Incorporating ChatGPT in Foreign Language Education: Teacher Challenges, Reflections on Informal Initiatives and Strategies

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Abstract

The emergence of Artificial Intelligence (AI) tools and more specifically LLM Chatbots, has led foreign language (FL) education into a transformative era. ChatGPT ,in particular, has gained worldwide attention for empowering teachers to enhance language learning through immediate feedback, tailored learning experiences and authentic conversational contexts. However, there seems to be a considerable research gap in relation to FL teachers' adoption and adaptation of these tools in both formal and informal teaching settings. The present study intended to address that gap by dealing with three core aspects: the pedagogical challenges teachers face when implementing AI tools; their reflections on informal, self-directed initiatives and their impact on students' language skills and motivation; and the strategies employed to effectively integrate ChatGPT while managing concerns related to its accuracy. To investigate these dimensions, an online questionnaire addressing FL teachers from various regions and educational levels in Greece, has been employed. It examined teacher challenges, reflections and strategies.Allitems in the questionnaire were close ended, allowing for the collection of quantitative data. Descriptive and inferential statistical analyses were conducted in order to identify correlations of teacher characteristics, and their AI integration practices, perceived challenges, most preferred strategies for leveraging ChatGPT effectively in the teaching process and ideal professional development models. In the final analysis, the present research aimed to synthesize insights originating from various teaching contexts, presenting how AI enhances FL learning and simultaneously promotes professional growth. Adding to that, its findings contribute to informing institutional policies, enriching the repertoire and crafting the design of teacher training practices worldwide while ensuring the development/advancement of AI solutions in FL education.

Keywords: *artificial intelligence, ChatGPT, foreign language education, professional development*

1. Introduction

With the advent of technology in education and its ongoing transformation, reshaped foreign language teaching practices present educators with both opportunities and challenges [1],[2]. More specifically, AI technologies that provide users with real-time responses, simulate dialogue and assist written language production –have attracted professional's attention while simultaneously enhancing students' involvement and autonomy; ChatGPT appears to have drawn the attention of the educational community thanks to these capabilities [3],[4].

Furthermore, according to recent studies the use of ChatGPT leads to a more learner-centered approachas it promotes autonomy, provides personalised learning paths and opportunities for real communication,thus leading students to take ownership of their own learning [5],[6]. In practice, as Kohnke and Zou [3] maintain, this means that students use ChatGPT to check grammar, lexis and complete writing tasks independently. In the same vein Wang [4]points out that ChatGPT is especially valuable in FL contexts where students lack access to immediate feedback or real-world language use.

However, questions arise as to how these technologies are being employed in educational reality and moreeducators express concerns overthe accuracy of the AI products, breaches in academic integrity and student overreliance on AI[2],[7],[8].Adding to that, technological and institutional burdens such as inadequate infrastructure, lack of clear guidelines for responsible AI usage and limited training opportunities make it even harder for educators to integrate AI into their teaching practices [1],[5]. Holmes et al.[2]and Bartneck et al. [9] also pinpointthat in the absence of appropriate institutional guidance, educators integrate AI tools on their own, contributing to inconsistent patterns across schools, regions and systems[2],[9]. In light of this inconsistency, educators are responding in varied ways. While some are experimenting with ChatGPT viewing it as a valuable partner, others remain hesitant or feel totally unprepared in the reality of their day-to-day teaching [3],[5].

Although recent studies began to explore what ChatGPT might offer in foreign language classrooms-pinpointing its potential for creativity, collaboration and supporting learning through scaffolding – it has to be stressed that empirical data regarding teachers' experiences, strategies and needs is still limited [10]. More precisely, few studies have investigated how educatorsmanage to balance the capabilities of AIwith the ethical matters and technical issues that arise in classroom settings[2],[8].

In an attempt to address thesegaps, the present research intends to explore four key areas: (1) initially, the challenges educators encounter, (2) how students informally use ChatGPT (3) the strategies educators employ when integrating ChatGPT into their lessons (4) the training and professional development educators need. By focusing on some aspects, the study aims to provides a view of how AI affects modern language teaching and highlights the institutional support and training required.

2. Literature Review

Artificial Intelligence is a concept with multiple facets encompassing an assortment of technological innovations capable of autonomously providing answersand completing tasks aimed at achieving predetermined goals without direct human involvement. Indeed, attempting to define Artificial Intelligence seems to be a rather demanding task. According to Kaplan and Haenlein [11] AI is "a system's ability to correctly interpret external data, to learn from such data, and to use those learnings to achieve specific goals and tasks through flexible adaptation". Additionally, Poole andMackworth [12] define AI as "the field that studies the synthesis and analysis of computational agents that act intelligently". In the same vein, Russell and Norvig [13], conceptualise AI as the field concerned with the design of intelligent agents that perceive the environment and act accordingly. These agents are guided by functions that link their perceptions to actions, and can be implemented sing various approaches, including production rules, reactive architectures, logic-based planning and decision-making models.

Relatively recently, the incorporation of AI-driven systems into daily life has significantly impacted numerous sectors, with education being notably affected [9],[14],[15]. In the case of foreign language teaching, Firatmentioned some benefits of ChatGPT such as providing individualised learning opportunities, immediate insights into task executionand adaptable learning since students can access it anytime and from any location [5].Among its other benefits ChatGPT is also used for helping students understand what a word means based on context, correcting grammar errors, generating different types of texts and providing sample usages [3].Firat [5] claims that ChatGPT enables its users to work on their language skills at their own pace, selecting topics they are interested in and adjusting difficulty levels in an attempt to match their own needs.

It also noteworthy the fact that ChatGPT can be used in a constructive manner as it enables its users interacting with one another, reflecting and applying problem-solving techniques to the learning process. These capabilities align closely with the principles of constructivism[10].Students can also use ChatGPT to check sentence structures and receive feedback instantly while enhancing their language skills [3]. In cases of collaboration, ChatGPT serves as a foundation for meaningful dialogue, encouraging learners to question, interpret and improve the language products [4]. Klimova and Pikhart[6]further point out that ChatGPT proves especially useful in task-based environments as it can generate context-specific products while leading students to explore a wide range of language styles. It is also significant that the interactive nature of ChatGPT provides students the opportunity to engage in simulations of various conversations boosting simultaneously their confidence in both speaking and writing [4],[10],[15].

However, the integration of AI technologies such as ChatGPT in education is not without challenges. A significant concern highlighted in literature is students' tendency to accept AI-generated responses without any kind of scrutiny, a phenomenon called "automation bias" [2]. According to Smutny and Schreiberova[8] trusting ChatGPT blindly can be problematic as the products may lack accuracy, and teachers may not be present to test them. Ethical issues also arise as students may be tempted into using the ChatGPT content as their own questioning in this way the fairness of assessment practices and academic integrity [5]. As far as teachers are concerned, research suggests that a significant proportion of them lack the training required in order to effectively incorporate AI into their pedagogical approaches [1]. Firat [5] also highlights the fact that the absence of clear institutional guidelines leaves teachers confused without adequate guidance. Consequently, even those educators who seem to be open to innovation may show reluctance or use such technologies in cautious ways [9].

Although recent research dealt with the potential of ChatGPT in foreign language education, there is still limited empirical evidence on how ChatGPT is integrated in classroom settings [3],[5],[16],[17]. In

particular, studies overlooked the role of teacher agency, informal experimentation by students, and the challenges educators face in classroom settings [2],[6],[16],[18],[19]. Collectively,whileexisting literature presents both limitations and capabilities of ChatGPT in FL education- complex but promising picture-only few studies directly investigated how FL teachers deal with its implementation into practice. To this end, the present study aims to address this gap by studying teachers' experiences, challenges, reflections on informal initiatives and strategies adoptedwhen integrating ChatGPT in real classroom environments.

3. Methodology

The present study aims at investigating digital challenges faced by teachers, reflections on informal initiatives that focus on self-guided approaches, their impact on students' language skills and motivation and strategies for effective integration of ChatGPThandle issues related to its accuracy.
More specifically, the questions of the present study are:
1. What are the challenges that foreign language teachers face when implementing ChatGPT into formal and informal teaching environments?
2. In what ways have teachers observed or facilitated informal uses of ChatGPT by students, and what impact do these practices have on language learning?
3. What strategies have educators adopted to effectively integrate ChatGPT into their foreign language teaching practices?
4. How do educators assess their training needs regarding AI implementation in foreign language education?
The participants in this study were 116 foreign language teachers working in primary and secondary education in Greece, aged between 18-64 years old. All participants were members of educational groups on social media platforms (Facebook). Among the participants, 68 were female and 48 male. Most of the teachers, 94 (81.0%), worked in the public sector, while 22 (19.0%) were employed in private sector institutions. The participants taught various foreign languages, including English, French, German and Italian which contributed to the study's diverse perspectives on AI integration in education. Furthermore, the range of teaching experience among the participants contributed to insights gained into the use of AI tools.
The survey included five sections: teachers' background, familiarity with technology, strategies employed, challenges faced, and professional development needs. All questions were close endedin order to allow for consistent statistical analysis. Descriptive statistics were calculated,and Chi-square tests were conducted to explore relationships between variables. Data analysis was performed using SPSS. To ensure broad participation, invitations to the survey were distributed via teacher networks, professional communities, and educational forums on social media. In addition, participation was voluntary, and all responses were anonymous.

4. Results

The results presented an extensive overview of FL instructors' challenges towards incorporating ChatGPT in foreign language education, reflections on informal initiatives taken and strategies employed. To be more precise the responses showed several major findings. As far as the pedagogical and technological challenges are concerned, 62% of teachers mentioned limited computer skills as a significant challenge. Disbelief over the accuracy of responses generated by ChatGPT was reported by 57% of survey participants, while 49% pointed out the insufficient support provided in order to be able to implement them in their teaching repertoire effectively. In addition, a statistically significantrelationship (x^2 = 9.88, p<0.1) was observed between teachers' digital confidence and their frequency of ChatGPT use, showing that the digitally skilled educators were more likely to implement such tools in their teaching repertoire.
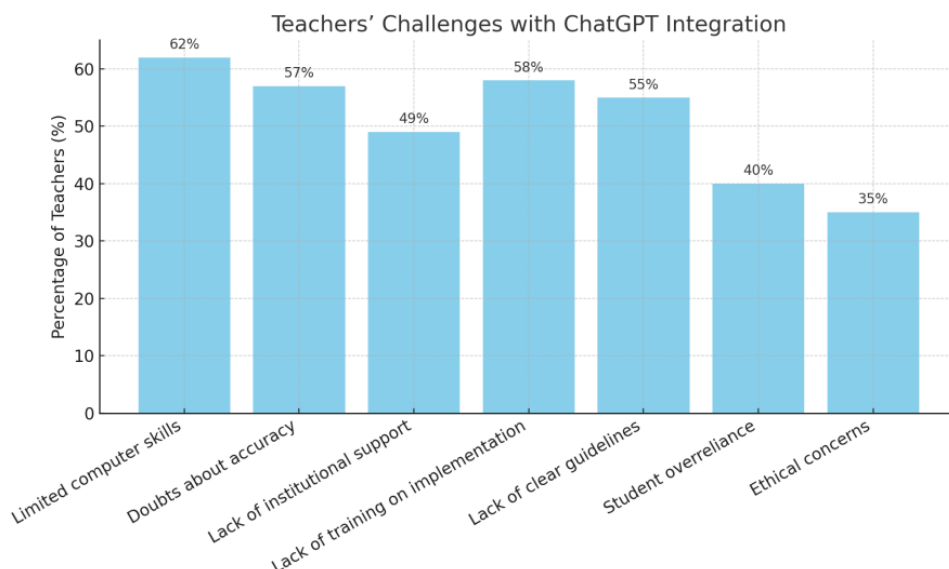
Fig. 1. Teachers' Challenges with ChatGPT

Regarding informal use of ChatGPT by students, a significant proportion, that is 72%, reported that they observed students on their own using ChatGPT for language purposes. To be more precise, these purposes are related with self-directed grammar checks, lexis development and text production. Additionally, 34% of teachers involved pinpointed that students first used ChatGPT outside the school environment and later used it for sharing examples or asking questions that often led to discussions and deeper engagement with the language. Interestingly, the study showed that those educators who encouraged the use of ChatGPT by studentshave led to increased levels of pupil motivation (x^2=8.42,p<0.5).

As far as the strategies employed are concerned, 68% of the teachers mentioned using role-play in which ChatGPT acted as a conversation partner. Furthermore, 61% implemented task-based activities where students made use of ChatGPT for brainstorming. 54% engaged their students in collaborative tasks where they had to assess AI-generated language products. By reflecting and criticizing responses by ChatGPT students managed to improve their analytical thinking and levels of metalinguistic awareness. It is also noteworthy that there was a statistically significant association ($x2$=8.42, p<.05) between prior AI-related training and the strategies repertoire employed, pinpointing the importance of professional development in modern pedagogical practices.
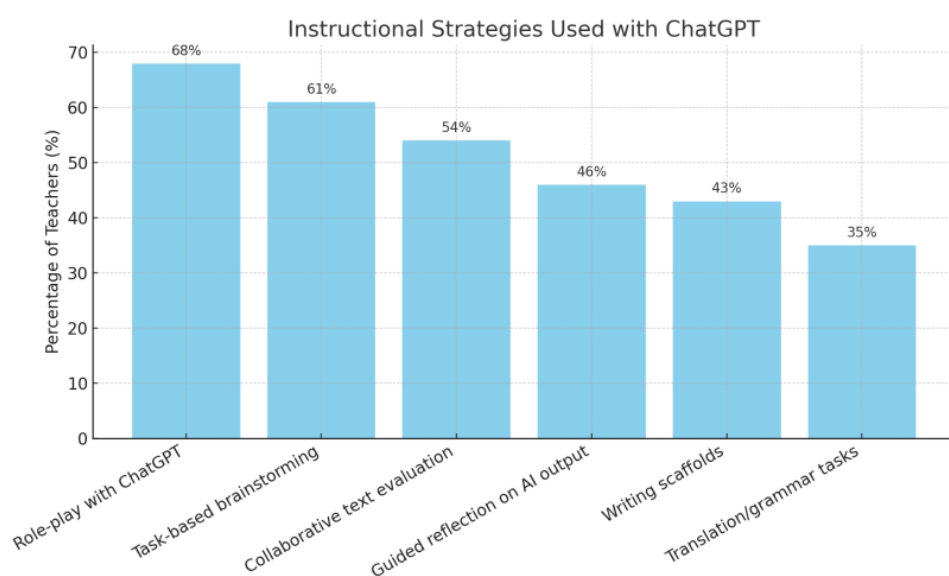

Fig. 2. Instructional Strategies Used

As regards the issue of training needs, teachers showed a strong interest in being provided with additional support. More specifically, 82% prefer hands-on workshops while 69% are in favour of peer collaboration and 63% opt for accessing lesson templates. Furthermore, 58% of the participants pinpointed the need for training that deals with not only how to make use of such Artificial Intelligence (AI) toolsbut with how to implement them effectivelyinto lesson planning and assessment practices. It is worthwhile to mention that those educators (x^2=7.76, p=.05) who considered training lack as a burden were significantly more likely act hesitantly regarding the implementation of ChatGPT in classroom settings.
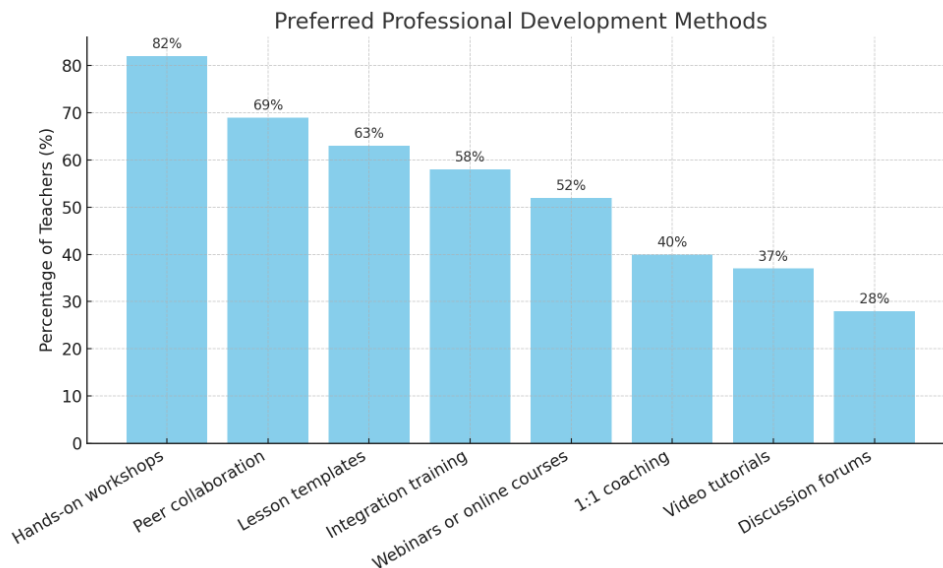

Fig. 3. Preferred professional development method

5. Discussion

The findings of the present study shed light on the relationship between FL teachers and ChatGPT. Regarding teachers' attitudes towards ChatGPT, the overall tone of the responses indicates cautious curiosity towards it. More precisely, a significant observation is that a teacher's confidence with technology notably affects their willingness to use ChatGPT. The proportion of teachers that was identified as more digitally skilled was statistically more likely to use ChatGPT (x^2=9.88, p<.1). This finding proves thatcomfort breeds experimentation, that is teachers who feel equipped to deal with such tools, implement them in their teaching practices in a pedagogically meaningful and practical way. On the other hand, AI tools such as ChatGPT are deliberately avoided or underutilized by educators who lack basic computer skills because they feel unprepared to use them effectively.

Furthermore, this prevailing sense of hesitancy is reinforced by educators' challenges regarding the reliability of AI products and the insufficient support provided by institutions. More precisely, over half of the participants of the survey (57%) were doubtful regarding the reliability of ChatGPT responses, while half of them (49%) pinpointed the lack of institutional support. These data indicate a tension that many educators deal with, that is the pressure for innovation but without proper training and adequate infrastructure. It is not surprising that educators who reported inadequate institutional support and training were also more likely to hesitate when it came to implementing ChatGPT in their teaching (x^2 =7.76, p=.05). Therefore, without institutional support, even the most promising technologies fail toprove effective and successful.

Regarding informal uses, the study also reveals an important finding: when it comes to exploring and using AI tools such as ChatGPT students outsmart their teachers. A striking 72% of educators mentioned that they observed their students making use of ChatGPT independently for language-related purposes, that is from checking grammar and building vocabulary to writing complete texts. It is also noteworthy that 34% of the educators pinpointed the fact that students often brought their informal experiences with ChatGPT into the classroom,that is asking questions, sparking discussions and sharing examples. The students' spontaneity to implement AI technologies such as ChatGPT shows that such technologies are becoming embedded in their academic routines regardless of whether their educators are prepared for this shift or not.

Furthermore, the impact of teacher attitude also plays a critical role in shaping how informal uses of ChatGPT are integrated into classroom dynamics. Educators who encouraged students to explore ChatGPT autonomously were significantly more likely to mention increased student motivation (x^2=8.42, p<.5). This finding underscores the importance of educator openness to student inquiry and a willingness to engage with technologies that students already make use of. Therefore, educators who embrace informal AI use with guidance and reflection can effectively transform it into a catalyst for student engagement and collaborative learning.

As far as instructional strategies are concerned, findings show that teachers are not only experimenting with ChatGPT, but they simultaneously integrate it following a communicative, learner-centred approach. More precisely, the most common practices included role-play activities (68%), task-based brainstorming activities (61%) and group work where students evaluated AI-generated texts together (54%). Rather than replacing traditional teaching, these strategies integrate ChatGPT to enrich classroom interaction, promote critical thinking and sharpen students' awareness of language. Notably, teachers who had received training in AI technologies were more likely to experiment with a broader range of methods (x^2 =8.42, p< .05) proving that teachers' professional development leads to more effective and engaging classroom practices.

However, these innovations are not unfolding independently of factors such as teacher training and institutional support. Teachers repeatedly stressed the necessity of targeted training and professional development, to ensure acquiring not only knowledge of how to operate AI technologies but also to understand how to implement them appropriately within pedagogical frameworks, assessment and instructional planning. More specifically, teachers showed preference towards hands-on learning (82%), more collaborative alternatives such as peer learning (69%) and shared ready-to-use lesson materials (63%). These data indicate a shift in professional learning culture towards a collaborative environment where teachers learn by doing and exchanging ideas. It also worthwhile to mention that those educators who considered insufficient training as a problem were more hesitant towards adopting AI in their teaching repertoire, underscoring the fact that successful educational breakthrough requires technological access, time, support and space for educators to grow into these roles with confidence.

To recapitulate, the results show that ChatGPT is not only a technological innovation. Findings prove that there is a change regarding the way FL educators view instruction, learners' autonomy and digital skills.Thischange is not consistent, though, as some educators are already experimenting with innovative ways in order to incorporate AI into their teaching while others showreluctance due to uncertainty, lack of training or institutional constraints. According to the aforementioned,ongoing professional development, sufficient technology infrastructure and a space that allows both educators and students to truly engage with each other's perspectives can contribute to a meaningful integration of AI. Therefore, more comprehensive assistance to educators might guarantee that ChatGPT develops into a useful tool for language learning.

6. Pedagogical and Institutional Implications

The findings of the present study pinpoint a number of pedagogical and institutional implications that provide meaningful insights into integrating AI technologies in foreign language education. One of the most significant implications is the urgency to endow teachers with the necessary skills and confidence in order to ensure a meaningful implementation of AI tools such as ChatGPT. As mentioned earlier,the statistically significant relationship between teachers' digital confidence and their using ChatGPT stresses the need to proceed with developing their digital literacy skills. More importantly, programmes that do not only focus on tool familiarisation and are based on a curriculum geared towards lesson planning, assessment integration and ethical use of AI technologiesare likely to lead to greater and meaningful integration.

Additionally, teacher training should promote reflective practice, offering examples of how tools like ChatGPT can support learner autonomy, critical thinking and creativity. A significant number of educators are already exploring this aspect proving that they are combining innovation with sound pedagogical principles. To this end suchstrategies can be systematised and disseminated through communities of practice, encouraging true pedagogical innovation. From an institutional perspective, it is imperative that teachers, schools and authorities take a proactive role in supporting AI integration. More specifically, it is necessary that clear policies and ethical guidelines of AI use are formulated. In this context, it can be inferred thatthose institutions that tend to prioritize teachers while giving them space and time andpromote collaborative decision-making are more likely to adopt AI technologies in a meaningful and effective way.

Finally, with a large number of students using ChatGPT on their own, it is imperative that institutions consider connecting in-school and out-of-school learning by building policies that are flexible and focus on students.

7. Limitations and Recommendations for Future Research

Despite the fact that the present study provides valuable insights into how teachers are engaging with ChatGPT in foreign language education it is significant to acknowledge its limitations. Initially, though diverse in terms of linguistic and institutional backgrounds, the size of the sample participating in the survey was relatively small-116 FL teachers- and recruitment was through social media. This means that the findings might not reflect the experiences of all educational settings, in particular those where access to technology is limited or cultural attitudes towards AI technologies vary.

Second, another limitation that needs to be considered is the fact that the survey relies solely on quantitative data collected through close-ended questions. Although this approach allows for conducting statistical analysis, it does not provide the opportunity for capturing the complexity of teachers' experiences, classroom dynamics or students' outcomes. To this end it is imperative that a mixed methods approach be conducted so as to thoroughly comprehend the pedagogical implications of AI usage through interviews and classroom observations. Furthermore, though the study examined teachers' reflections on student use of ChatGPT it did not directly collect data from students themselves. Therefore, it is considered necessary that student perspective be taken into consideration in identifying shifts in teaching methodology and student achievement.

Finally, another limitation is the fact that the study focused only on ChatGPT. Since the field of educational AI expands rapidly, it is considered important that other tools and platforms be explored and compared along with their advantages and challenges. It is worthwhile to mention that long-term studies could contribute to determining how AI implementation affects both teaching practices and students' outcomes.

To recapitulate, ongoing research is essential to the development of an evidence-informed framework that supports the effective and ethical implementation of AI technologies in foreign language education.It is significant that the present research takes into consideration not only the ethical limitations and challenges that arise but also the opportunities that AI technologies offer in an attempt to ensure effective and meaningful learning for all.

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