

# AI and Arabic Argumentation: A Genre-Based Comparison of ChatGPT and Gemini Outputs

Afnan Arummi

Arabic Department

Faculty of Cultural Sciences, Universitas Sebelas Maret  
Surakarta, Indonesia

[afnanarummy85@staff.uns.ac.id](mailto:afnanarummy85@staff.uns.ac.id)

Eva Farhah

Arabic Department

Faculty of Cultural Sciences, Universitas Sebelas Maret  
Surakarta, Indonesia

[evafarhah@staff.uns.ac.id](mailto:evafarhah@staff.uns.ac.id)

Reza Sukma Nugraha

Arabic Department

Faculty of Cultural Sciences, Universitas Sebelas Maret  
Surakarta, Indonesia

[reza.sn@staff.uns.ac.id](mailto:reza.sn@staff.uns.ac.id)

**Abstract**—This study investigates how two advanced generative language models—ChatGPT (OpenAI) and Gemini (Google DeepMind)—construct Arabic argumentative texts through the view of the Genre-Based Approach (GBA) within the framework of Systemic Functional Linguistics (SFL). Using a descriptive qualitative design, the research compares the schematic, lexicogrammatical, and rhetorical features of texts generated under identical prompt conditions: “Write an Arabic argumentative text about the role of artificial intelligence in Arabic language education.” Findings reveal that ChatGPT produces a humanistic argumentative genre, characterized by a thesis–argument–conclusion structure, experiential reasoning, and affective engagement. In contrast, Gemini constructs a technocratic argumentative genre that follows a claim–counterclaim–resolution schema, marked by nominal density, logical sequencing, and analytical detachment. At the lexicogrammatical level, ChatGPT favors mental and affective process verbs that emphasize interpersonal meaning, while Gemini relies on relational and material processes that foreground ideational precision and objectivity. These results demonstrate that AI systems, despite being non-human entities, encode distinct genre ideologies and epistemological orientations within their linguistic outputs. The study contributes to the expanding discourse on AI-generated language by highlighting how GBA can be adapted to evaluate non-human authorship, offering implications for genre-based pedagogy, corpus design, and critical AI literacy in Arabic language education.

**Keywords**—Arabic argumentative genre; ChatGPT; Gemini; Genre-Based Approach (GBA); Systemic Functional Linguistics (SFL); AI-generated discourse.

## I. INTRODUCTION

In recent years, artificial intelligence (AI) has become an integral component of language technology, transforming how texts are generated, interpreted, and utilized in education [1]. The advancement of large language models such as ChatGPT and Gemini has opened new horizons for natural language generation, enabling machines to produce coherent and contextually appropriate discourse in multiple languages [2], [3]. However, while these models have demonstrated impressive fluency in major world languages such as English, their performance in Arabic—a morphologically complex and context-dependent language—remains underexplored [4], [5].

The Arabic language poses unique linguistic challenges for AI systems due to its diglossic nature, rich morphology, and syntactic flexibility [6]. These characteristics make it essential to evaluate AI-generated Arabic texts not only in terms of grammatical correctness but also in their ability to construct coherent discourse that aligns with the conventions of Arabic genres [7]. In this context, the Genre-Based Approach (GBA) offers a powerful framework for analyzing the schematic structure and linguistic resources that realize communicative purposes within a text [8], [9]. GBA emphasizes the relationship between language, context, and social purpose, making it particularly suitable for evaluating how AI models generate argumentative discourse in Arabic.

Despite the growing interest in AI-generated texts, few studies have focused on genre realization and argumentative structures within Arabic discourse produced by large language models [10]. Most prior research on AI text generation in Arabic has been limited to assessing translation quality, grammar accuracy, or lexical richness [11], leaving a gap in understanding how AI constructs coherent argumentation—a key competence in academic and persuasive writing. Argumentative texts are especially valuable for such analysis because they require logical structuring, explicit stance-taking, and cohesive reasoning, elements that are central to both linguistic and pedagogical evaluation [12].

Therefore, this study aims to compare the realization of the argumentative genre in Arabic texts generated by ChatGPT and Gemini, employing the Genre-Based Approach as the analytical framework. Specifically, the research investigates (1) how each model organizes the schematic structure of Arabic argumentative texts, (2) which lexicogrammatical features are employed to construct cohesion and persuasion, and (3) what implications these findings have for Arabic language pedagogy in the era of AI-assisted writing. By addressing these questions, this research seeks to contribute to both the theoretical understanding of AI discourse generation and the practical development of genre-based writing instruction in Arabic language education.

## II. LITERATURE REVIEW

### A. Genre-Based Approach (GBA)

The Genre-Based Approach (GBA) is rooted in the Systemic Functional Linguistics (SFL) theory proposed by Halliday [1] and further developed by Martin and Rose [2]. Within this framework, a genre is viewed as a staged, goal-oriented social process realized through the use of language choices. GBA provides analytical tools to understand how meanings are constructed through schematic structures and lexicogrammatical realizations [3]. According to Hyland [4], GBA serves as an effective bridge between form and function in academic and discourse studies. In Arabic contexts, it provides systematic procedures for describing how writers organize arguments, negotiate meaning, and construct interpersonal stance within rhetorical traditions [5].

### B. Argumentative Genre in Arabic Discourse

Argumentation (*al-ḥijāḡ*) has long been central to Arabic rhetoric. Classical scholars such as al-Jurjānī and Ibn al-Athīr highlighted the persuasive function of linguistic devices, including *balāghah*, *ta' līl*, and *tadarruj fī al-ḥujjah* [6]. Modern linguistic research emphasizes that Arabic argumentative discourse relies heavily on ethical and emotional reasoning rather than purely logical sequencing [7]. Studies by Hamdan and Fareh [8] and Bassiouney [5] reveal that Arabic arguments frequently integrate evaluative expressions, social values, and appeals to cultural authority. This rhetorical orientation distinguishes Arabic argumentative writing from the more linear and impersonal style commonly found in English [9].

### C. AI-Generated Text and Genre Realization

Recent developments in Large Language Models (LLMs)—notably ChatGPT by OpenAI and Gemini by DeepMind—have transformed the field of text generation and computational linguistics [10], [11]. These models can produce coherent, contextually relevant texts; however, their discourse realization is shaped by the training data and model architecture [12]. According to Bender et al. [13], AI-generated texts often display surface-level fluency yet lack deep pragmatic awareness, particularly in morphologically complex languages such as Arabic. Comparative studies (e.g., Qadir and Mahmoud [14]; Ruan et al. [15]) found that ChatGPT typically generates more rhetorically cohesive texts, while Gemini emphasizes factual precision and brevity. However, research addressing Arabic argumentative texts produced by these systems remains limited. Applying GBA to this domain allows researchers to assess how LLMs simulate genre conventions in Arabic—especially the *ḥijāḡī* (argumentative) form, which involves intricate interactions of logic, emotion, and cultural reasoning [5], [7].

## III. METHOD

This research employs a descriptive qualitative design with a comparative discourse analysis approach to examine how ChatGPT and Gemini generate Arabic argumentative texts. The qualitative paradigm allows for an in-depth exploration of linguistic and structural patterns that quantitative analysis may overlook [1]. The data consist of Arabic argumentative texts produced by ChatGPT [2] and Gemini [3]. Both models were prompted with the same instruction: *اكتب نصًا عربيًا حجاجيًا حول دور الذكاء الاصطناعي في تعليم اللغة العربية، مكون من ثلاث فقرات.* (Write an Arabic argumentative text about the role of artificial intelligence in Arabic language education, consisting of three paragraphs.) This topic was chosen for its contemporary relevance and potential to elicit argumentative reasoning [4]. Each model generated three responses, and the most coherent text from each was selected for analysis. Data were analyzed using the Genre-Based Approach (GBA), developed by Martin and Rose [5], within the framework of Systemic Functional Linguistics (SFL), proposed by Halliday and Matthiessen [6]. The analysis focused on: 1) Schematic structure (thesis–arguments–conclusion), 2) Lexicogrammatical features (connectives, modality, evaluative language), and 3) Cohesion and coherence across clauses. Each text was segmented, coded, and compared across the two AI systems to identify similarities and differences in genre realization. Analytical rigor was ensured through repeated readings and expert validation [7]. Ethical transparency was maintained by documenting all generation prompts and analytical decisions [8].

IV. RESULT AND DISCUSSION

A. Analysis of Both ChatGPT-Gemini Arabic Text

To illustrate the comparative discourse analysis, two Arabic argumentative texts were generated by ChatGPT and Gemini based on the same prompt. Both systems were instructed to produce a short argumentative text (*nash hijāgī*) consisting of three paragraphs on the topic “The Role of Artificial Intelligence in Arabic Language Education (دور الذكاء الاصطناعي في تعليم اللغة العربية)”. This topic was deliberately selected for its pedagogical and contemporary relevance, as it allows both linguistic creativity and logical reasoning to emerge. Presenting the two texts below provides a clear empirical basis for examining how each AI model realizes the schematic structure, lexicogrammatical features, and rhetorical stance that define the Arabic argumentative genre [2], [4], [5].

While ChatGPT tends to construct arguments in a human-like rhetorical manner, emphasizing emotional appeal and evaluative tone, Gemini is expected to organize its reasoning through factual clarity and logical progression [14], [15]. The following texts, therefore, represent not only linguistic outputs but also two distinct AI-driven genre realizations that reflect differing communicative philosophies embedded within their architectures.

TABLE I. ARGUMENTATIVE TEXT GENERATED BY CHATGPT

Stage	Argumentative Text
	دور الذكاء الاصطناعي في تعليم اللغة العربية (أسلوب ChatGPT)
Thesis	لقد أصبح الذكاء الاصطناعي اليوم من أبرز أدوات التطور العلمي التي غيرت ملامح التعليم في مختلف اللغات، ومن بينها اللغة العربية. فمع ظهور النماذج اللغوية المتقدمة والأنظمة التفاعلية، بات بإمكان المتعلم العربي أن يتدرب على الكتابة والمحادثة والاستماع في بيئة افتراضية تحاكي المعلم البشري. وهذا التطور يشير إلى تحول جوهري في طرائق تعليم العربية، من الأسلوب التقليدي القائم على الحفظ والتلقين، إلى الأسلوب التفاعلي القائم على التحليل والفهم.
Argumentation	غير أن استخدام الذكاء الاصطناعي في تعليم العربية ليس خالياً من التحديات. فهذه الأنظمة، على الرغم من قدرتها على معالجة النصوص، لا تزال تفتقر إلى الحس الثقافي والدلالي الذي يميز المتحدث العربي الأصيل. كما أن اعتماد المتعلمين المفرط على الآلات قد يضعف قدرتهم على التفكير اللغوي النقدي، ويجعلهم أسرى للأجوبة الجاهزة التي تقدمها الخوارزميات. لذلك يرى بعض التربويين أن الذكاء الاصطناعي ينبغي أن يكون وسيلة مساعدة لا بديلاً عن المعلم الإنساني.
Conclusion	وفي ضوء ما تقدم، يمكن القول إن الذكاء الاصطناعي يشكل فرصة عظيمة للنهوض بتعليم اللغة العربية إذا أحسن توظيفه في إطار تربوي واع. فدمج التقنيات الذكية في المناهج، مع الحفاظ على الدور الإنساني في التوجيه والتقويم، يضمن توازناً بين الإبداع الآلي والوعي اللغوي البشري. ومن ثم، فإن مستقبل تعليم العربية لن يكون في رفض الذكاء الاصطناعي أو الاعتماد الكامل عليه، بل في بناء شراكة ذكية بين الإنسان والآلة لتحقيق التعلم الأمثل.

The Arabic argumentative text produced by ChatGPT exhibits a well-structured realization of the argumentative genre as conceptualized in the Genre-Based Approach (GBA) developed within the framework of Systemic Functional Linguistics [1], [2]. The schematic structure unfolds across three distinct stages—thesis, argumentation, and conclusion—demonstrating a coherent progression of ideas. The first paragraph establishes a clear thesis that positions artificial intelligence (AI) as a transformative force in Arabic language education, emphasizing the shift from traditional rote learning to interactive, analytical pedagogy. The second paragraph presents counter-arguments, highlighting the limitations of AI, such as its lack of cultural sensitivity and potential to weaken learners’ critical linguistic thinking, thus advocating for AI to function as an assistive rather than a substitutive tool. The final paragraph synthesizes these perspectives, proposing a balanced pedagogical integration that preserves human agency while leveraging technological affordances.

At the lexico-grammatical level, the text demonstrates advanced cohesion through the strategic use of conjunctions such as *fa* (“so”), *ghayra anna* (“however or nevertheless”), *kama anna* (“moreover or in addition or similarly”), *lidzālika* (“therefore”), and *wa-min tsamma* (“consequently or accordingly or thus”), which signal causal and contrastive relations typical of argumentative discourse. The modality system conveys epistemic caution and evaluative judgment through expressions like *laysa khāliyan min al-tahaddiyāt* (“not without challenges”) and *yanbaghī an yakūna wasīlatan musā'idah* (“should serve as a supporting tool”), reflecting a balanced authorial stance rather than categorical assertion. Moreover, the appraisal resources—both positive (*fursah ‘azīmah* “فرصة عظيمة”, “a great opportunity”) and negative (*taftaqir ilā al-hiss al-thaqāfi* “تفتقر إلى الحس الثقافي”, “lacks cultural sensitivity”)—illustrate the writer’s evaluative orientation towards the pedagogical and ethical implications of AI integration.

Cohesion and coherence are further reinforced through lexical reiteration (*al-dzakā al-iṣṭināʿī*, *al-anzīmah*, *al-taqniyāt al-dzakiyyah*) and thematic progression from technological transformation to human-centered synthesis. Collectively, these linguistic and rhetorical patterns situate the text within the Analytical Exposition subtype of the argumentative genre, where the communicative goal is not to persuade emotionally but to reason critically through balanced evaluation [3]. Thus, the text exemplifies how AI-generated Arabic discourse can approximate human-like argumentative reasoning, aligning with academic norms of rationality, coherence, and evaluative subtlety [4].

To extend the comparative dimension of this study, a parallel Arabic argumentative text was generated using Gemini, Google DeepMind’s large language model, under the same prompt conditions as applied to ChatGPT. This

step aims to explore how two state-of-the-art generative systems, each trained with distinct architectures and linguistic corpora, realize the same communicative purpose within the Arabic argumentative genre. While ChatGPT tends to emulate a human-like rhetorical flow that integrates affective and evaluative tones, Gemini is often characterized by its concise analytical reasoning and structured presentation of claims [1], [2]. Presenting the Gemini-generated text enables a comparative assessment of schematic structure, lexicogrammatical features, and rhetorical stance, thereby illuminating how the underlying model design influences discourse construction in Arabic [3], [4]. Such a comparison not only enriches our understanding of AI-mediated language generation but also offers insight into the adaptability of Genre-Based Analysis in evaluating non-human authorship across linguistic systems.

TABLE II. ARGUMENTATIVE TEXT GENERATED BY GEMINI

Stage	Argumentative Text
	دور الذكاء الاصطناعي في تعليم اللغة العربية (أسلوب Gemini)
Claim	يُعَدُّ الذكاء الاصطناعي أداةً حديثة يمكن أن تسهم في تطوير تعليم اللغة العربية. فالتقنيات القائمة على التعلّم الآلي تساعد في تحليل النصوص وتصحيح الأخطاء اللغوية وتقديم تغذية راجعة فورية للمتعلمين. كما تتيح البرامج الذكية فرصًا للتدريب الذاتي عبر المحادثات التفاعلية، مما يجعل عملية التعلّم أكثر مرونة وفاعلية من الطرق التقليدية.
Counterclaim	ومع ذلك، فإن اعتماد التعليم على الذكاء الاصطناعي يثير بعض المخاوف. فهذه الأنظمة لا تستطيع دائمًا فهم السياق الثقافي والدلالي العميق للغة العربية، مما قد يؤدي إلى تبسيط مفرط أو إلى أخطاء في المعنى. كما أن الاستخدام المفرط للتقنيات قد يقلل من التواصل الإنساني، وهو عنصر أساسي في تعلّم اللغات وتدوّقها.
Resolution	لذلك، من المهم أن يُستخدم الذكاء الاصطناعي في تعليم العربية بطريقة متوازنة. فهو أداة مساعدة فعالة إذا جرى توظيفه ضمن إطار تربوي يراعي الجوانب اللغوية والثقافية. الجمع بين التقنية الحديثة ودور المعلم البشري يمكن أن يخلق بيئة تعليمية أكثر شمولاً تُتمّي المهارات اللغوية وتحافظ على روح اللغة العربية في الوقت نفسه.

The Arabic argumentative text above generated by Gemini presents a distinctly expository-discursive realization of the argumentative genre as theorized within the Genre-Based Approach (GBA) [1]. Structurally, the text adheres to the canonical schematic configuration—thesis, argumentation, and conclusion—but with a noticeably linear and modular development. The thesis paragraph succinctly establishes the central claim that artificial intelligence (AI) can serve as a modern pedagogical tool for enhancing Arabic language instruction. Rather than employing rhetorical embellishment, the paragraph foregrounds technological functionality, emphasizing analytical, corrective, and interactive affordances of machine learning. This focus on process and outcome situates Gemini’s text within a scientific-informational register, aligning with the ideational metafunction described by Halliday and Matthiessen [2].

The argumentative stage reveals a measured critical stance, structured through clear logical connectors such as *wa ma‘a dhālika* (“however”) and *fahāzhihi al-anzīmah* (“these systems”), marking the transition from appreciation to critique. Unlike ChatGPT’s more humanistic tone, Gemini articulates its counterarguments in conceptual terms, invoking “cultural and semantic context” and “human communication” as abstract variables rather than affective values. This rhetorical abstraction signals a preference for semantic condensation and nominalization, transforming experiential meaning into technical categories such as *tabṣīṭ mufriṭ* (“oversimplification”) and *akhtā’ fī al-ma‘nā* (“semantic errors”). Such nominalizations, a hallmark of scientific exposition, enhance textual density and minimize interpersonal subjectivity [3].

At the lexicogrammatical level, Gemini’s text exhibits a high degree of grammatical metaphor—processes represented as things—thereby enabling the condensation of complex pedagogical relations into compact syntactic units. For instance, *taṣḥīḥ al-akhtā’ al-lughawīyah* and *taqdīm taḡhḍīyah rāji‘ah fawriyyah* realize dynamic actions (correcting, providing feedback) as abstract nominal groups, allowing Gemini to maintain analytic detachment while maximizing informational load. This reflects the SFL principle that nominalization is a resource for academic argumentation, enabling writers to “build theory” rather than “tell experience” [2]. Furthermore, the modality system remains minimal and epistemically neutral—seen in expressions like *yumkin an tashama* (“can contribute”) and *min al-muhimm an yustakhdam* (“it is important to use”)—signaling propositional caution rather than evaluative engagement. This aligns Gemini’s rhetorical voice with institutional objectivity and frames its argument within an evidentiary, policy-oriented register.

Cohesion and coherence are achieved through explicit conjunctive ties (*fa*, *wa ma‘a dhālika*, *li-dhālika*) that produce a stepwise logical flow typical of expository writing. The text’s thematic progression unfolds predictably: AI as tool → AI as risk → AI as balanced solution. This triadic progression corresponds to what Martin and Rose [1] term a dialogic contraction sequence, where argumentation narrows the field of possible meanings toward a synthesized evaluative stance. In this respect, Gemini’s text embodies an institutionalized rationality—a discursive configuration that privileges logic, balance, and propositional precision over interpersonal negotiation. Such stylistic restraint, while reducing emotive resonance, enhances cognitive transparency and argumentative clarity—features that distinguish Gemini’s computational discourse from ChatGPT’s more rhetorically humanized expression [4].

*B. Comparative Synthesis: ChatGPT vs Gemini*

When compared at the lexicogrammatical and rhetorical levels, the argumentative texts generated by ChatGPT and Gemini exhibit distinct yet complementary realizations of the same communicative goal—reasoning about the pedagogical role of artificial intelligence (AI) in Arabic language instruction. ChatGPT’s text demonstrates a humanistic-argumentative orientation, foregrounding interpersonal meaning through modal expressions (e.g., *yajibu an, yastahiq al-intibāh ilā*) and evaluative adjectives (e.g., *muḥaddathah, fa‘‘ālah*). This linguistic behavior aligns with what Martin and Rose [1] classify as a dialogically expansive style, opening space for empathy, affect, and negotiation between writer and reader. Its clause-level organization tends toward paratactic elaboration, where information unfolds through additive conjunctions (*wa, fa*) and experiential clauses dominated by processes of affect and judgment, thus emphasizing the moral and social implications of technology in learning.

In contrast, Gemini’s text realizes argumentation through logico-expository precision and nominal abstraction, characteristic of institutional and academic registers. The deployment of grammatical metaphor (e.g., *taṣḥīḥ al-akhtā’, taqdīm taḡhdhiyah rāji‘ah*) converts dynamic processes into entities, enabling compactness and density of meaning. The text also exhibits a dialogically contractive stance [1], maintaining epistemic distance via neutral modality (*yumkin an, min al-muhimm an*) and minimizing interpersonal affect. This produces a text that reads as an analytical exposition rather than an emotive argument. Gemini’s cohesive architecture—marked by sequential connectors (*wa ma‘a dzālika, li-dzālika*)—creates a triadic progression from assertion to critique to synthesis, reflecting the schematic ideal of balanced reasoning in academic discourse [2].

Therefore, while ChatGPT’s discourse mobilizes interpersonal resonance to humanize the technological debate, Gemini’s language enacts ideational condensation to rationalize it. Both systems converge on the same thematic goal but diverge in semiotic strategy: ChatGPT constructs solidarity and value alignment, whereas Gemini constructs authority and logical coherence. From the perspective of Genre-Based pedagogy, these two realizations demonstrate the adaptability of the argumentative genre to distinct registerial settings—the former pedagogical and empathetic, the latter analytical and institutional [3]. This contrast highlights how AI-generated discourse can replicate different layers of human textual culture, including affective persuasion and epistemic exposition.

*C. Comparative Analysis of Genre Realization and Lexicogrammatical Structure in ChatGPT and Gemini Outputs*

TABLE III. COMPARATIVE ANALYSIS CHATGPT-GEMINI

No.	Analytical Aspect	ChatGPT	Gemini
1.	Schematic Structure	Adheres to the classical <b>thesis–argument–conclusion</b> schema with a reflective-narrative flow. Each paragraph develops thematic continuity through experiential reasoning and ethical reflection.	Exhibits an expository, systematically ordered <b>claim–counterclaim–resolution</b> structure. Reasoning is presented in a logical sequence and with explicit segmentation of ideas.
2.	Rhetorical Stance	<b>Dialogically expansive</b> : engages the reader through empathic tone and moral positioning. Emphasizes humanistic dimensions of language education.	<b>Dialogically contractive</b> : adopts an analytical and detached stance, prioritizing clarity, precision, and argument control.
3.	Thematic Orientation	<b>Human-centered</b> , highlighting the moral and pedagogical implications of AI in Arabic education.	<b>Efficiency-oriented</b> , focusing on technological effectiveness and instructional balance.
4.	Lexicogrammatical Realization	Dominated by mental and affective process verbs (e.g., <i>ya‘tabiru, yumkin, yajibu</i> ). Employs additive conjunctions ( <i>wa, fa</i> ) to enhance interpersonal cohesion and rhetorical flow.	Characterized by nominalization and dense syntactic packaging (e.g., <i>taṣḥīḥ al-akhtā’, taqdīm taḡhdhiyah rāji‘ah</i> ). Relational and material processes predominate, signaling objectivity and technical precision.
5.	Cohesion and Coherence	Cohesion is achieved through lexical repetition and simple causal connectors, producing a persuasive and narrative argument.	Cohesion is established through formal logical connectors ( <i>wa ma‘a dzālika, li-dzālika</i> ), resulting in an analytic and hierarchical argument structure.
6.	Evaluative Language	Explicitly evaluative; relies on positive–negative polarity to assert moral stance on AI use.	Implicitly evaluative; preference for epistemic modality maintains academic neutrality.

7.	Interpersonal Meaning	Reflective and inclusive tone establishes proximity with the reader, consistent with pedagogical discourse.	Detached and epistemically distant; projects analytical authority typical of academic exposition.
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The comparative analysis reveals two distinct rhetorical and linguistic orientations in AI-generated Arabic argumentative discourse. ChatGPT’s text demonstrates a **humanistic argumentative genre**, characterized by affective engagement, dialogic inclusivity, and ethical reasoning. It foregrounds the social and pedagogical dimensions of Arabic learning, aligning with Martin and Rose’s view that genre reflects “the enactment of social purposes through linguistic choice” [1].

In contrast, Gemini constructs a **technocratic argumentative genre**, privileging analytical precision, nominal density, and logical progression. The system’s discourse reflects a *contractive rhetorical stance*, which aligns with Halliday and Matthiessen’s systemic-functional conception of the text as a “resource for constructing meaning through grammatical metaphor” [2]. While ChatGPT amplifies interpersonal meaning through experiential verbs and moral positioning, Gemini operates within a more ideationally compressed register, typical of institutional or technical exposition.

These divergences suggest that **AI systems embody different genre ideologies**, shaped by their training data and architectural design. The findings thus extend the Genre-Based Approach beyond human authorship, demonstrating that even algorithmic texts exhibit distinct discourse strategies and identity constructions. As Bender et al. [3] caution, such linguistic differences mirror not only model design but also embedded cultural and epistemological biases.

## V. CONCLUSION

This study aimed to investigate how ChatGPT and Gemini, two state-of-the-art generative language models, represent the Arabic argumentative genre through schematic, lexicogrammatical, and rhetorical structures. The analysis, grounded in the Genre-Based Approach (GBA) and Systemic Functional Linguistics (SFL), revealed substantive distinctions in how each model constructs meaning, organizes discourse, and positions itself within the communicative act.

*First*, in terms of schematic structure, ChatGPT produced a text that conforms to the classical thesis–argument–conclusion configuration, emphasizing narrative cohesion and moral reasoning. Gemini, conversely, adopted a more systematic claim–counterclaim–resolution structure, marked by explicit argument segmentation and logical sequencing. This divergence highlights each model’s inherent preference for distinct discourse patterns: ChatGPT prioritizes rhetorical fluidity, while Gemini emphasizes analytical order. *Second*, the lexicogrammatical realization showed clear contrasts in process selection and syntactic density. ChatGPT’s reliance on mental and affective verbs reflects a human-centered orientation that foregrounds evaluative and interpersonal meaning. Gemini’s output, on the other hand, displayed high nominal density and relational processes, yielding a discourse style associated with scientific and technical exposition. This indicates differing semiotic strategies in meaning-making: experiential elaboration versus ideational compression. *Third*, regarding rhetorical stance, ChatGPT’s text projected a dialogically expansive tone that invited reader empathy and moral reflection, while Gemini adopted a contractive and detached tone that reinforced analytic authority. These findings highlight how model architecture and training data influence not only linguistic output but also the epistemological positioning encoded in AI-generated texts.

In sum, the study demonstrates that AI models exhibit distinct genre ideologies in Arabic argumentative writing. Their differences are not merely linguistic but semiotic, reflecting underlying paradigms of humanistic versus technocratic reasoning. From a pedagogical perspective, these insights affirm the potential of applying GBA to evaluate AI-generated texts, offering new directions for genre-based instruction, corpus development, and critical AI literacy in Arabic education.

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