structure, organization, and meaning (Gee, 2014; Fairclough, 2010). Developing proficiency in DA involves enhancing a range of analytical skills that help students engage with both linguistic and social dimensions of communication. For instance, students must learn to recognize elements such as stance markers, politeness strategies, conversational maxims, coherence, cohesion, and pragmatic markers. These features are not only identified but also analyzed in terms of their role in shaping meaning, such as how cohesive devices contribute to textual clarity or how politeness strategies influence social interactions. Interpretation goes a step further where students draw inferences about underlying

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intentions, pragmatic meanings, and the cultural or social norms embedded in language use.

Artificial Intelligence (AI) tools, such as natural language processing (NLP) platforms, chatbots, and machine learning algorithms, have become instrumental in assisting English as a Foreign Language (EFL) learners in developing these critical analytical skills (Suriano et al., 2025). AI-powered tools support students in deconstructing complex texts, identifying discourse patterns, and engaging in higher-order thinking skills, such as analyzing tone, structure, and argumentation, without being hindered by linguistic challenges. AI-enhanced discourse analysis exercises also generate customized reading materials based on students' interests and prior performance, fostering intrinsic motivation and sustained analytical engagement (Ruiz-Rojas et al., 2024). AI-supported writing tools help learners recognize coherence and cohesion by providing automated feedback on logical sequencing and textual connectivity (Hongxia & Razali, 2025; Marzuki et al.,2023; Luo & Zhong, 2025; Almousa & AbuSa'aleek, 2025). Besides, they enhance pragmatic competence by offering contextualized suggestions for language use so students can understand discourse conventions (Alves Pereira et al. 2023).

The role of AI in language learning has been the subject of recent studies. Warschauer and Grimes (2008) highlighted that AI-supported automated systems facilitate corrective feedback and foster interactive learning. Liu and Wang (2024) found that AI tools effectively enhance critical thinking abilities in English literature classes. Rahimi et al. (2025) emphasized AI-assistive tools' role in promoting motivation, self-regulation, and collaboration. AI-assisted platforms simulate real-world discourse by guiding goal-setting, self-evaluation, and peer interaction (Kim et al., 2023). Furthermore, ChatGPT could also scaffold student learning, address linguistic challenges, and enhance analytical skills by providing interactive feedback and recommending targeted activities (Bin-Hady et al., 2024).

Statement of the Problem

Discourse analysis, a branch of linguistics, examines how language is used within its social, cultural, and pragmatic contexts. EFL students studying this field often encounter challenges in identifying key discourse features such as stance, engagement strategies, coherence, cohesion, and pragmatic meaning. These difficulties may stem from limited exposure to authentic discourse, differences in cultural and pragmatic norms, or a lack of analytical thinking skills. This study explores the potential of ChatGPT, an AI-powered educational tool, to support students in identifying, analyzing, and interpreting stances, engagement strategies, and other typical discourse features in both written and spoken texts. It also examines how the use of ChatGPT may shape students' perceptions of AI tools in the context of learning discourse analysis.

Accordingly, the study Objectives are:

1. To evaluate the effect of ChatGPT on EFL students' ability to identify, analyze, and interpret discourse features (e.g., stance, maxims, politeness, coherence, cohesion, online discourse, pragmatic meanings).

2. To assess the extent to which ChatGPT enhances students' analytical skills in interpreting contextual meanings in academic and spoken texts.
3. To explore EFL students' perceptions of using ChatGPT as a tool for discourse analysis.

REVIEW OF LITERATURE

Key Analytical Skills in Discourse Analysis

Key analytical skills in discourse analysis include critical reading and listening to carefully analyze texts, speeches, or conversations to identify impeded meanings, biases, and power dynamics (van Dijk, 2001; Javadi & Mohammadi, 2019). Contextualization helps in interpreting the social, cultural, historical, and institutional settings in which language is employed (Wodak, 2014). Language and grammar analysis examines linguistic features such as vocabulary, syntax, semantics, and pragmatics to understand meaning and social relationships. This type of analysis concentrates on textual analysis. Higher analytical skills emphasize context models and pragmatics to consider situational, cognitive, and social factors in meaning-making (van Dijk,2024).

Discourse identification helps categorize different types of context, such as narrative, expository, descriptive, or argumentative (Lathifah et al, 2024). Theme and topic analysis focuses on identifying recurring topics in language and their relation to broader social issues (Dawadi, 2020). Power and ideology analysis explores how language use reflects and shapes authoritative structures, social inequalities, and ideological perspectives (Fairclough, 2023; Javadi & Mohammadi, 2019). Williamson et al. (2018) highlighted that conducting a critical discourse analysis of social discourse involves examining the underlying rules, codes, and ideologies that reflect how individuals engage in communication. This includes analyzing how people speak, behave, interact, and interpret meaning within social contexts. In other words, Critical Discourse Analysis (CDA) focuses on revealing ideologies and power structures through the systematic analysis of semiotic data (written, spoken, or visual) (Wodak, 2024). Intertextuality and interdiscursivity analysis study how texts reference or challenge other texts and genres (Hyland, 2019). Conversation analysis examines the structure, sequence, and content of interactions to understand how language accomplishes social actions (Clayman & Gill, 2023). Similarly, analyzing metadiscourse—especially stance features—involves analysis of how writers construct arguments and engage audiences through rhetorical positioning (Hyland, 2005).

Enhancement of Analytical Skills

Interpreting coherence, cohesion, and pragmatic features requires high-order analytical skills (Hyland, 2019). By providing corrective feedback and explanations, AI tools enhance students' ability to identify these features (Zou et al., 2023). Offering instant feedback and contextual suggestions can connect theoretical knowledge and practical application in discourse studies (Waer, 2021). These tools also promote awareness of pragmatic implicatures to enable students to interpret implied meanings in texts. ChatGPT has been found to help EFL students improve their writing, especially in areas

like organization, coherence, grammar, and vocabulary skills that are important for analyzing discourse (Song & Song, 2023; Boudouaia et al., 2024; Zhao, 2023). The use of AI-assisted tools in critical thinking-oriented writing instructions has led to improvements in students' critical thinking. This includes enhanced clarity, accuracy, precision, and logic in writing (Xue, 2024). Therefore, these improvements in writing skills are essential for developing higher-order analytical abilities needed in discourse analysis, particularly in identifying coherence, cohesion, and pragmatic meanings.

AI-powered tools can enhance discourse analysis and support the development of students' analytical skills. Alves Pereira et al. (2023) and Avsheniuk et al. (2024) emphasize that these tools significantly improve students' ability to analyze language-related problems and thus enhance critical thinking skills such as analytical reasoning, creativity, and cognitive flexibility. Building on this, Mandour (2025) highlights how AI technologies can further strengthen discourse analysis through Systemic Textual Analysis (STA). Tools like Google Apps Scripts and OpenAI's GPT API can automatically analyze language and provide feedback on structure, clarity, and main ideas. Therefore, they can help learners better understand and engage with texts.

Furthermore, Guo and Lee (2023) demonstrate that ChatGPT can boost students' confidence in critical thinking, evaluation, and logical reasoning, even among those with limited prior knowledge. They argue that AI tools' integration into higher education can enhance analytical skill development and discourse engagement. However, they also caution against the unregulated use of large language models (LLMs) as they probably affect traditional learning structures. Collaboration between educators and researchers is therefore essential to ensure responsible and pedagogically appropriate implementation. In support of this view, Suriano et al. (2025) find significant correlations between students' attitudes, trust, knowledge, and engagement with AI. This type of engagement exerts a greater influence on critical thinking than knowledge alone. Their findings suggest that AI-based chatbots can effectively promote analytical discourse skills, provided they are embedded within instructional strategies that encourage active participation and critical examination of AI-generated content.

Perceptions of ChatGPT in Enhancing Analytic Thinking Skills

EFL students generally have positive perceptions of ChatGPT due to its usefulness in improving analytic and critical thinking and other related higher-order thinking skills (Guo & Lee, 2023). They recognize its role in providing instructional support and feedback (Song & Song, 2023; Boudouaia et al., 2024; Benek, 2025). Students also perceive ChatGPT as a supportive tool that aids in research competency and metacognitive awareness, which are important for discourse analysis. It helps access additional information and stimulate thought processes (Abdelhalim, 2024). Tran and Tran (2023) pinpointed that ChatGPT can enhance language learners' critical thinking skills and ability to navigate digital environments. Bochra (2024) concluded that students find ChatGPT to be a valuable tool for understanding and analyzing literary works.

However, there are concerns about over-reliance on AI, contextual accuracy, and the potential reduction in creativity, so there is a need for balanced use and supervision

(Song & Song, 2023; Bin-Hady et al., 2024). The study by Toma and Yánez-Pérez (2024) investigated the potential negative effect of long-term ChatGPT use on creative thinking and found no evidence that ChatGPT negatively impacts creativity. Similarly, Teng (2024) emphasized that while ChatGPT offers new ways to enhance EFL writing skills, its integration should be balanced with a supportive collaboration among teachers and students to avoid over-reliance. Likewise, Arndt (2023) found that while ChatGPT generally provides accurate and useful information across various subjects, its occasional errors require proper evaluation by users. In their study, Andersson and McIntyre (2025) concluded that ChatGPT identified conventional and context-sensitive forms of impoliteness accurately. They also found that the model struggles in certain cases, especially when impoliteness is expressed through implicature or indirect language, because it has difficulty grasping the situational context, which is essential for accurately interpreting impolite behavior. This highlights both its potential as a learning tool and the importance of cautious evaluation of its outputs.

Accordingly, research indicates that EFL students perceive ChatGPT as a valuable resource for developing analytical thinking and language proficiency. However, concerns remain regarding over-reliance on AI, contextual inaccuracies, and the potential impact on creativity. These concerns highlight the need for a balanced, guided approach to integrating AI in discourse analysis education. Therefore, the present study aims to answer the following questions:

Research Questions:

1. How does ChatGPT affect EFL students' ability to identify and analyze discourse features such as stance features, maxims and politeness strategies, coherence and cohesion, online discourse features, and pragmatic meanings?
2. To what extent does ChatGPT improve students' analytical skills in interpreting contextual meanings in academic and spoken texts?
3. What are EFL students' perceptions of using ChatGPT as a tool for discourse analysis?

METHOD

Research Design

This study employs a mixed-methods approach, quantitative and qualitative methods, to investigate the effect of ChatGPT on analytical skills and students' perceptions of its role in discourse analysis.

Participants

This study involved 30 female undergraduate EFL students, aged between 19 and 22 years (M = 20.4), enrolled in a discourse analysis course at Majmaah University in Saudi Arabia during the first semester of the 2024–2025 academic year. Participation was voluntary, and all students provided informed consent before data collection. Institutional approval for conducting the study was obtained from Majmaah University's Research Ethics Committee. As part of the intervention, all participants received training on using ChatGPT. Before this course, students had completed

subjects such as writing, applied linguistics, semantics and pragmatics, and sociolinguistics. These courses provided them with foundational knowledge on key discourse analysis concepts, including stance features, cohesion and coherence, speech-act theory, presuppositions, entailment, semiotic analysis, language and identity, language and power, language and gender, authoritative speech, and language and ideology.

Context of the Study

This study was conducted within the framework of a university-level course on Discourse Analysis. The course provides students with the necessary skills for analyzing language use in various contexts. The course learning outcomes target main concepts such as power, ideology, bias, identity, and pragmatics. In addition, the course aims to develop discourse analytic skills, for example, identifying and analyzing coherence, cohesion, stance features, engagement strategies, conversational analysis, and speech act theory. It also trains students in the application of politeness strategies and maxims to comprehend politeness in conversational discourse and distinguish the four maxims of Grice's Cooperative Principle (i.e., quality, quantity, relevance, and manner).

Instruments

Pre and Post-Test

This test aims to assess participants' ability to identify, analyze, and interpret various linguistic features across academic, spoken, online, and pragmatic contexts. The content validity of the test was ensured through review by three experts in discourse analysis and EFL teaching, who examined the test items for clarity, relevance, and alignment with the study objectives and research questions. To ensure reliability, the test was piloted with a small group of EFL students from a similar background, and minor adjustments were made to improve clarity and consistency of the items. The final version of the test consists of six parts that focus on different aspects of discourse analysis, such as stance features, maxims, politeness strategies, coherence and cohesion, pragmatic meaning, and analytical skills. The questions are multiple-choice and true/false to evaluate participants' understanding of fundamental concepts (i.e, hedges, boosters, attitude markers, and self-mention in academic writing, as well as conversational dynamics, typical online discourse features, and the logical flow of ideas). The test ensures a comprehensive evaluation of both theoretical knowledge and practical application of discourse analysis in varied communication settings. The total score of the test is 60, with 10 marks for each part. The questions, texts, and conversations included in this test are adopted from Brain's (2012) *Discourse Analysis*. The six parts of the test are aligned with the objectives of the study as presented in Table 1.

Table 1
Research questions' alignment with research objectives

Study Objective	Related Test Sections
1. Identifying and Analyzing Discourse Features	Part 1: Stance Features Part 2: Spoken Text Part 4: Coherence and Cohesion
2. Interpreting Contextual Meanings in Academic and Spoken Texts	Part 3: Online Discourse Features Part 5: Pragmatic Meaning Part 6: Analytical Skills Evaluation

Questionnaire

The questionnaire aims to identify students' perceptions of ChatGPT's role in enhancing analytical skills in discourse analysis. The questionnaire includes both closed-ended and open-ended items. For the closed-ended items, a 5-point Likert scale is used. Three theoretical frameworks are utilized in designing the questionnaire. First, the Technology Acceptance Model (TAM) is employed to assess users' perceptions of ChatGPT's usability and usefulness. Second, this questionnaire draws on Constructivist Learning Theory to explore how ChatGPT encourages students to build knowledge while engaging in discourse analysis. Third, the Cognitive Load Theory is used to examine how ChatGPT might reduce the mental effort required to perform complex discourse analysis tasks.

The questionnaire consists of four sections, each targeting specific dimensions of students' experiences:

1. Effectiveness of ChatGPT for Learning Discourse Analysis
   The first section identifies the perceived effect of ChatGPT on students' analytical skills of discourse features. The items assess the AI tool's abilities to break down complex tasks, provide feedback, and improve discourse analysis skills.
2. Students' Engagement and Ease of ChatGPT Use in Discourse Analysis
   The second section aims to assess the usability of ChatGPT in facilitating discourse analysis tasks and its role in maintaining student engagement during the learning process of discourse analysis.
3. Perceptions of AI in Discourse Analysis

The third section of the questionnaire explores students' attitudes towards ChatGPT as a learning tool for developing analytical skills in discourse analysis.

4. Open-Ended Questions
   This section aims to collect qualitative data that complements the quantitative results on students' perspectives on ChatGPT's effectiveness and potential enhancements for supporting discourse analysis learning.

Validation and Pilot of the Questionnaire

Three applied linguistics experts checked the questionnaire to make sure it matched the research goals and theories. A pilot study was conducted with a small group of EFL students (n=20) to refine item clarity and ensure reliability.

The reliability of the questionnaire

Reliability Analysis (Cronbach's Alpha) Results

Table 2
Internal consistency reliability (Cronbach's Alpha) for each section

Section	Number of Items	Cronbach's Alpha	Reliability Level
Effectiveness of ChatGPT in Discourse Analysis	7	0.86	Good
Engagement and Usability	5	0.72	Acceptable
Perceptions of AI in Discourse Analysis	5	0.62	Acceptable

Note**:** Cronbach's Alpha values interpret reliability as follows: ≥ 0.9 (Excellent), 0.8–0.89 (Good), 0.7–0.79 (Acceptable), 0.6–0.69 (Questionable), < 0.6 (Poor).

Reliability analysis shows that the "Effectiveness of ChatGPT in Discourse Analysis" section has strong reliability (α = 0.86), which indicates good internal consistency. This suggests that the items within this section measure the same construct reliably. The "Engagement and Usability" section (α = 0.72) falls within the acceptable range; this result indicates moderate reliability. The "Perceptions of AI in Education" section (α = 0.62) is categorized as "acceptable."

Implementation phase

The implementation phase is summarized in Table 3.

Table 3
Implementation phase procedures

Phase	duration	activity
Preparation Period	Weeks 1–7	Introduction to foundational concepts and skills for discourse analysis.
Pre-Test	End of Week 7	Assessment of baseline analytical skills in identifying coherence, cohesion, stance, and pragmatics meanings in spoken and written texts
Intervention Phase	Weeks 8–11	*Individual Practice with ChatGPT feedback*: Students analyzed spoken and written texts with ChatGPT's assistance. The AI tool provided feedback on their analyses, helping them identify and revise errors independently. *Collaborative Learning in groups* : In class, students worked in groups to review their analyses and discuss their findings. *Skill Reinforcement exercises* | Students had more exercises to refine their analytical skills and deepen their understanding of discourse analysis concepts.
Post-Test	End of Week 13	Evaluation of progress and impact of using ChatGPT on analytical skills.

Note: During the intervention, participants used ChatGPT to support discourse analysis tasks. Both the free and premium versions were allowed, with no significant differences in functionality; the only difference was the time limit for usage in the free version. Students were guided on how to use the tool effectively for identifying, analyzing, and interpreting discourse features.

Data analysis procedures

Quantitative data from the pre- and post-tests were first assessed for normality using the Kolmogorov-Smirnov and Shapiro-Wilk tests. Since post-test scores showed deviations from normality, non-parametric analyses were conducted using the Wilcoxon Signed-Rank Test to compare pre-test and post-test scores within the same group. Effect sizes (r) were calculated to evaluate the practical significance of observed differences. Questionnaire data were analyzed using descriptive statistics (frequencies, percentages, means, and standard deviations) for closed-ended items. Open-ended responses were analyzed thematically to identify recurring patterns and insights regarding students' perceptions of ChatGPT in discourse analysis.

FINDINGS

SPSS was used to analyze the pre- and post-test data. First, normality tests were conducted to determine whether parametric or non-parametric analysis should be used. For clarity, Q1 refers to test items assessing participants' ability to identify and analyze discourse features, while Q2 refers to items assessing participants' ability to interpret contextual meanings in academic and spoken texts; thus, Q1 and Q2 correspond to specific sections of the pre- and post-tests, not the research questions.

Normality test results

Table 4
Tests of normality for pre-test and post-test scores

Measure	Kolmogorov-Smirnov			Shapiro-Wilk		
	Statistic	df	p-value	Statistic	df	p-value
Q1 Pre-test	0.126	30	.200*	0.959	30	.289
Q1 Post-test	0.187	30	.009	0.907	30	.013
Q2 Pre-test	0.128	30	.200*	0.949	30	.158
Q2 Post-test	0.202	30	.003	0.880	30	.003
Total Pre-test	0.106	30	.200*	0.953	30	.205
Total Post-test	0.158	30	.055	0.936	30	.070

Note. *p-values marked with an asterisk (.200*) indicate the lower bound of the true significance. The Lilliefors Significance Correction was applied.

Results in Table 4 indicate that pre-test scores (Q1, Q2, and Total) follow a normal distribution, as all p-values exceed 0.05 in both Kolmogorov-Smirnov (KS) and Shapiro-Wilk (SW) tests. However, post-test scores for Q1 and Q2 exhibit non-normality ($p < 0.05$ in both tests). The Total Post-test score is borderline normal, with p-values slightly above 0.05 in SW (.070) but slightly below in KS (.055). This suggests that the intervention may have altered the distribution of scores. Since post-test scores deviate from normality, non-parametric tests are more appropriate than parametric ones like the paired t-test. The Wilcoxon Signed-Rank Test is the most suitable method for comparing pre-test and post-test scores within the same group.

Descriptive statistics

Table 5
Median and interquartile range (iqr) for pre-test and post-test scores

Measure	Pre-test Median (IQR)		Post-test Median (IQR)	
Total Score	35.0	(6.75)	42.0	(10.5)
Total Q1 Score	17.5	(4.75)	21.0	(8.25)
Total Q2 Score	18.0	(4.75)	**20.5**	(4.75)

As shown in Table 5, the median scores increased from the pre-test to the post-test across all measures. Additionally, the interquartile range (IQR) expanded for the total and Q1 scores, suggesting greater variability in post-test performance. This increased spread may indicate differences in individual responses to the intervention. In contrast, Q2's IQR remained unchanged, so there is more consistent performance within this measure. These results support the conclusion that using the ChatGPT intervention positively influenced performance.

Comparing pre-test and post-test scores

Table 6
Wilcoxon signed-rank test results comparing pre-test and post-test scores

Comparison	W	p-value	Z	Interpretation
Total Pre-Test vs. Total Post-Test	110.00	.012	-2.52	Significant difference
Total Q1 Pre-Test vs. Total Q1 Post-Test	133.00	.040	-2.05	Significant difference
Total Q2 Pre-Test vs. Total Q2 Post-Test	90.00	.010	-2.58	Significant difference

Note. The Wilcoxon Signed-Rank Test was used to compare pre-test and post-test scores. A p-value < .05 indicates statistical significance.

The Wilcoxon Signed-Rank Test was used to compare pre-test and post-test scores across different measures (Total, Q1, and Q2). The results indicated statistically significant improvements in all cases. A significant difference was found between the total pre-test and post-test scores, W = 110.0, p = .012, and Z = -2.52, suggesting an overall improvement. Similarly, scores for Q1 showed a significant increase (W = 133.0, p = .040, Z = -2.05), indicating a meaningful enhancement in discourse feature identification and analysis. Likewise, Q2 scores significantly improved (W = 90.0, p = .010, Z = -2.58), reflecting better interpretation of contextual meanings

Table 7
Effect sizes for wilcoxon signed-rank test

Comparison	Effect Size (r)	Interpretation
Total Pre-Test vs. Total Post-Test	0.47	Medium to Large Effect
Total Q1 Pre-Test vs. Total Q1 Post-Test	0.37	Medium Effect
Total Q2 Pre-Test vs. Total Q2 Post-Test	0.47	Medium to Large Effect

Note. Effect sizes (r) were calculated using the formula $r = Z / \sqrt{N}$. According to Cohen's guidelines: 0.1 = small, 0.3 = medium, 0.5+ = large**.**

All effect sizes are moderate to large; therefore, the intervention had a meaningful impact on test scores. The strongest effects were observed for Total Pre-Test vs. Post-Test (r = .47) and Total Q2 Pre-Test vs. Post-Test (r = .47), both of which approached a

large effect. The effect size for Total Q1 Pre-Test vs. Post-Test **(**r = .37) suggests a moderate but significant improvement**.**

Accordingly, the Wilcoxon test showed significant improvements from the pre-test to the post-test. The effect sizes confirm that these differences are statistically significant and practically meaningful. This suggests there are improvements in students' analytical skills in discourse analysis after the intervention.

Questionnaire results

Tables 8–10 present the results of the questionnaire. For clarity, Q1–Q17 refer to individual questionnaire items, not the research questions. Each item assesses students' perceptions of ChatGPT in terms of effectiveness, engagement, usability, and attitudes toward AI in discourse analysis

Close-ended questions

SPSS was used for questionnaire analysis, as shown in Tables 8,9, and 10

Table 8
Effectiveness of ChatGPT for learning discourse analysis

		Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Mean	SD	Rank	Result
Q1	F	5	13	9	3	0	3.67	0.88	5	agree
	%	16.7	43.3	30.0	10.0	0				
Q2	F	6	12	9	2	1	3.67	0.99	5	agree
	%	20.0	40.0	30.0	6.7	3.3				
Q3	F	6	12	10	1	1	3.70	0.95	3	agree
	%	20.0	40.0	33.3	3.3	3.3				
Q4	F	8	12	8	2	0	3.87	0.90	1	agree
	%	26.7	40.0	26.7	6.7	0				
Q5	F	2	17	8	3	0	3.60	0.77	7	agree
	%	6.7	56.7	26.7	10.0	0				
Q6	F	8	10	10	2	0	3.80	0.92	2	agree
	%	26.7	33.3	33.3	6.7	0				
Q7	F	6	13	7	4	0	3.70	0.95	3	agree
	%	20.0	43.3	23.3	13.3	0				
Weighted mean		3.71								
SD		0.70								

As shown in Table 8, Participants rated ChatGPT highly effective in identifying discourse features such as coherence, cohesion, pragmatic meaning, and stance features. The average rating across all effectiveness-related questions was ~3.71 out of 5, indicating a positive perception of ChatGPT's role in discourse analysis. The highest-rated aspect was identifying stance features (Q4**),** with several responses praising its ability to break down complex discourse elements. The lowest-rated aspect was providing feedback that improves discourse analysis skills (Q5**)** and breaking down complex discourse tasks into manageable steps (Q7), suggesting that some students found difficulty in applying ChatGPT's guidance to real-world discourse tasks.

Table 9
Engagement and usability

		Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Mean	SD	Rank	Result
Q8	F	5	16	5	4	0	3.73	0.91	2	agree
	%	16.7	53.3	16.7	13.3	0				
Q9	F	4	12	11	3	0	3.57	0.86	4	agree
	%	13.3	40.0	36.7	10.0					
Q10	F	8	15	5	2	0	3.97	0.85	1	agree
	%	26.7	50.0	16.7	6.7					
Q11	F	5	13	10	1	1	3.67	0.92	3	agree
	%	16.7	43.3	33.3	3.3	3.3				
Q12	F	3	13	12	2	0	3.57	0.77	4	agree
	%	10.0	43.3	40.0	6.7	0				
Weighted mean		3.70								

Results of Table 9 indicate that the highest-rated item (Q10: Mean = 3.97, SD = 0.85) shows that students strongly agreed that ChatGPT provides relevant examples that facilitate understanding. This suggests that they appreciate the illustrations of discourse analysis concepts. The lowest-rated statement (Q12: Mean = 3.57, SD = 0.77) refers to confidence in analyzing stance features, coherence, cohesion, and pragmatic meaning. While most respondents still agreed, some might feel that ChatGPT alone is insufficient for boosting confidence in these areas. The overall weighted mean of 3.70 suggests a positive perception of ChatGPT's usability and engagement, but with some areas for improvement, particularly in ensuring that users feel fully confident after using it.

Table 10
Perceptions of AI in discourse analysis

		Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Mean	SD	Rank	Result
Q13	F	3	15	10	2	0	3.63	0.76	5	agree
	%	10.0	50.0	33.3	6.7	0				
Q14	F	8	12	9	1	0	3.90	0.84	1	agree
	%	26.7	40.0	30.0	3.3	0				
Q15	F	7	12	9	2	0	3.80	0.89	3	agree
	%	23.3	40.0	30.0	6.7	0				
Q16	F	5	16	7	2	0	3.80	0.81	3	agree
	%	16.7	53.3	23.3	6.7	0				
Q17	F	6	15	7	2	0	3.83	0.83	2	agree
	%	20.0	50.0	23.3	6.7	0				
Weighted mean		3.79								
SD		0.66								

Table 10. explores students' general attitudes toward AI tools in discourse analysis. The highest-rated item (Q14: Mean = 3.90, SD = 0.84) suggests that ChatGPT encouraged independent and systematic approaches to discourse analysis. The lowest-rated statement (Q13: Mean = 3.63, SD = 0.76) still falls in the "agree" range; thus, while

most respondents see AI as beneficial for higher education, especially in the context of discourse analysis, a small portion remains unconvinced. The weighted mean of 3.79 shows an overall positive attitude toward AI tools like ChatGPT in learning, with the highest satisfaction in terms of promoting independence.

Open-ended questions

The thematic analysis of the open-ended questions is represented in Tables 11,12,13, and 14.

Table 11. presents the **t**hematic analysis of students' responses to the first question about positive aspects of ChatGPT in discourse analysis

Table 11
Positive aspects of ChatGPT in discourse analysis

Themes	Frequency	Percentage
Fast and clear explanations	11	36.67%
Pattern recognition	4	13.33%
Time efficiency & usefulness	9	30.00%
Multi-level analysis	2	6.67%
Context awareness	3	10.00%
Pragmatic meaning understanding	4	13.33%
Stance, coherence, and cohesion analysis identification	5	16.67%
Customization & adaptability	2	6.67%
Total	40	100

Table 11 highlights key positive aspects of ChatGPT in discourse analysis as perceived by students. The most frequently mentioned benefit is **f**ast and clear explanations (36.67%)**,** indicating that students value ChatGPT's ability to break down complex concepts efficiently. Time efficiency and usefulness (30.00%) also emerged as a significant theme, showing that ChatGPT saves time compared to manual analysis while enhancing the learning experience.

Additionally, pattern recognition (13.33%**)** and pragmatic meaning understanding **(**13.33%) suggest that students appreciate ChatGPT's ability to identify linguistic structures and interpret implicit meanings. The tool's effectiveness in analyzing **stance,** coherence, and cohesion (16.67%) demonstrates its role in improving textual organization and logical flow. Other aspects, such as context awareness (10.00%**)** and multi-level analysis (6.67%)**,** further emphasize ChatGPT's ability to analyze discourse beyond surface-level interpretation. Lastly, customization and adaptability (6.67%) indicate that some students recognize the flexibility of refining prompts to focus on specific discourse features.

Table 12 categorizes the second question regarding challenges encountered while using ChatGPT in discourse analysis.

Table 12
Challenges faced by learners

Themes	Frequency	Percentage
Lack of deep contextual understanding	12	44.4%
Overgeneralization	8	29.6%
Handling sarcasm, implicit meaning, or mixed stances	7	25.9%
Total	27	100

The table categorizes various challenges faced by learners when using ChatGPT in discourse analysis, as highlighted by their responses. Lack of Deep Contextual Understanding (44.4%)**:** This theme has the highest frequency, which aligns with several responses indicating that ChatGPT sometimes struggles with understanding complex, nuanced, or deeply contextual information. For instance, students pointed out issues with ChatGPT missing sociocultural or historical contexts, handling complex texts, and maintaining context in longer passages. These difficulties suggest that while ChatGPT is suitable for basic discourse analysis, its ability to interpret context deeply and make connections is limited, especially in more complex academic or real-world scenarios. Overgeneralization (29.6%)**:** This theme reflects learners' concerns that ChatGPT often simplifies discourse analysis because it sometimes provides broad or vague answers rather than specific interpretations. Several students mentioned that AI sometimes misinterprets discourse features by applying general patterns to specific cases. This theme reveals that overgeneralization can reduce the quality of discourse analysis, as it requires a thorough and specific understanding of language subtleties. Handling Sarcasm, Implicit Meaning, or Mixed Stances (25.9%)**:** Responses under this theme reflect the challenges learners face when using ChatGPT for analyzing certain aspects of discourse like sarcasm, irony, or implicit meanings. Some students noted that ChatGPT had trouble identifying tone shifts, recognizing sarcasm, and detecting indirect speech acts. These findings indicate that ChatGPT may struggle to understand pragmatic subtleties that are often critical in discourse analysis, where tone and context are key.

Responses to the Third question are categorized in Table 13. The themes introduce suggested improvements in ChatGPT to better support discourse analysis learning.

Table 13
Suggested improvements

Themes	Frequency	Percentage
Enhanced contextual understanding (historical, sociocultural contexts, and longer conversation tracking)	12	40.0%
Better detection of implicit meaning and sarcasm	5	16.7%
More academic references and structured annotation outputs	5	16.7%
Advanced pragmatic analysis (politeness, indirectness, irony)	4	13.3%
More interactive examples and real-time feedback	3	10.0%
Incorporation of visual aids like diagrams for better explanation	1	3.3%
Total	30	100%

The results indicate that enhanced contextual understanding was the most frequently suggested improvement (40%). This suggests that students find it essential for AI-

powered discourse analysis tools to retain historical, sociocultural, and broader discourse contexts. The detection of implicit meaning and sarcasm received a notable proportion of responses (16.7%), suggesting that students perceive a gap in AI's ability to accurately interpret subtle meanings, including sarcasm and irony. Similarly, the demand for academic references and structured outputs was also reported by 16.7% of students. Participants expressed a need for AI to generate more credible scholarly content, possibly through the incorporation of citation features and structured annotation tools, such as XML, JSON, or CoNLL formats. The need for improved pragmatic analysis was cited by 13.3% of students, indicating that current AI tools struggle with politeness strategies, indirectness, and irony. A smaller yet significant proportion (10%) emphasized the value of interactive learning, such as real-time feedback and engaging examples. Lastly, only 3.3% of students mentioned visual aids such as diagrams, suggesting that while some learners find visual explanations helpful, the majority prefer text-based discourse analysis approaches.

Table 14 presents categories of students' responses to the Fourth question about changing their overall perception of AI as a learning tool after the intervention.

Table 14
Perception of ChatGPT as a learning tool in discourse analysis

Theme	Frequency	Percentage
AI as a Learning Facilitator	10	33.3%
AI's Strengths in Speed & Efficiency	7	23.3%
AI's Role in Critical Thinking & Analysis	5	16.7%
Increased Appreciation of AI's Capabilities	4	13.3%
Recognition of AI's Limitations	3	10.0%
AI as an Interactive Learning Tool	3	10.0%
AI's Accessibility & Availability	2	6.7%
No Change in Perception	2	6.7%
Total	36	100

The results show that the majority of respondents (33.3%) perceive AI, specifically ChatGPT, as a valuable learning facilitator that simplifies complex topics, summarizes content, and enhances comprehension. A significant portion (23.3%) highlighted AI's speed and efficiency as a time-saving tool that streamlines learning by providing instant explanations and feedback. Additionally, AI's role in critical thinking and analysis was acknowledged by 16.7% of participants, who appreciated its ability to support deeper engagement with academic content. Similarly, appreciation of AI's capabilities (13.3%) suggests that students have become more aware of how AI can assist with academic tasks, such as text analysis and concept explanation. However, recognition of AI's limitations (10%) suggests a balanced perspective—while students appreciate its usefulness, some acknowledge that AI still lacks deep contextual understanding and requires human oversight. The same percentage (10%) viewed AI as an interactive learning tool, highlighting its potential to make studying more engaging. A smaller proportion (6.7%) appreciated AI's accessibility and availability, while another 6.7% reported no change in perception**,** indicating that they already had strong beliefs about AI before using ChatGPT.

DISCUSSION

Results indicate a significant improvement after using ChatGPT as an assistive tool in learning and practicing discourse analysis (DA) exercises. Tables 6 and 7 present the answers to the first and second research questions. Data showed improvement in students' ability to identify, analyze, and interpret discourse features. These findings align with those of Guo and Lee (2023), who highlighted that ChatGPT enhanced students' confidence in critical thinking, evaluation, analysis, and logical reasoning. The current study suggests that AI-generated feedback with explanations, group work, and AI-guided analysis practice positively influenced students' ability to recognize discourse features. This result is similar to the study by Zou et al. (2023), who concluded on the effectiveness of AI-generated constructive feedback.

A distinctive contribution of this study is its focus on discourse analysis, an area less explored in international AI-assisted language learning research, which often emphasizes writing improvement or general communication skills. By demonstrating that ChatGPT can support the recognition of stance, maxims, and pragmatic meanings, this study expands the scope of AI applications beyond surface-level writing tasks. Moreover, while most prior studies (e.g., Guo & Lee, 2023; Zou et al., 2023) were conducted in East Asian or European contexts, the present findings provide evidence from an Arab EFL setting. This situational difference enriches the literature by showing how cultural and linguistic environments may shape learners' engagement with AI.

Mandour (2025) further supports this result. He emphasizes that AI-powered tools have the potential to enhance Systemic Textual Analysis (STA) because these tools can automate discursive and sentiment analysis, which leads to more accurate and efficient interpretation of texts. Furthermore, prior studies support the present findings and show that AI-assisted tools like ChatGPT significantly enhance writing skills (e.g., Almousa & AbuSa'aleek, 2025). These skills are essential for developing higher-order analytical abilities relevant to discourse analysis. In particular, AI tools help students in identifying coherence, cohesion, and pragmatic meanings in texts (Song & Song, 2023; Boudouaia et al., 2024; Xue, 2024). Moreover, Alves Pereira et al. (2023) emphasize the role of AI in enhancing students' understanding of discourse conventions. These studies, along with the present study, demonstrate that AI-assisted tools contribute to the improvement of writing skills necessary for analytical and interpretive competencies in discourse. Whereas most prior work has focused on writing proficiency and general critical thinking (e.g., Almousa & AbuSa'aleek, 2025; Kim et al., 2023), this study extends the discussion by examining students' ability to analyze stance, maxims, and pragmatic features — areas that have been underexplored in AI-assisted learning.

The results from Tables 11 to 14 show how EFL students perceive ChatGPT as a tool for discourse analysis. Students agreed upon its clarity, speed, and analytical depth, but also emphasized its shortcomings in context comprehension and indirect language handling. These perceptions reflect and expand on prior research. For instance, Guo and Lee (2023) found that ChatGPT can reinforce students' confidence in critical thinking and reasoning, even with limited prior knowledge. Moreover, the challenges mentioned in Tables 12 and 13, such as ChatGPT's limitations with sarcasm, politeness, and

contextual analysis, align with Andersson and McIntyre (2025), who noted that while ChatGPT performs well in identifying explicit impoliteness, it struggles with implicature and pragmatic interpretation. These results support the call for improved AI contextual understanding.

AI tools play a role not only in linguistic interpretation but also in supporting broader pedagogical practices. In the regional EFL context, this role is particularly significant. Unlike settings where learners have extensive, authentic exposure to discourse, Arab EFL learners often encounter discourse mainly through academic texts. Rahimi et al. (2025) introduce the idea of AI as a co-teacher. Their study illustrates how AI tools influence learners' motivation, goal-setting, and engagement by fostering personalized language learning and promoting collaboration via AI-moderated forums. The conclusion of their study aligns with students' desire for structured academic outputs and collaborative experiences seen in Table 13. These environments are designed to simulate real-world discourse scenarios. Within these settings, students are required to analyze language from multiple perspectives. Hence, this process helps reinforce the role of AI in supporting collaboration and fostering critical thinking in higher education.

The results of Table 14 show that most students acknowledged AI's role in enhancing critical thinking and learning efficiency. They agreed that ChatGPT also encourages analytical engagement. These findings are supported by Bin-Hady et al. (2024), who reinforced the AI's pedagogical value in scaffolding language learning. Accordingly, students benefit not only from error correction but also from feedback that prompts self-reflection. Kim et al. (2023) also confirm AI's scaffolding potential and its role in creating personalized, interactive learning experiences that improve analytical abilities and foster self-directed learning. This interpretation aligns well with students' feedback in Table 14.

Lastly, the relationship between students' engagement and critical or analytical thinking in using ChatGPT, as implied by responses in Table 14, reflects the findings of Suriano et al. (2025)**.** Their work demonstrates that engagement with AI contributes more to critical thinking than knowledge alone. This result indicates that active and critical use of ChatGPT in enhancing critical thinking skills when paired with reflective teaching practices.

Findings emphasized that AI tools like ChatGPT should not be seen merely as automated tutors, but as cognitive partners that encourage reflection, critical engagement, and independent learning. Yet, their application must remain under the careful guidance of educators. Accordingly, it is essential for teachers to teach students how to critically evaluate AI-generated content, an issue emphasized both in the literature (e.g., Arndt, 2023) and in students' responses. This result is also consistent with Benek (2025), who emphasized that collaboration is needed in the implementation of AI tools inside English language classes. By situating ChatGPT as both a learning scaffold and a discourse partner, this study contributes to the growing international conversation on how AI can enrich—not replace—human-centered pedagogy in higher education.

CONCLUSION

This study demonstrated that developing EFL students' analytical thinking in discourse analysis can be significantly enhanced through the integration of AI tools. Quantitative results showed measurable gains in students' ability to identify and analyze discourse features, while qualitative feedback highlighted their appreciation of ChatGPT's clarity, speed, and real-time feedback. Students also reported increased engagement and confidence, though challenges remained in ChatGPT's handling of pragmatics and indirect meanings.

Importantly, the intervention combined AI-assisted feedback, instructor scaffolding, and collaborative group work. While ChatGPT played a central role, improvements cannot be attributed solely to the AI tool; teacher guidance and peer collaboration also reinforced students' learning.

Pedagogically, integrating ChatGPT into EFL discourse analysis offers several advantages: enhanced critical and analytical thinking, personalized and immediate feedback, and increased learner autonomy. For effective use, instructors should adopt a scaffolding role and design structured AI-assi*ste*d activities that promote interaction and reflection. Thus, Practical strategies include designing activities where students critically evaluate AI-generated analyses, pairing AI feedback with peer discussion, and integrating reflective tasks to encourage independent judgment

Nonetheless, current limitations must be acknowledged. ChatGPT struggles with pragmatic and discourse-specific features such as tone, stance, and indirect speech acts, and further development is needed in these areas. Future AI improvements should also focus on enhanced memory retention, discourse-specific training, and integration of real-world conversational datasets.

Finally, the findings of this study are specific to the sample and the current version of ChatGPT, limiting their generalizability. As AI evolves rapidly, future outcomes may differ, and replication across contexts remains necessary.

SUGGESTIONS

Future research should explore the long-term implications of AI-assisted learning. Researchers can examine how AI tools enhance students' analytical skills, cognitive development, and engagement in academic discourse. Future studies should continue exploring the effects of AI-supported learning**,** particularly regarding pragmatic awareness, self-regulation**,** and academic integrity. With thoughtful integration, these tools can equip learners with the skills necessary for academic and professional success. Replication of the present study and examination of other AI tools are recommended to either support or challenge the current findings. Additionally, the inclusion of both male and female learners in future studies is necessary to investigate potential gender differences in perceptions of AI and its effectiveness in enhancing analytical skills in discourse analysis. Finally, given that this study focused on an Arab EFL context, cross-cultural research could investigate how contextual and cultural factors shape the integration of AI into discourse analysis instruction.

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