Preparing Learners for the Higher Education Curriculum: Perfecting Argumentative Writing Skills in French as a Foreign Language: An Innovative Teaching Approach with Chatgpt and Interactive In-Class Assessment

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Abstract

This article examines the impact of integrating ChatGPT an advanced artificial intelligence model developed by OpenAI, into the teaching of French as a foreign language (FLE) to first- year baccalaureate students. The main objective of this study is to determine the extent to which ChatGPT can foster the development of linguistic and communicative skills, particularly in the area of argumentation, while addressing the issues of language authenticity, creativity and autonomy in the learning process. Using a mixed-methods approach combining quantitative analysis and qualitative reflection, we explored students' performance and perceptions following the use of ChatGPT. The results show that ChatGPT helped to significantly improve the argumentative writing skills of almost half of the participants, while highlighting the importance of appropriate pedagogical support in overcoming the challenges of linguistic authenticity and creative engagement for learners.

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This study highlights the potential of ChatGPT as a complementary tool in the teaching of FLE, while recommending a thoughtful integration of technology to enrich the learning experience without compromising the fundamental principles of language education.

Keywords: ChatGPT; French as a foreign language; argumentative writing; pedagogical integration; linguistic authenticity; learner autonomy.

1. Introduction

As part of the dynamic evolution of foreign language teaching, particularly French as a foreign language (FLE), the advent and integration of artificial intelligence (AI) technologies into teaching processes represents a major step forward. The current digital age, characterised by increased digitalisation and a relentless thirst for pedagogical innovation, calls for a rethink of traditional teaching and learning methods. Among the emerging technologies, developed by OpenAI [1], stands out as a promising tool capable of fundamentally transforming educational approaches. It is a powerful AI tool aiding scientific writing and enhancing students' writing skills by providing grammar corrections, improvement suggestions, and detailed feedback. It also assists researchers by streamlining the writing process and offering valuable support in crafting different sections of research articles [2]. This makes it a hopeful tool that encourages students to engage actively and enhances their cognitive growth by adjusting to their individual learning speeds and providing ongoing assistance throughout their learning journey Reference[3].

This article aims to explore the integration of ChatGPT in the teaching of FLE, with a particular focus on the development of argumentative writing skills in first- year baccalaureate students. This research is part of the wider context of preparing learners for higher education, and seeks to answer some key questions: How can the use of ChatGPT enrich the teaching of FLE and contribute to the development of linguistic and communicative skills, specifically in the field of argumentation? How can this tool address the issues of language authenticity, stimulate creativity and encourage learner autonomy in their learning process?

Our methodological approach combines a quantitative analysis of students' performance with a qualitative exploration of their perceptions of ChatGPT use, providing a holistic understanding of its impact. The aim is to determine the extent to which ChatGPT can act as a catalyst for strengthening argumentative skills, which are crucial for academic and professional success. With this in mind, the study aims to examine the potential of ChatGPT as a complementary tool in the FLE pedagogical arsenal, while taking into account the pedagogical challenges that ChatGPT poses, particularly in terms of linguistic authenticity and the creative engagement of learners.

The results reveal that ChatGPT has the potential to significantly improve the argumentative writing skills of a significant proportion of students, marking the effectiveness of this technology as an innovative pedagogical tool. Nevertheless, this technological integration also raises challenges, underlining the importance of carefully adapted pedagogical support. It is imperative to navigate between the possibilities offered by ChatGPT and the fundamental requirements of language teaching, to ensure a learning experience that does not compromise the

principles of language authenticity, while at the same time stimulating creativity and supporting learners' autonomy.

This introduction highlights the framework of our investigation, looking at ways of optimising the use of ChatGPT in the teaching of French as a foreign language. It aims to contribute to the debate on the incorporation of AI tools in education, offering a nuanced assessment of the benefits and limitations of ChatGPT, and considering avenues for thoughtful pedagogical integration that effectively prepares students for higher education in an increasingly digitised world.

2. **Literature Review**

In the contemporary educational landscape, the integration of artificial intelligence (AI) technologies, such as ChatGPT, holds significant promise for revolutionising foreign language teaching (FLE) and learning processes [1]. ChatGPT, developed by OpenAI, represents a transformative advancement capable of substantially enhancing language and communication acquisition [1]. Recent studies have investigated the impact and implications of incorporating ChatGPT into educational settings, shedding light on its potential benefits and challenges.

Béatrice St-Cyr-Leroux, in her reflections on UdeMNews, provides valuable insights into the evolving dynamics of higher education, emphasising the importance of adapting to rapid technological changes and shifting global educational demands [4]. St-Cyr-Leroux highlights the potential of digital tools, including ChatGPT, to enrich the learning environment and foster greater student engagement, underscoring the critical role of academic leadership in guiding successful transformations.

Ondrej Kubovic's analysis, published on Safer Kids Online by ESET, explores the benefits and risks associated with using ChatGPT for children, with a specific focus on writing skills and education in artificial intelligence [5]. Kubovic underscores the importance of balanced and safe utilisation of this technology in educational settings, emphasising its potential to support teaching and learning initiatives while acknowledging the need for careful consideration of ethical and pedagogical implications.

Furthermore, Montenegro-Rueda and his colleagues. conducted a systematic review assessing the impact of implementing ChatGPT in education, offering valuable insights into its effects on teaching and learning processes [3]. Their findings contribute to a nuanced understanding of the benefits and limitations of AI in education, providing guidance for thoughtful and effective pedagogical integration aligned with contemporary educational goals.

These discussions align with previous studies that have explored the implications of conversational AI and digital tools in education. McTear, Callejas, and Griol discuss the conversational interface and its application in interacting with smart devices [6]. Dale (2016) examines the resurgence of chatbots and their potential in natural language processing [7]. Gao, Galley, and Li delve into neural approaches to conversational AI, highlighting the advancements in this field [8]. Vaswani and his colleagues. introduce the attention mechanism, which has revolutionised neural network architectures [9].

Moreover, Bates provides guidelines for designing teaching and learning in the digital age, offering insights into effective pedagogical practices [10]. Mayer discusses multimedia learning and its application in educational settings [11]. Selwyn examines key issues and debates surrounding education and technology [12]. Koehler and Mishra (2008) introduce technological pedagogical content knowledge, emphasising the importance of integrating technology into teaching practices [13].

Additionally, Bair and his colleagues. advocate for empowering educators through technology, highlighting the role of the connected teacher in modern education [14]. Cuq and Gruca discuss didactics of French as a foreign and second language, providing valuable insights into language teaching methodologies [15]. Bourguignon explores the communicative approach to language teaching, focusing on theory and practice [16]. Blanchet and Chardenet offer practical guidance for teaching French as a foreign language [17]. Amossy delves into argumentation in discourse, providing theoretical frameworks for analysing language use [18].

3. **Methodology**

3.1. Description of the sample

Our study focused on a sample of 82 students enrolled in the first year of the baccalaureate within the experimental sciences stream at the high school HOUMMAN ELFATWAKI This target population was chosen to evaluate the impact of using chatgpt on the development of argumentative writing skills in FLE.

3.2. Presentation of the lessons on argumentation and the use of ChatGPT

The teaching intervention began with a series of in-depth lessons on argumentation, covering aspects such as the structure of an argument, the different argumentative planes (dialectical, concessive, thematic, and analytical), as well as how to find, present, explain, and exemplify arguments using logical connectors. The students were then introduced to ChatGPT, with a discussion of its positive and negative uses, and encouraged to use it to search for arguments relevant to their written work.

3.3. Frequency and duration of written productions by the students

The students were assigned to produce an argumentative written production every weekend over a four-month period. During the school holidays, they were asked to produce three additional texts each period. This pace was stepped up in May, with three productions per week, in order to maximise their preparation for the regional exam.

3.4. Assessment criteria used to measure student performance

Student performance was assessed across a range of criteria, including the quality and coherence of their written work, their ability to use arguments and logical connectors effectively, and the structure of their introductions and conclusions. In-class assessments, where students read their work aloud and then received and gave constructive feedback, provided qualitative feedback on their understanding and engagement. In addition, the results of the formal in-class assessments and the regional exam provided quantitative data to objectively

measure the improvement in students' argumentative writing skills.

This methodology combines qualitative and quantitative approaches to provide a comprehensive analysis of the effect of using ChatGPT on the development of argumentative writing skills in high school students. It aims to offer valuable insights into the potential of AI in the teaching of FLE, while taking into account the associated pedagogical challenges.

4. **Results and Findings**

The results of this study provide an in-depth analysis of the impact of integrating ChatGPT into the teaching of French as a foreign language, specifically focusing on the development of argumentative writing skills among first-year baccalaureate students. The performance of the students was evaluated based on their ability to produce coherent and well-structured argumentative texts over the course of the intervention.

The data reveal that ChatGPT significantly improved the argumentative writing skills of a substantial portion of the participants. The students' written productions were categorised into four performance levels: *significant success*, *average performance*, *difficulties in explaining arguments*, and *lack of motivation* (See Figure 1). This categorisation provides a comprehensive view of how different students responded to the use of ChatGPT and highlights the diverse range of outcomes observed.
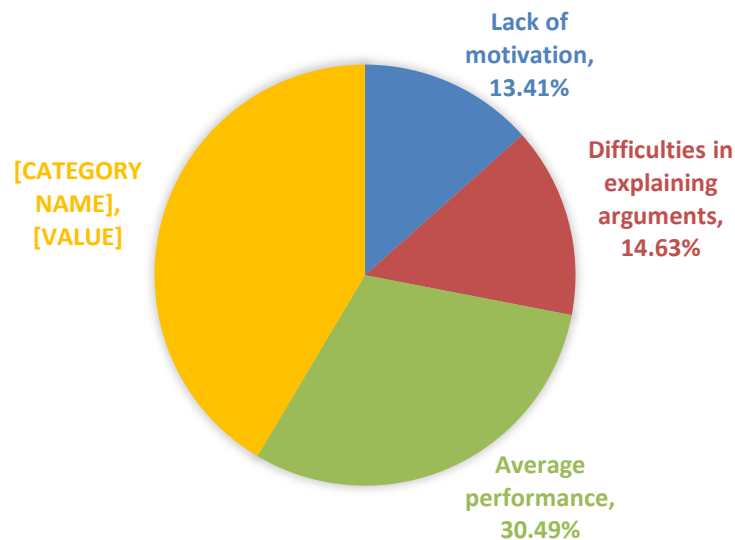

Figure 1: Breakdown of Student Performance in Argumentative Writing

4.1. Performance breakdown

- 34 students (41.46%) managed to produce better, more complete and coherent argumentative written productions, demonstrating a significant improvement in their argumentative writing skills through the use of ChatGPT.
- 25 students (30.49%) produced argumentative texts of average quality, revealing shortcomings due

mainly to problems with basic French.

- 12 students (14.63%) found it difficult to explain the arguments properly, probably due to poor attendance and seriousness, as well as a lack of regular written production per weekend.

- 11 students (13.41%) did not produce any written work and showed a lack of motivation, after obtaining poor marks in the first semester.

Out of a total of 82 pupils in the class:

- **Significant success**: 34 students, representing 41.46%, showed significant improvement in producing complete and coherent argumentative written productions. This significant improvement in their argumentative writing skills through the use of ChatGPT indicates that this tool has been beneficial for a considerable proportion of students, highlighting its pedagogical potential.

- **Average performance**: 25 students, i.e. 30.49% of the class, produced argumentative texts of average quality, illustrating the presence of certain skills in argumentative writing while revealing shortcomings linked mainly to difficulties with basic French. This observation highlights the importance of identifying the specific areas where these students need support to improve their skills.

- **Difficulties in explaining arguments**: 12 students, corresponding to 14.63%, found it difficult to explain their arguments clearly, probably due to poor attendance and engagement, as well as a lack of regular writing practice. This suggests a need to understand the barriers faced by these students and to develop approaches to improve their ability to articulate arguments effectively.

- **Lack of motivation**: 11 students, also 13.41%, did not produce any written work and showed a lack of motivation, particularly following disappointing results in the first semester. This situation reveals the challenge of motivating these students and the need to encourage them to persevere, despite the obstacles, in order to improve their academic performance.

5. **Discussion**

The integration of ChatGPT into the teaching of French as a foreign language (FLE) for first-year baccalaureate students at Houman Elfatwaki secondary school yielded insightful results regarding its impact on the development of argumentative writing skills. The findings reveal both significant successes and notable challenges, highlighting the complex dynamics of incorporating AI tools into educational practices. These results highlight the urgent need to guide students in the use of ChatGPT, encouraging them to use it as a complementary aid to their learning of French, while at the same time urging them to develop their critical thinking, inventiveness and autonomy. A balanced approach, combining the benefits of ChatGPT with carefully structured traditional teaching, can provide high school students with enriching and highly stimulating learning opportunities (See Table 1).

Table 1: Summary of Student Performance and Recommendations Following Integration of ChatGPT in FLE Instruction

Category	Percentage of Students	Key Findings	Recommendations
Significant Success	41.46%	- ChatGPT provided tailored support, relevant examples, and engaging interaction that facilitated learning and writing practice.	- Continue using ChatGPT as a supplement to traditional teaching. - Encourage independent exploration of complex topics and ambitious writing projects.
Average Performance	30.49%	- Students demonstrated basic writing skills but struggled with advanced language use and argument structuring. - Issues mainly in mastering French grammar and syntax.	- Provide personalized support. - Use ChatGPT for tailored exercises focusing on grammar, logical connectors, and coherent argumentation.
Difficulty Explaining Arguments	14.63%	- Students had difficulty explaining arguments clearly, indicating a lack of deep understanding or logical organization. - Possible lack of commitment or interest in writing.	- Conduct remedial sessions to develop critical thinking and clarity of expression. - Use ChatGPT to simulate debates or discussions to stimulate interest.
Demotivation	13.41%	- Lack of motivation, particularly after poor performance, led to reduced effort and deteriorating performance.	- Adopt a supportive approach, value incremental progress, and encourage perseverance. - Set achievable short-term goals and use ChatGPT for fun, interactive activities to re-engage students.

A notable proportion of students (41.46%) showed significant improvement in their argumentative writing skills. These students were able to produce more complete and coherent written arguments, suggesting that ChatGPT effectively supported their learning process. The AI tool provided personalised feedback, offered relevant examples, and engaged students in interactive and personalised writing exercises, which likely contributed to their enhanced performance. The success observed indicates that ChatGPT can be a valuable supplement to traditional teaching methods, helping bridge the gap between instruction and practice, and providing students with immediate feedback and additional resources to refine their skills. For these students, leveraging ChatGPT can facilitate the development of more complex argumentative structures, encouraging them to explore advanced topics and undertake more ambitious writing projects.

However, approximately 30.49% of the students produced argumentative texts of average quality. These students demonstrated some proficiency in argumentative writing but faced challenges primarily related to basic French language skills, such as grammar and syntax. This indicates that while ChatGPT can assist with higher-

order writing skills, fundamental language proficiency still needs targeted attention. For students in this category, personalised support is crucial. Educators should identify specific areas where these students struggle and use ChatGPT to create tailored exercises that address their individual needs. Reinforcing basic language skills through additional exercises and incorporating ChatGPT as a supplementary tool for practice can help improve their overall writing quality.

A smaller group of students (14.63%) had difficulty explaining their arguments clearly. This issue may stem from a lack of deep understanding of the subject matter, insufficient logical organisation skills, or low engagement in the learning process. These students often missed classes or did not consistently complete their writing assignments, which further hindered their progress. Focused interventions that enhance critical thinking and clarity of expression are essential for these students. ChatGPT can be used to simulate debates or discussions on controversial topics, which can stimulate interest and improve their ability to articulate arguments effectively. Increasing student engagement through interactive and relatable content can help address their disinterest and improve their overall performance.

A significant challenge identified was the lack of motivation among 13.41% of students, particularly following poor performance in the first semester. This demotivation led to a complete lack of written work from these students, indicating a severe disengagement from the learning process. Addressing the psychological barriers to learning is crucial. A supportive approach that values incremental progress and sets achievable short-term goals can help rebuild these students' confidence. Using ChatGPT for fun, interactive activities that align with students' interests can re-engage them and foster a more positive attitude toward learning.

The study highlights the diverse impact of ChatGPT on students' argumentative writing skills, demonstrating both the potential and challenges of integrating AI tools in education. While nearly half of the students significantly improved, others showed varying degrees of progress, with some facing persistent challenges. ChatGPT can provide enriching and stimulating learning experiences, particularly for students who are already motivated and possess a basic proficiency in French. However, the integration of ChatGPT should complement, not replace, traditional teaching methods. A balanced approach that includes both technological and human elements is essential to address the diverse needs of students. AI tools like ChatGPT can be used to tailor educational experiences to individual student needs, offering personalised feedback and targeted exercises to help students improve specific skills. Additional support mechanisms, such as remedial sessions and engagement strategies, are necessary to help underperforming students catch up and stay motivated.

Despite the promising results, several limitations must be acknowledged. The study was conducted with a relatively small sample of 82 students from a single school, limiting the generalisability of the findings to a broader population. The study's four-month duration may not be sufficient to observe long-term impacts of ChatGPT on language learning and argumentative writing skills. Variations in students' initial proficiency in French and their familiarity with technology were not controlled for, which might have influenced the results. Additionally, the study focused solely on argumentative writing skills, leaving out other essential language skills such as oral communication, listening comprehension, and vocabulary acquisition.

In conclusion, the integration of ChatGPT into FLE instruction has shown significant potential to enhance students' argumentative writing skills. However, the successful implementation of such AI tools requires thoughtful pedagogical strategies, personalised support, and continuous evaluation to ensure that all students benefit. Future research should explore long-term effects, broader applications across different language skills, and more diverse educational settings to further understand the role of AI in language education. By addressing these considerations, educators can harness the benefits of AI tools like ChatGPT to create more effective, engaging, and personalized learning experiences for students, preparing them for the demands of higher education in an increasingly digital world.

6. Limitations of the Study

As with any research endeavour, this study on the integration of ChatGPT into French language learning is not without its constraints. While the findings provide valuable insights and suggest promising directions for the future of language education, it is essential to recognise the inherent limitations that may impact the generalisability and applicability of the results. Acknowledging these limitations is crucial for providing a balanced interpretation of the study's outcomes and for guiding future research that seeks to build upon these initial findings.

This study, while offering significant insights into the potential of ChatGPT for enhancing French language learning, has several limitations that need to be addressed in future research:

- Sample Size and Generalisability: The study was conducted with a relatively small sample size of 82 students from a single school. This limits the generalisability of the findings to a broader population of French language learners.
- Duration: The study spanned four months, which may not be sufficient to observe the long-term impacts of using ChatGPT on language learning and argumentative writing skills. Longer studies are needed to fully understand the sustained benefits and potential drawbacks of this technology.
- Focus on Intermediate Learners: The study primarily focused on intermediate learners. As a result, it does not provide insights into how beginners or advanced learners might benefit differently from the use of ChatGPT in their language learning processes.
- Reliance on Self-Reported Data: The study relied heavily on self-reported data, which can be subjective and prone to biases. Future research should incorporate more objective measures of assessment to validate the self-reported outcomes.
- Potential Biases: There may be biases related to students' varying levels of familiarity with technology and their initial proficiency in French. These factors were not controlled for and might have influenced the results. Future studies should aim to account for these variables to provide a clearer understanding of ChatGPT's effectiveness.
- Scope of Research: The study focused solely on argumentative writing skills, which is just one aspect of language learning. Other skills such as oral communication, listening comprehension, and vocabulary acquisition were not addressed. Expanding the scope to include these areas could provide a more comprehensive view of ChatGPT's impact on language learning.

- Cultural and Educational Contexts: The specific cultural and educational contexts of the learners were not extensively considered, which could affect the generalisability of the findings. Future research should take into account these contextual factors to better understand how ChatGPT can be adapted to different learning environments.

Addressing these limitations in future research will help to build a more robust understanding of the role of ChatGPT in language education and ensure that its integration into learning environments is both effective and equitable.

7. **Conclusions and Recommendations**

At the culmination of this comprehensive study on the integration of ChatGPT into the teaching of French as a foreign language (FLE) for first-year baccalaureate learners, several key conclusions emerge, addressing the initial questions posed. The study aimed to explore how ChatGPT could enhance linguistic and communicative learning, particularly in the realm of argumentative skills, while considering authenticity, creativity, and learner autonomy.

Our mixed-methods analysis reveals that ChatGPT significantly enhanced the argumentative writing skills of a majority of participants. This improvement underscores ChatGPT's efficacy as an innovative pedagogical tool, offering tailored support and engaging students in interactive and personalised learning experiences. Moreover, students' feedback underscores the importance of pedagogical supervision in navigating the challenges inherent in using this technology, especially concerning linguistic authenticity and stimulating creativity.

Nevertheless, the study underscores the need for profound pedagogical reflection for the successful integration of ChatGPT into FLE teaching. Educators are encouraged to adopt strategies that leverage ChatGPT's capabilities while upholding the core objectives of language education. This entails designing activities that prompt students not only to generate arguments using ChatGPT but also to analyse, critique, and enrich them, thereby nurturing their critical thinking and autonomy.

In summary, this research underscores ChatGPT's potential in FLE instruction as a supplementary tool for honing argumentative writing skills. However, to maximise its benefits without compromising fundamental educational principles, deliberate integration and adequate pedagogical support are imperative. The possibilities unveiled by this study warrant further research into optimal practices for integrating AI tools in education to adequately prepare learners for the challenges of higher education in a digitally evolving world.

To advance this study and promote the ethical use of ChatGPT as an educational tool, the following recommendations are proposed:

1. Teacher Training: Conduct training sessions to familiarise teachers with ChatGPT's capabilities and limitations, enabling them to ethically and effectively integrate the tool into their lessons.
2. Establish Ethical Guidelines: Develop clear guidelines for ChatGPT use, stressing respect for copyright, the importance of originality and proper citation, and critical evaluation of ChatGPT-

generated results.

3. Promote Responsible Use: Emphasise responsible use among students, encouraging ChatGPT as an aid for finding arguments while insisting on personal writing and idea formulation.

4. Encourage Creativity: Foster students' creative and original writing skills, using ChatGPT for inspiration while urging the development of personal arguments.

5. Individual Monitoring: Provide personalised guidance to students, assisting them in integrating argumentative skills and fostering critical thinking.

6. Extend Study: Expand the study to other classes and teachers, gathering additional data on student performance, perceptions, and ethical implications.

7. Collaborate with Other Schools: Share study results and collaborate with other schools to exchange ideas, best practices, and ethical approaches to ChatGPT use.

By implementing these recommendations, educators can generalise ChatGPT's use as a teaching tool while upholding ethical standards and nurturing students' argumentative skills and creativity. Further analysis of individual writing pieces, assessment methods, and contextual factors can provide deeper insights, guiding appropriate pedagogical interventions to support students' argumentative writing development.

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