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Assessing the use of ChatGPT for corrective feedback provision in EFL education in the FWB:

A focus on teachers' and students' perspectives.

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Table of contents

1	CHAPTER 1: Introduction	8
1.1	Background to the study	8
1.2	Purpose of the study	8
1.3	Research structure	9
2	CHAPTER 2: Theoretical introduction – State of the art	10
2.1	Corrective Feedback (CF) in Language Learning	10
2.1.1	Types of CF.....	10
2.1.2	Effectiveness of CF	11
2.1.3	Technology-Mediated CF	11
2.1.4	Implications for Teaching	12
2.2	Artificial intelligence:	12
2.2.1	History and definition:	12
2.2.2	Artificial Intelligence and education.....	13
2.2.3	AI Chatbots:	14
2.3	ChatGPT an overview:.....	15
2.3.1	ChatGPT in EFL education:.....	15
2.3.2	Review of some of the benefits of the use of ChatGPT in EFL education.....	17
2.3.2.1	Individualised learning paths	17
2.3.2.2	Motivation and engagement:.....	17
2.3.2.3	Lessen teacher workload.....	19
2.3.3	Review of some of the drawbacks of the use of ChatGPT in EFL education .	19
2.3.3.1	Plagiarism and reliability:	19
2.3.3.2	Ethical issues and privacy	21
2.3.4	Recommendations of use for ChatGPT in EFL education.....	21
2.4	Artificial intelligence in the Belgian (FWB) educational system.....	22
2.4.1	Current state of AI in Belgian education	22
2.4.2	Opportunities and limitations.....	24
2.4.3	Conclusion	24
3	CHAPTER 3: Data and methodology.....	25
3.1	Objectives of the research:.....	25
3.2	Research design	26
3.3	Methodology	26
3.3.1	Data and methodological approach.....	26
3.3.2	Evolution of the methodology	27
3.3.3	Qualitative Data: Teacher Interviews	28

3.3.3.1	Teacher selection:	28
3.3.3.2	Selection of the analysed texts:.....	29
3.3.3.3	Prompt research:	30
3.3.4	Quantitative data: student TAM questionnaire	32
3.3.4.1	Student selection process	33
3.3.5	Procedure for teachers and students.....	33
3.3.5.1	Teacher interviews	33
3.3.5.1.1	Interview questions:	34
3.3.5.1.2	Objectives and insights	35
3.3.5.2	Student surveys	35
3.3.5.2.1	TAM survey questions:.....	35
3.3.5.2.2	Objectives and insights	36
3.3.6	Analytical methods	37
3.3.6.1	Qualitative analysis	37
3.3.6.1.1	Interviews with teachers	37
3.3.6.1.2	Open-ended questions from student surveys	38
3.3.6.1.3	TAM questionnaire for students	38
3.3.6.2	Comparative analysis	38
3.3.7	Tools and software.....	39
3.3.7.1	Data collection tools	39
3.3.7.2	Transcription software	39
3.3.7.3	Data analysis software	39
3.3.7.4	Summary	39
3.4	Ethical considerations	40
3.5	Limitations of the research.....	40
4	Data analysis and results.....	41
4.1	Introduction.....	41
4.2	Overview of the data:.....	42
4.2.1	Students:.....	42
4.2.2	Teachers:	43
4.3	Current use of AI tools.....	43
4.3.1	Teachers:	43
4.3.2	Students:.....	45
4.4	Perceived benefits	46
4.4.1	Efficiency.....	46
4.4.1.1	Teachers	46

4.4.1.1.1	Prior to ChatGPT corrective feedback on the three different proficiency levels:	47
4.4.1.1.2	After ChatGPT corrective feedback on the three different proficiency levels:	47
4.4.1.2	Students:	48
4.4.2	Timesaving:	50
4.4.2.1	teachers	51
4.4.2.1.1	Conclusion on teachers' perceptions:	52
4.4.2.2	Students:	52
4.4.2.2.1	Conclusion on students' opinions on the use of AI for CF:	59
4.4.3	Student autonomy	59
4.4.4	Personalisation and adaptivity	60
4.4.4.1	Teachers	61
4.4.4.2	Students	61
4.5	Potential drawbacks	67
4.5.1	Challenges of implementation	67
4.5.2	Over-reliance:	68
4.5.2.1	Students	68
4.5.3	Accuracy concerns	71
4.5.3.1	Teachers	71
4.5.3.2	Students	72
4.5.3.3	Summary of accuracy concerns	73
4.5.4	Ethical concerns	73
4.5.4.1	Students	74
4.5.4.2	Teachers	75
4.6	Teacher's role and training	75
4.7	Future integration:	77
4.7.1	For teachers	77
4.7.2	For teachers and students	77
4.7.3	Conclusion on future integration	79
4.8	Summary of the results	79
4.8.1	Overview of the data	79
4.8.2	Current use of AI tools	79
4.8.3	Perceived benefits	80
4.8.4	Potential drawbacks	81
4.8.5	Teacher's role and training	81
4.8.6	Future integration	81

5	CHAPTER 5: Conclusion.....	83
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List of abbreviations

AI	Artificial Intelligence
AES	Automated Essay Scoring
AWE	Automated Writing Evaluation
CF	Corrective Feedback
EFL	English as a Foreign Language
FWB	Fédération Wallonie-Bruxelles
GenAI	Generative Artificial Intelligence
GPT(s)	Generative Pre-trained Transformer(s)
LLM	Large Language Model
ML	Machine Learning
NLP	Natural Language Processing
TAM	Technology Acceptance Model
WCF	Written Corrective Feedback

1 CHAPTER 1: Introduction

1.1 Background to the study

The incorporation of technology in education has profoundly transformed multiple facets of teaching and learning. An important development in language teaching is the utilisation of Artificial Intelligence (AI), specifically for the purpose of delivering corrective feedback (CF). Corrective feedback plays a vital role in language acquisition by assisting students in recognising and rectifying errors, hence improving their linguistic competence. Historically, CF has been imparted by educators through written or verbal feedback. Nevertheless, the growing number of students in each class and their varying levels of skill have posed a difficulty for teachers in delivering tailored feedback to individual pupils. Within this particular environment, artificial intelligence (AI) techniques like ChatGPT have arisen as potentially viable remedies for these difficulties. ChatGPT, an AI system created by OpenAI, utilises sophisticated natural language processing (NLP) methods to deliver immediate and comprehensive evaluations of written texts. The tool's capacity to provide constant and instantaneous feedback renders it a significant asset for both students and teachers in the EFL classroom. Nevertheless, despite its potential, the efficacy of AI-facilitated CF remains inadequately investigated, from both educators and learners.

1.2 Purpose of the study

The main objective of this study is to investigate the perceived benefits and drawbacks of utilising AI tools, notably ChatGPT, for delivering corrective feedback in English as a Foreign Language (EFL) teaching. This research aims to gain insight into the opportunities and limitations of incorporating ChatGPT as a computer-assisted language learning tool in EFL classes by evaluating the perspectives of both secondary school teachers and students regarding its usefulness. The study seeks to achieve its goals by examining the following questions:

1. **RQ1:** What are the perceived advantages and limitations of GenAI (ChatGPT) for CF from both teachers' and students' perspectives?
2. **RQ2:** How does the implementation of GenAI (ChatGPT) for CF affect teachers' workload and instructional practices?

This research is contemporary and important due to the increasing interest in the utilisation of artificial intelligence (AI) in education. It also fills a void in current academic research by specifically examining the practical consequences of AI-facilitated corrective feedback in actual classroom environments. Moreover, this study seeks to offer significant insights on the advantages and disadvantages of ChatGPT from several viewpoints, with the goal of informing future uses of AI in language education.

1.3 **Research structure**

This thesis is organised into two main components. The initial section introduces the theoretical framework and discusses the previously indicated research questions (RQ1 and RQ2). Prior to addressing these enquiries, the investigation explores the notion of corrective feedback, several categories of CF, and the function of technology in dispensing CF. This section provides a thorough analysis of the advantages and difficulties associated with utilising AI technologies such as ChatGPT for computer-based feedback (CF) in English as a Foreign Language (EFL) education. It offers a detailed summary of the current body of research on this topic.

The second section of the thesis includes the applied component of the study. The text presents the study analyses of the quantitative and qualitative data obtained through surveys and interviews. This section is dedicated to examining the feedback provided by instructors and students regarding their experiences and perspectives of utilising ChatGPT for CF. The results of this analysis are subsequently examined in connection with the research enquiries, offering valuable insights into the practical consequences and/or usages of AI-facilitated computer-aided learning in English as a Foreign Language classrooms.

The thesis finishes by providing a concise overview of the main findings, an analysis of the study's constraints, and recommendations for further investigations. The present work also seeks to add to the ongoing discussion on the integration of technology in education and its impact on teaching and learning practices by examining the practical applications and potential obstacles of employing AI tools like ChatGPT for CF in language education.

2 CHAPTER 2: Theoretical introduction – State of the art

Providing an in-depth theoretical overview and current state of the art for ChatGPT application in EFL instruction, this chapter focusses on corrective feedback. The notion of corrective feedback (CF) in language learning is first examined in this chapter, along with its various applications, efficacy, and educational consequences. Subsequently, the chapter delves into the wider framework of Artificial Intelligence (AI), providing a synopsis of its history, terminology, and an elucidation of its function in education, specifically within the EFL setting. After that, the topic of AI chatbots is discussed, with a particular emphasis on ChatGPT and its uses, advantages, and difficulties in educational environments. The chapter ends with a review of AI's current status in the Belgian educational system, focussing on Fédération Wallonie-Bruxelles (FWB) schools. This analysis covers the advantages, disadvantages, and potential future directions of AI integration in EFL instruction.

2.1 Corrective Feedback (CF) in Language Learning

Corrective feedback (CF) is an essential element of language learning, aiming to help learners recognise and correct errors in their language use. CF can be direct or indirect, focused or unfocused, and can be delivered orally or in writing (Ellis, 2009). In the context of language teaching, CF is vital as it provides learners with the necessary guidance to improve their linguistic accuracy and fluency. Ellis, Loewen, and Erlam (2006) define CF as responses to learner utterances that contain errors, which can involve indicating an error, providing the correct form, or offering metalinguistic information about the error. The effectiveness of CF has been a subject of intense academic interest due to its practical implications for pedagogy and its role in validating theoretical claims about language acquisition (Ellis, 2013).

2.1.1 Types of CF

Corrective feedback (CF) in language acquisition can be classified into two primary categories: oral corrective feedback (OCF) and written corrective feedback (WCF) (Meunier & Muñoz, 2022). Lyster & Ranta (1997) define OCF as a set of techniques that encompass explicit corrections, recasts, clarification requests, metalinguistic hints, elicitations, and repeats. On the other hand, WCF, as mentioned by Meunier and Muñoz (2022), consists of written comments on students' work, which can either be direct, where errors are explicitly corrected, or indirect, and highlighted for students to self-correct. WCF tends to be more

detailed and explicit, often incorporating metalinguistic explanations and thorough corrections. In contrast, OCF can be immediate or delayed and is typically more conversational or instructional in nature (Meunier & Muñoz, 2022).

Beyond these traditional types of feedback, a newer form of CF has emerged: technology-mediated corrective feedback. Heift et al. (2021), as cited in Meunier and Muñoz (2022), explore how this digital feedback focuses primarily on aspects like spelling, grammar, writing, and pronunciation. This feedback can either be facilitated by teachers using digital tools or provided entirely by automated language correction software. Although there has been notable advancement in recent years, these tools are still in the process of development and have not yet achieved their maximum capabilities (Heift et al., 2021, as referenced in Meunier & Muñoz, 2022). Heift et al. (2021) also emphasise the necessity for further investigation into the long-term efficacy of this feedback approach, and they underscore the crucial role of language instructors in educating students on the proper utilisation and comprehension of these tools (Heift et al., 2021, as cited in Meunier & Muñoz, 2022).

2.1.2 **Effectiveness of CF**

The efficacy of corrective feedback (CF) has been a subject of discussion in language learning research. Truscott (1996) strongly opposed the practice of correcting grammar in second-language writing courses, asserting that it had little or no impact. However, later studies presented a more nuanced view. For instance, Hartshorn et al. (2010) found that dynamic written corrective feedback (WCF) improved accuracy, though it came with a slight trade-off in fluency and complexity. In contrast, Van Beuningen et al. (2012) demonstrated that both direct and indirect comprehensive CF could enhance accuracy without adversely affecting complexity or fluency. More recent research, like the studies by Thi and Nikolov (2023) and Ajabshir and Ebadi (2023), continues to study the impacts of CF on different aspects of language performance. These findings suggest that while CF can be effective in improving accuracy, its influence on fluency and complexity is context-dependent and varies according to the type of feedback used.

2.1.3 **Technology-Mediated CF**

In her study, Lundberg (2023) highlights how AI-powered tools have opened up new possibilities for corrective feedback. Automated Essay Scoring (AES) systems and AI Writing

Evaluation (AWE) tools provide flexible solutions for offering feedback (Lundberg, 2023). Research by Gayed et al. (2022) and Ajabshir and Ebadi (2023) has shown that these tools can be effective in enhancing lexical diversity and fluency. However, as Lundberg (2023) points out, while AI tools offer the benefit of immediate and consistent feedback, they need to be thoughtfully integrated with traditional teaching methods to be truly effective.

2.1.4 **Implications for teaching**

Teachers play a crucial role in delivering CF, balancing between providing comprehensive corrections and encouraging learner autonomy. The effectiveness of CF depends not only on the accuracy of the corrections but also on **how feedback is delivered** and perceived by students (Ellis, 2013). Studies highlight the importance of making feedback supportive and non-judgmental to maximise its positive impact on learning (Ellis, 2013, as cited in Meunier & Muñoz, 2022). Given the varied outcomes in studies on CF, a hybrid approach that combines AI-mediated and teacher-mediated feedback might be a practical solution. AI can manage routine error corrections, allowing teachers to dedicate more time to complex aspects of language teaching and personalised guidance.

2.2 **Artificial intelligence:**

Artificial Intelligence (AI) is a vast and intricate field. The objective of this section is to provide a concise and comprehensible explanation of AI, while avoiding excessive focus on technical or mathematical details.

2.2.1 **History and definition:**

AI has its roots in Vannevar Bush's 1945 vision of a means of advancing human knowledge (Antebi, 2021). In his 1950 article, Alan Turing delved into the notion of machines imitating human behaviours and carrying out cognitive activities, such as playing chess (Antebi, 2021). John McCarthy, a prominent figure in cognitive science, coined the phrase “artificial intelligence” (AI) and subsequently organised the inaugural AI conference in 1956. Marvin Lee Minsky, a prominent player in the field of AI research, provided a commonly acknowledged definition of AI as "the scientific discipline focused on enabling machines to perform tasks that would necessitate intelligence if carried out by humans" (Minsky, 1968).

As AI research progressed, various definitions emerged. Minsky's definition, while influential, is considered by some to be overly simplistic. Russell and Norvig (2009) provide a broader view, defining AI as “non-human intelligence measured by its ability to replicate human cognitive skills”. These skills encompass pattern recognition, natural language processing (NLP), adaptive learning from experience, strategic thinking, and reasoning about others (De Spiegeleire et al., 2017).

Moreover, Adiguzel and colleagues (2023) stress that AI is not inherently intelligent; rather, it performs tasks typically associated with intelligence to varying degrees of success (Chiu et al., 2022; Mertala et al., 2022). For instance, while AI can distinguish between a car and a rainbow, it doesn't truly understand what those objects are (Adiguzel et al., 2023). Zhang (2023) highlights that AI operates based on algorithms and big data, creating systems that mimic human intelligence through these processes (Dwivedi, 2021). For those seeking a more comprehensive overview, we recommend reading Daniel Faggella's article, “What is artificial intelligence? An informed definition,” which provides an in-depth discussion of the definition of AI.

2.2.2 Artificial Intelligence and education

The integration of AI technologies in education, particularly within language curricula, is believed to enhance instructional effectiveness and accelerate language learning outcomes, given the promising capabilities these models offer (Godwin-Jones, 2022). In evaluating these tools, Godwin-Jones (2022) also emphasises the complementary relationship between pedagogy and technology in language acquisition, advocating for a collaborative approach where human instructors work alongside AI tools. Similarly, researchers like Carvalho et al. (2022), Hellmich and Vinall (2021), Pellet and Myers (2022), and Vinall and Hellmich (2022) acknowledge the expanding role of AI in language-related activities. They stress the importance of teachers adapting to this new landscape by guiding students effectively. These scholars highlight that having knowledgeable teachers as intermediaries between students and digital tools is essential, not optional. As Pellet and Myers (2022) point out, a teacher's presence is crucial to help students navigate the benefits and limitations of these resources.

2.2.3 AI Chatbots:

The chatbot system is an increasingly used AI technology in education. A chatbot operates as a smart agent, engaging with users by answering their questions and delivering pertinent information (Clarizia et al., 2018). These systems mimic human conversation, allowing users to interact with digital devices in a way that feels almost like talking to another person (Ciechanowski, 2019). Chatbot creation strongly depends on Natural Language Processing (NLP), an artificial intelligence (AI) field that empowers machines to understand, analyse, and interpret human language (Adiguzel et al., 2023).

Natural Language Processing (NLP) is crucial in developing efficient chatbots and other artificial intelligence (AI) technologies for educational purposes. It enables these systems to analyse and provide relevant responses to extensive amounts of text (Adiguzel et al., 2023). This technology is essential for making AI applications more responsive and capable of engaging students in a natural and interactive learning environment.

Figure 1: Chatbots mode of operation

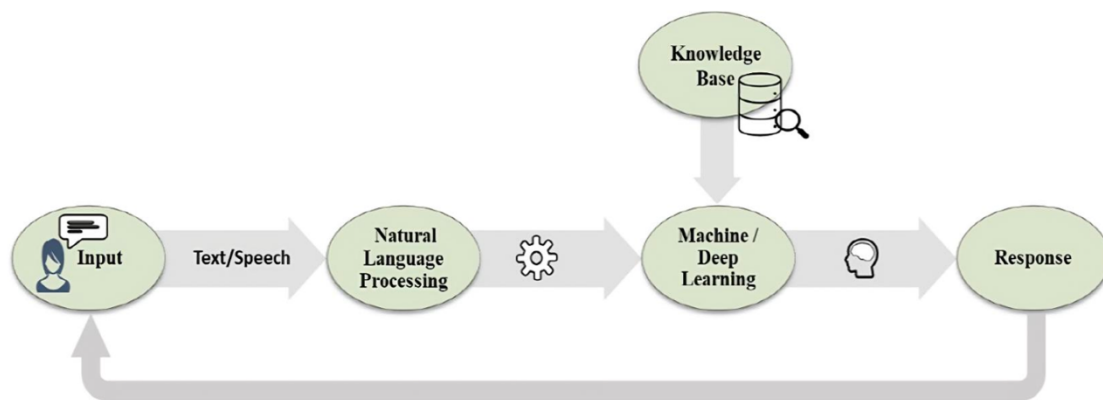


Figure 1. Adopted from Adiguzel, T., Kaya, M. H., & Cansu, F. K. (2023) (Aleedy et al., 2022, p. 662)

Figure 1 depicts the process by which an artificial intelligence Chatbot analyses and reacts to input, such as written or spoken language from a pupil. The procedure commences with Natural Language Processing (NLP), which decrypts and comprehends the student's input. The AI use machine learning to analyse information, acquire knowledge from it, and autonomously generate responses (Antebi, 2021). Deep learning is a kind of machine learning that utilises artificial neural networks, which are algorithms designed to mimic the functioning of the human brain. According to Antebi (2021), these neural networks are specifically

designed to imitate the cognitive processes of the human brain. Both machine learning and deep learning depend on a knowledge foundation or datasets to operate efficiently. This sequence allows the AI to provide a response to the original input. Due to the thesis's focus on other issues, we cannot explore the technical details of these processes in this context. To gain a more comprehensive understanding, I suggest reading Antebi's (2021) "Fields of Artificial Intelligence" in the book "Artificial Intelligence and National Security in Israel" (pp. 41-46). This source provides a detailed examination of the subject matter.

2.3 ChatGPT an overview:

Education is only one of the many fields that artificial intelligence (AI) has profoundly affected. Chatbots, specifically ChatGPT, have demonstrated significant promise in revolutionising educational methods among various AI technologies. ChatGPT, an advanced machine learning software created by OpenAI, employs the Generative Pre-trained Transformer (GPT) algorithm to produce text-based responses that closely resemble human language (Adiguzel et al., 2023).

Introduced in November 2022, ChatGPT is a sophisticated large language model (LLM) that can comprehend and produce writing that resembles that of a human, making it an invaluable resource for language acquisition. It has been trained on extensive database, including articles, websites, books, and written conversations. However, it should be noted that OpenAI has not yet revealed what precisely constitutes the database (Gans, 2023). The availability of those datasets enabled the system to carry out various tasks including language translation, text summarisation, question answering, creative writing, and code production (Adiguzel et al., 2023). Released in March 2023, the most recent version of ChatGPT, known as ChatGPT-4, provides improved functionalities such as stronger natural language processing and reasoning ability across several areas (OpenAI, 2023).

2.3.1 ChatGPT in EFL education:

The use of ChatGPT in English as a Foreign Language (EFL) education has been generating a lot of interest lately. As highlighted by Adiguzel et al. (2023), ChatGPT can offer personalised learning, provide instant feedback, and boost student engagement. It has already being integrated into education through tools like intelligent tutoring systems, automated grading,

and customised learning platforms. In this section, we will dive into how ChatGPT is being used in education, particularly in EFL classrooms. We will also take a closer look at the benefits and challenges that come with bringing ChatGPT into the educational system.

Several studies have demonstrated that using Generative AI technologies, like ChatGPT, can significantly **reduce teacher workload**. Generative AI (GenAI) refers to a set of machine learning algorithms designed to create new data samples that closely mimic existing datasets (Chan & Hu, 2023). These models, such as ChatGPT, Bard, Stable Diffusion, and DALL-E, can generate text, images, sounds, videos, and even code. Their ability to handle complex prompts and produce human-like responses has sparked interest in integrating GenAI across various fields (Chan & Hu, 2023).

For instance, Guo and Wang (2023) conducted a mixed-method study in which they used both qualitative and quantitative methodologies to compare the feedback provided by ChatGPT with the feedback provided by teachers on students' argumentative writing. Their research highlighted that GenAI technologies (ChatGPT) were able to deliver a significantly greater amount of feedback in a shorter duration when compared to teachers. While ChatGPT provided quick responses, teachers generally devoted a considerably longer amount of time to assessing student essays. In their study, Guo and Wang (2023) explain that *Teacher M* spent a total of 305 minutes providing feedback on 10 essays, spending on average around 30 minutes on each essay (Guo, K., Wang, D. 2023). Likewise, Mohamed (2024) underlined the capacity of ChatGPT to augment the effectiveness of EFL instructors (Mohamed, 2024). In his study, the author conducted comprehensive interviews with ten EFL teachers, one of whom, *Teacher I*, praised ChatGPT as a potent instrument for language evaluation and feedback provision tool. He asserts that **ChatGPT increases teachers' efficiency by delivering precise and prompt feedback to students, thus saving time and effort** (Mohamed, 2024). These results indicate that the feedback provided by GenAI tools can provide a notable advantage in terms of lessening the teacher workload (Mohamed, 2024).

Additionally, using GenAI as a feedback tool is believed to have the potential to improve **student motivation and competency**. Mohamed (2024) found that teachers perceive ChatGPT's accurate and prompt feedback as a means to improve student engagement and motivation (Mohamed, A.M., 2024). Although a majority of the teachers interviewed see GenAI feedback favorably, some hold opposing opinions. As explained by the author, several EFL teachers voiced apprehensions about **excessive dependence** on ChatGPT. They stated

concerns that such reliance could undermine the significance **of human connections** in language acquisition (Mohamed, A.M. 2024). Comparably, Guo and Wang's research also reflects negative attitudes toward ChatGPT's comments. EFL teachers have cited problems, such as **lengthy feedback**, which is difficult for less advanced students to understand (Guo, K., Wang, D., 2023).

2.3.2 Review of some of the benefits of the use of ChatGPT in EFL education

2.3.2.1 *Individualised learning paths*

AI tools like ChatGPT can create **individualised learning paths**, tailored to students' unique needs. Both Brown & al. (2020) and Cunningham-Nelson et al. (2019), argue that this personalised approach can boost student motivation and engagement, resulting in better learning outcomes. One of the key ways these tools achieve this is by providing instant feedback. ChatGPT's natural language processing (NLP) capabilities make it an effective tool in providing tailored feedback, which, as mentioned in Chiu et al., (2023a) is essential for fostering self-reflection and promoting self-directed learning.

Llorente et al. (2021) and Zhang et al. (2020) share the belief that technologies like ChatGPT can assist students in their own areas of strength and weakness by providing a customised learning experience. AI solutions like ChatGPT are thought to offer customised feedback on written assignments, which is expected to enhance students' learning process (Chiu et al., 2023a). ChatGPT has the potential to enhance student motivation by providing a learning environment that is more captivating and dynamic (Adiguzel et al., 2023). It should be noted that there exist other alternative tools for feedback provision; however, they will not be covered in this dissertation as we focus mainly on ChatGPT.

2.3.2.2 *Motivation and engagement:*

In their research, Karataş et al. (2024), conducted a qualitative case study involving 13 preparatory class students in Turkey. Their goal was to explore the effects of ChatGPT on students in depth. During a period of four weeks, students utilised ChatGPT in their language sessions, and the outcomes shown significant enhancements in their learning experiences

(Karataş et al., 2024). Students attested to the efficacy of ChatGPT in improving their writing abilities, as it offered valuable insights on grammar and facilitated the enrichment of their vocabulary. According to the author, the tool's interactive aspect enhanced engagement and recall of new vocabulary and grammar. A student emphasised the simplicity of acquiring new vocabulary within a specific situation, which enhances their retention (Karataş et al., 2024). As reported by the participants, the utilisation of ChatGPT had a good influence on their motivation and engagement. The tool's capacity to deliver immediate feedback and generate interactive learning experiences was highly appreciated. Students found the learning **process more engaging**, which in turn enhanced their **motivation** to participate in language activities (Karataş et al., 2024). Besides, students report that ChatGPT's application extended beyond traditional language learning, fostering creative and cultural learning experiences. Students used the tool for various activities like creating stories, exploring cultural topics, and engaging in creative writing exercises (Karataş et al., 2024). According to Karataş et al. (2024), students stated that engaging in these activities not only enhanced their enjoyment of the learning process but also deepened their cultural comprehension and inventiveness.

Chan and Hu (2023) performed a survey of 399 undergraduate and postgraduate students from different fields in Hong Kong to investigate their views and usage of ChatGPT. The authors of the research acknowledge the various advantages provided by ChatGPT (as well as other GenAI technologies). Students acknowledge the potential of the tool for providing personalised learning support, aiding in writing, and facilitating research. The author states that ChatGPT can function as a virtual tutor, offering customised and prompt answers to students' enquiries. This capability has the potential to improve their comprehension and memory of the subject matter (Chan & Hu, 2023). According to Chan & Hu (2023), the ChatGPT application has the ability to assist students in generating ideas, enhancing their writing abilities, and offering comments on their work. As Chan and Hu (2023) note, this is considered highly beneficial for individuals who are not native English speakers. Another benefit highlighted in the study is the ability of ChatGPT to facilitate literature searching, summarise readings, and generate hypotheses. Providing students with additional help in their research activities (Chan & Hu, 2023). Similarly, Mohamed (2024) states that ChatGPT can significantly enhance EFL learning by providing personalised and interactive language practice. According to Mohamed, those practices can help students develop their conversational skills and increase their confidence in using English. On top of providing swift feedback, it provides ample

opportunities for language exposure and practice, regardless of students' location or schedule (Mohamed, 2024).

2.3.2.3 Lessen teacher workload

As discussed earlier, Guo and Wang (2023) and Mohamed (2024) demonstrated that ChatGPT can significantly reduce the time teachers spend grading and providing feedback. Their research showed that ChatGPT not only delivers more feedback in less time but also helps make the overall feedback process more efficient for EFL teachers. Given these findings, integrating ChatGPT into the classroom could help **lighten teachers' workloads**, allowing them to focus more on other important aspects of teaching, such as crafting innovative lesson plans, engaging in professional development, and offering personalised coaching to students (Grassini, 2023).

Building on this, Grassini's study highlights ChatGPT's potential to automate the **grading process** further. She suggests that ChatGPT could be used to semi-automate the grading process for students' work by discerning the strengths and weaknesses within a given task. Those tasks could consist of research articles, academic essays, or other forms of written coursework. In this context, educators can adapt the reports generated by such a model to deliver beneficial **feedback** to students, whether in formative or summative assessment scenarios (Grassini, 2023). Additionally, ChatGPT can offer a more precise evaluation of students' learning challenges and progress, helping teachers pinpoint areas where students struggle and target interventions more effectively (Grassini, 2023). Grassini also notes that the potential of AI tools extends beyond grading and assessment; they can also be utilised for translating educational materials and fostering interactive learning environments. For instance, GPT-4 has shown high proficiency in translation tasks, improving on previous solutions, and further advancing the capabilities of AI in education (Grassini, 2023).

2.3.3 Review of some of the drawbacks of the use of ChatGPT in EFL education

2.3.3.1 Plagiarism and reliability:

While students generally noted the positive aspects of using ChatGPT, some pointed out technical issues and suggested that the tool could benefit from improvements in this area.

In addition, concerns were raised about becoming too dependent on such tools. One student expressed a fear that over-reliance could lead to a decline in their English skills, saying, *“I am afraid I will get used to it too much and my English will deteriorate.”* (Karataş et al., 2024). Some students also highlighted misuse risk during assignments or exams. This issue is echoed by Chan & Hu (2023), who emphasise that an over-dependence on AI tools like ChatGPT could inhibit the development of critical thinking, creativity, and other essential skills. Some students also fear that relying too heavily on AI could negatively affect job prospects and undermine human values (Chan & Hu, 2023). Karataş et al. (2024) also note that students are calling for technical improvements and greater accessibility, as some experienced functionality issues due to high traffic. Additionally, as highlighted in Karataş et al. (2024), ethical concerns were raised, particularly around the potential **plagiarism** and the **reliability of AI-generated content**.

As Grassini (2023) mentions, the rise of AI writing tools has brought the issue of student **plagiarism** to the forefront of educational institutions. The misuse of content generated by AI, without proper citation, poses significant ethical concerns and threatens the integrity of the academic process. Despite efforts to mitigate this, recent studies show that sophisticated AI models like ChatGPT can bypass plagiarism detectors, creating content that appears entirely original (Grassini, 2023). What is even more concerning is that these detectors, designed to identify AI-generated text, are not always reliable and sometimes fail to flag such content (Grassini, 2023). This inconsistency makes it even harder to detect plagiarism, adding another layer of complexity to the issue (Grassini, 2023). As AI technology continues to advance, this challenge is likely to become even more pronounced. With each new generation of AI models, the detection of AI-generated content will become increasingly difficult, necessitating the development of more sophisticated detection tools (Grassini, 2023).

Grassini (2023) also highlights a significant limitation of ChatGPT: it is trained on a vast amount of raw, unfiltered data, which may not always be objective and can sometimes include **inaccuracies**. Its knowledge is also restricted to information available before 2021, meaning there's an inherent delay between the creation of new information and its inclusion in the model. This makes ChatGPT's responses potentially unreliable, especially for specialised subjects or recent events. Moreover, there are instances where ChatGPT has generated incorrect or even fabricated information, a problem frequently reported by both users and researchers. This issue, often referred to as '**AI Hallucinations**,' poses a real challenge for

students who rely on ChatGPT to support their learning (Grassini, 2023). Although improvements are expected with newer versions like GPT-4, which reportedly shows fewer hallucinations, the risk of inaccuracy still persists (Grassini, 2023). What is more, Chan & Hu (2023) discovered that students contacted in their study expressed apprehension over the dependability of AI-generated content. They observed that ChatGPT occasionally generates misleading or inaccurate information. In addition to the possibility of mistakes, the study conducted by Chan & Hu (2023) also highlighted problems surrounding privacy, particularly with regards to the use of personal data.

2.3.3.2 *Ethical issues and privacy*

A research conducted at Northern Border University examined the perceptions of EFL faculty members regarding the efficacy of ChatGPT in facilitating the acquisition of English language skills (Mohamed, 2024). The results unveiled a variety of viewpoints: although certain faculty members valued the tool for its capacity to deliver prompt and precise responses, others voiced apprehensions over its possible disadvantages. Concerns were raised about the potential negative impact of depending on ChatGPT on the cultivation of **critical thinking** and **research abilities**, as well as the possibility of disseminating **disinformation** (Mohamed, 2024). Mohamed (2024) examines the difficulties linked to the utilisation of ChatGPT in educational environments, considering the aforementioned concerns. To recapitulate, the problems encompass the peril of **imprecise responses**, the **absence of human engagement**, and **ethical considerations** such as apprehensions regarding **privacy**. The author emphasises the significance of equipping educators with enough **training** to effectively handle these matters and calls for the establishment of explicit standards to guarantee the responsible utilisation of AI tools such as ChatGPT in educational settings (Mohamed, 2024).

2.3.4 Recommendations of use for ChatGPT in EFL education

As previously said, incorporating ChatGPT into educational environments offers numerous advantageous outcomes, particularly when employed in conjunction with conventional instructional approaches. According to Mohamed (2024), ChatGPT can improve student engagement and assist in EFL education by offering individualised and interactive learning opportunities. Nevertheless, integrating ChatGPT into the classroom does present certain difficulties. The accuracy and reliability of AI-generated information, potential biases, and ethical considerations such as plagiarism require thorough examination (Grassini, 2023). In

order to tackle these concerns, it is crucial to **provide education to both students and educators** on the ethical use of artificial intelligence in academic environments (Mohamed, 2024). In addition, Grassini (2023) highlights the significance of creating reliable detection mechanisms to identify information generated by artificial intelligence and uphold academic honesty. Successful incorporation of ChatGPT into education necessitates careful planning and explicit protocols (Chan & Hu, 2023). Institutions may guarantee that AI tools such as ChatGPT enhance the learning experience rather than harm it by implementing these suggestions. By utilising the advantages of ChatGPT and effectively addressing its constraints, educators can make the most of this approach (Karataş et al., 2024).

2.4 **Artificial intelligence in the Belgian (FWB) educational system**

The incorporation of Artificial Intelligence (AI) in education is gaining importance, and Belgium's Fédération Wallonie-Bruxelles (FWB) is progressively tackling this issue. This section seeks to investigate the present condition of artificial intelligence (AI) inside the FWB educational framework. It will analyse the plans, initiatives, and gaps that currently exist.

2.4.1 **Current state of AI in Belgian education**

In recent years, the FWB has demonstrated a dedication to integrating digital technologies into its educational system, establishing the foundation for wider adoption of AI. Although there has been notable advancement in developing digital infrastructure, the practical application of AI tools is still in its early phase (Stratégie Numérique, 2019).

Belgium's approach to digital transformation in education is shaped by initiatives like the Stratégie numérique pour l'éducation, which encompasses important projects such as Digital Wallonia and the Plan multimédia. These initiatives have mainly focused on equipping schools with essential digital infrastructure and multimedia resources (Stratégie numérique pour l'éducation, 2019). The Plan multimédia, which started in 1999, has provided multimedia resources to more than 90% of schools in Brussels (Stratégie numérique pour l'éducation, 2019). Launched in 2016, Digital Wallonia has the objective of improving network infrastructure in schools in Wallonia. During its initial phase, it successfully reached 200 schools (Stratégie numérique pour l'éducation, 2019). While these efforts are honourable, they have primarily centred on improving digital connectivity and access, with AI integration still on the horizon.

A central aspect of the *Stratégie Numérique* is the emphasis on integrating digital tools within the core curriculum, starting from early education. This approach emphasises the significance of cultivating digital literacy across all disciplines, regarding it not merely as an additional component but as an essential competency for achieving both academic and professional accomplishments. The plan in secondary school provides a progressive framework to cultivate targeted digital competences that are customised for different educational paths. The implementation of this strategy, which started in 2020, focusses specifically on developing critical digital skills and media literacy (Stratégie numérique pour l'éducation, 2019).

The effective incorporation of digital and AI technology in education is highly dependent on properly equipping instructors. The digital strategy for education presents a comprehensive method for teacher training, which involves integrating digital skills into the initial training of teachers and providing continuous professional development opportunities (Stratégie numérique pour l'éducation, 2019). This approach acknowledges the need of educators having a deep understanding of how to use digital tools and AI in teaching, enabling them to incorporate these technologies into the classroom. Continuous training programs are specifically developed to ensure that educators stay informed about the latest technological breakthroughs. These programs consist of structured modules for online learning, opportunities for blended learning, and efforts for collaboration among peers (Stratégie numérique pour l'éducation, 2019). Although attempts have been made, there is still a deficiency in providing educators with specialised training in AI. This highlights the need for further progress in order to fully use the potential of AI in the FWB educational system.

The *Référentiel de formation manuelle, technique, technologique et numérique* (FMTTN) offers guidance on building technical and digital skills in education, highlighting the importance of critically analysing algorithms, including those used in AI. While it encourages students to explore practical applications of AI and connected devices, it does not quite provide a strong framework for integrating AI into daily classroom activities (FMTTN, 2019). Similarly, the document *L'éducation aux médias dans les référentiels du tronc commun* highlights the importance of media literacy by encouraging critical thinking and active use of digital tools. However, it also falls short of specifically addressing the role of AI, highlighting yet another area where progress is needed (L'éducation aux médias dans les référentiels du tronc commun, 2020).

2.4.2 **Opportunities and limitations**

While the FWB's current strategy offers a solid foundation for future AI integration, the transition towards AI in education remains challenging. The existing digital infrastructure provides a strong basis for incorporating AI, but the absence of AI-specific policies and initiatives is a notable obstacle. Furthermore, as there is a distinct emphasis on improving the digital skills of pupils, it is imperative that teacher training programs adapt to incorporate curriculum relating to artificial intelligence. The implementation of AI also gives rise to ethical considerations, specifically around data privacy and potential biases, as well as the imperative to guarantee fair and equal access to these developing technologies (Stratégie numérique pour l'éducation, 2019; FMTTN, 2019).

2.4.3 **Conclusion**

To summarise, Belgium's educational plan under the FWB has made significant advancements in enhancing digital infrastructure and competences. Nevertheless, the process of completely incorporating AI into the educational system is currently in its early stages. Although the foundation for digital literacy is already set, successfully incorporating AI into education necessitates meticulous planning, policy formulation, and continuous support for teachers. As the FWB further develops its educational strategies, there is a distinct possibility to integrate AI in a manner that improves the learning process while conscientiously tackling the ethical and practical obstacles that come with this technological change (Stratégie numérique pour l'éducation, 2019; FMTTN, 2019). It is important to mention that at the time of writing this dissertation, the study accurately represents the present status of governmental policy concerning the incorporation of AI in education. Nevertheless, these rules are susceptible to modification, and it is conceivable that novel initiatives or revisions may have been implemented by the time this dissertation is perused. It is important to remember this when evaluating the results and consequences of this study.

3 CHAPTER 3: Data and methodology

In this chapter, we will closely examine the research questions, the data we have collected, and the methodology used for our analysis.

3.1 Objectives of the research:

The primary objective of this study is to explore how GenAI tools, specifically ChatGPT, can be implemented for corrective feedback provision within EFL (English as a Foreign Language) education within the Fédération Wallonie-Bruxelles in Belgium. As a future EFL teacher, this research is motivated by a desire to understand how these tools can be effectively integrated into teaching practices, benefiting both teachers and students.

As a future teacher, I have always been passionate about learning new skills, particularly regarding advancements in tools that could enhance teaching. The COVID-19 crisis, which confined us all to our screens, was a challenging time but also a period of significant innovation for educators. It forced teachers to come up with creative ideas to blend online teaching with new digital resources, integrating them into their traditional teaching methods. This experience reinforced the importance of adaptability in education.

Adaptability is crucial for becoming an effective teacher (Collie & Martin, 2016). Collie and Martin (2016) argue that adaptation is an essential skill for effectively handling the changes that occur in our lives. It is important to understand how new technologies, such as Generative AI (GenAI) and particularly ChatGPT, can be utilised to improve the future of education. This study aims to explore the potential of ChatGPT in providing corrective feedback in EFL (English as a Foreign Language) settings. By examining the perspectives of both teachers and students, the study seeks to evaluate the efficacy and practicality of using ChatGPT as a corrective feedback tool in the classroom. The study aims to address the following research questions:

RQ1: What are the perceived advantages and limitations of GenAI (ChatGPT) for corrective feedback from both teachers' and students' perspectives?

RQ2: How does the implementation of GenAI (ChatGPT) for corrective feedback affect teachers' workload and instructional practices?

3.2 **Research design**

For this research, we aimed to gather both teachers' and students' perspectives on GenAI tools for corrective feedback provision. The selected GenAI technology was ChatGPT, due to its accessibility and widespread use. This study employs a sequential mixed-method approach, combining qualitative data from semi-guided in-depth interviews with teachers and quantitative data from a Google Forms survey distributed to secondary school students in Wallonia.

The research approach is driven by the following considerations: understanding how teachers perceive the advantages and limitations of using ChatGPT for corrective feedback and its impact on their workload and instructional practices. As well as evaluating students' experiences and perceptions of receiving corrective feedback from ChatGPT, including their trust in and reliance on the tool.

3.3 **Methodology**

To explore the use of ChatGPT for corrective feedback provision within EFL (English as a Foreign Language) education in Belgium, a sequential mixed-method research approach was adopted. This approach combines both qualitative and quantitative methods to gain a comprehensive understanding of the perspectives of both teachers and students. The mixed-method approach integrates qualitative data from semi-guided in-depth interviews with teachers and quantitative data from an adapted Technology Acceptance Model (TAM) questionnaire distributed to students. This combination allows for a robust analysis of the implementation and impact of GenAI tools (ChatGPT) for corrective feedback provision in educational settings.

3.3.1 **Data and methodological approach**

It is important to note that the data analysed are not exactly the same. The research employs several methods to explain a phenomenon, characterising it as an explanatory study. The methodology follows a sequential mixed-methods approach, involving several steps to explain and understand the phenomenon comprehensively.

Initially, the plan was to conduct TAM questionnaires before and after an in-class activity. However, this approach was adapted to better suit the research context and objectives. The revised methodology revolves around the central research question: “Exploring the potential use of ChatGPT for corrective feedback provision on written production, in English as a Foreign Language (EFL) education in Belgium (FWB): A focus on teachers’ and students’ perspectives”. Each step in the research process contributes uniquely to the overall understanding:

1. **Analysis of student texts with AI:** This step involved using AI tools to provide corrective feedback on student-written texts.
2. **Interviews with teachers:** Semi-guided interviews (based on TAM questionnaire) were conducted to gather teachers' insights and perspectives.
3. **TAM questionnaires for students:** Adapted TAM questionnaires were distributed to students to capture their opinions on AI corrective feedback.

Although the three steps could have been conducted in a different order, the chosen chronology highlights the crossfeed of information between them. The methodology is non-standard and not rigidly defined, which might appear messy but is ecologically valid in this context. The crossfeed between the three steps allows for a circular and holistic understanding of the subject.

3.3.2 Evolution of the methodology

The methodology evolved and was constructed in response to local circumstances. There is a temporal structure as each step occurred in sequence, but the order is not the most crucial aspect. Instead, the focus is on the comprehensive description and discussion of the results to provide the richest possible insights.

In summary, this study adopts an adaptable methodology that combines several steps to examine the topic. The sequential mixed-methods approach, along with the flexible research design, ensures a nuanced understanding of the subject.

3.3.3 Qualitative Data: Teacher Interviews

For the qualitative data, three EFL teachers with varying levels of teaching experience were selected to provide diverse insights into the use of ChatGPT. Semi-guided in-depth interviews were conducted to explore teachers' experiences, perceptions, and challenges regarding the use of ChatGPT for corrective feedback. The interviews focused on:

- Initial perceptions of GenAI tools.
- Practical experiences using Chat GPT for corrective feedback.
- Perceived advantages and limitations of Chat GPT for corrective feedback.
- Impact on workload and instructional practices.

The Interviews were conducted in person or via video conferencing, lasting approximately 30 minutes each. They were recorded with consent and transcribed for analysis. During the interviews, teachers were presented with three student texts of varying proficiency levels that had been analysed by ChatGPT. This allowed teachers to evaluate the tool's effectiveness and adaptability.

3.3.3.1 Teacher selection:

The aim of the study was to conduct a case study with three EFL teachers in Belgium. For comparison, teachers with different teaching experiences were selected:

- Teacher 1 (less than a year of teaching experience)
- Teacher 2 (20 years of teaching experience)
- Teacher 3 (23 years of teaching experience)

Participants	Gender	Grade Level in EFL teaching	Years of experience
T1	Female	Third grade	1
T2	Female	Fourth, Fifth and sixth grade	20
T3	Female	Fourth, Fifth and sixth grade	23

Table 1: Participants characteristics

The study is not representative of all Belgium EFL teaching but is more specific to the selected teachers' experiences. To evaluate teachers' perceptions of Generative AI (GenAI) tools like ChatGPT for feedback provision in English as a Foreign Language (EFL) settings, we conducted semi-guided in-depth interviews with teachers from various schools within the Fédération Wallonie-Bruxelles (FWB). These interviews aimed to assess the efficacy of ChatGPT in providing corrective feedback on student-written texts.

3.3.3.2 Selection of the analysed texts:

Three texts of different proficiency levels were selected for analysis:

- High proficiency level (8.5/10)
- Good proficiency level (7/10)
- Limited proficiency level (6/10)

The written productions were graded using the grading table presented in the Appendix 1. The students' name and information were kept anonymous for the sake of privacy, and consent was asked while selecting the written productions for the analysis.

The decision to select texts from three different proficiency levels was driven by several key objectives. One of the primary goals was to assess ChatGPT's ability to provide appropriate feedback across varying levels of student proficiency. By selecting texts from high, good, and lower proficiency levels, we could evaluate how well ChatGPT adapts its feedback to meet the needs of students at different skill levels. Another important aspect was to determine if the same prompts used with ChatGPT would be effective across different proficiency levels. This analysis helps in understanding whether a single prompt can universally address the feedback requirements of students with varying abilities or if adjustments are necessary. The texts were all produced by students within the same grade and same class, providing a consistent context for the analysis. This consistency is crucial as it reflects the real-world classroom environment where teachers often deal with students of diverse proficiency levels within the same group. In contemporary classrooms, increasing class sizes often result in a broader range of student abilities. This research aimed to explore whether ChatGPT could effectively adapt its feedback to cater to this diversity when using the same prompt. The analysed texts are provided in the Appendix 1 for reference.

a) Writing activity and text selection process

Rather than asking students to write essays, which could induce anxiety and stress, a more engaging and less formal writing activity was designed. The activity was part of a didactic sequence for 5LM1 students, focusing on customs and traditions around the world. At the end of this sequence, students were asked to present a tradition from a randomly assigned country, drawn from a basket. Each group prepared and presented their chosen tradition to the class. After each presentation, classmates could ask questions to the presenting group. Following these presentations, students participated in a free writing activity. They were given 10 minutes to write about the presentations they had seen, inspired by a set of starter questions provided to those needing additional motivation. This task was designed to be informal and stress-free, asking students to write on the topic: “What tradition would you like to participate in and why?” This approach aimed to create a comfortable environment conducive to writing, free from the pressure of grades or formal assessment.

b) Conducting the interviews

During the interviews, teachers reviewed and analysed the selected student texts, which had been processed by ChatGPT for corrective feedback. This analysis was crucial to gauge any changes in the teachers' perceptions of the effectiveness of GenAI tools for providing corrective feedback. By discussing these texts, the interviews allowed teachers to explore the practical applications and limitations of ChatGPT in real classroom settings. This methodology ensured a comprehensive understanding of teachers' perspectives, highlighting the potential and challenges of integrating GenAI tools into EFL teaching practices.

3.3.3.3 Prompt research:

Several research sessions were carried out to establish effective prompts for ChatGPT. A pilot study was conducted before the actual practical analysis to test the prompts, using written texts from 5LM3 Spanish students, leading to the development of clear and precise prompts that improved the accuracy of ChatGPT's feedback. After conducting some research, it has been found out that a clear and precise prompt was needed to get the most efficient answer. Also, the more context one adds to the prompt, the more accurate the answers will be. On the

other hand, it has also been found that using polite structures would have an overall better answer compared to being unpolite. A good example of prompt would be:

A) Context: Hello, I am an EFL teacher, and my students were asked to write a text in English. You are my personal assistant today and will help me analyse the written productions.

Task: Could you please provide corrective feedback on the grammar, punctuation, syntax, and vocabulary in the following passage written by an EFL student? Point out any errors or areas for improvement.

Tell me when you are okay with the information, and I will send you the first text. I'll then send you one text at a time.

In the prompt above, we treat ChatGPT as a human rather than a machine. By greeting it and giving it a specific role (teacher assistant), the AI is more likely to understand the context in which it is being put. Secondly, giving the AI a specific task to complete will make sure that the technology does not do anything that is not wanted. Finally, I have experienced that often, asking it to “digest” the information and tell us when it is ready to receive the input would end up with more accurate feedback. Overall, the prompt could be rephrased in a shorter way without much change in the answer, but it should be kept in mind that during my phase of research I have found greater results by being more polite and precise in my prompts. Here is an example of a shorter prompt that would work as well:

B) Could you provide corrective feedback on the grammar, punctuation, syntax, and vocabulary in the following passage? Point out any errors or areas for improvement.

Although prompting is tremendously important when using AI tools in EFL educational settings, it is not the primary focus of this paper. For those interested in exploring this topic further, several studies provide valuable insights. Neil (2023) offers strategies to enhance ChatGPT prompts, highlighting the significance of effective prompting in achieving desired outcomes. Mollick (2023) discusses methods to use ChatGPT to boost writing skills, emphasising the importance of well-crafted prompts. Additionally, Cook (2023) outlines

essential steps for writing effective prompts for ChatGPT, providing practical advice for obtaining the best results.

3.3.4 **Quantitative data: student TAM questionnaire**

The Technology Acceptance Model (TAM) was used to create a survey using Google Forms. This survey was then distributed to a varied sample of secondary school students from 3rd to 6th grade in Wallonia, Belgium. The questionnaire was distributed to students in the classes taught by the interviewed teachers. Additionally, to gain a broader understanding of students' perspectives, other students in the same grade levels were also able to participate. The TAM questionnaire was designed to assess students' perceptions and experiences with ChatGPT for corrective feedback provision.

The TAM (Technology Acceptance Model) framework was used to design the questionnaire, which aims to assess students' perceptions and experiences with ChatGPT for corrective feedback provision. TAM is a well-established model that helps in understanding how users come to accept and use technology. A traditional TAM questionnaire typically includes sections designed to measure four main aspects/constructs: the perceived usefulness (PU), the perceived ease of use (PEOU), the attitude towards using (ATU), and the behavioural intention to use (BIU). Accordingly, our survey included the following sections adapted from TAM constructs:

- **General information:** This section collected data on students' grade levels and the primary language they studied, in order to contextualise their responses.
- **Experience with automated feedback tools:** This section evaluated students' prior experiences with ChatGPT (and other AI tools), relating to the 'perceived ease of use' construct in TAM.
- **Perception of automated feedback:** This section measured students' perceptions of the usefulness/benefits of ChatGPT for corrective feedback. Aligning with the 'perceived usefulness' construct.
- **Trust in automated feedback:** This section assessed the degree of trust students place in automated feedback, an important factor influencing 'attitude towards using' and 'behavioural intention to use' in TAM.

- **Suggestions and comments:** This section provided an opportunity for students to share their thoughts and suggestions, giving insights into their 'attitude towards using' the technology."

As mentioned before, the questionnaires were distributed via Google Forms, allowing students to complete it at their own pace. Participation was voluntary, and students were informed about the purpose of the study and the confidentiality of their responses.

3.3.4.1 Student selection process

The selection of students for this study was carried out in collaboration with three teachers. Each teacher was asked to invite their students to participate in the questionnaire. Some teachers facilitated this by having their students complete the questionnaire in class using QR codes, while others allowed their students to answer at home. Additionally, to broaden the scope and reach more students within the same grade levels in the Fédération Wallonie-Bruxelles (FWB), the questionnaire was also shared on social media platforms such as Instagram, X (formerly Twitter), and Facebook. The survey was made available from May 16th until June 1st, during which time a total of 86 participants completed the questionnaire.

3.3.5 Procedure for teachers and students

3.3.5.1 Teacher interviews

Initial interviews were conducted to gather baseline perceptions of ChatGPT. We then presented teachers with analysed texts to evaluate ChatGPT's feedback. And conducted follow-up interviews to capture any changes in perception after reviewing the AI feedback. The interviews were conducted before and after the feedback analysis.

Although initially intended as written surveys, it was decided to conduct oral interviews to foster a deeper level of trust between the interviewer and interviewee. With the teachers' consent, their responses were recorded and transcribed (refer to Appendix 2). This approach was intended to enhance the depth and authenticity of the data collected.

The interviews were semi-guided, based on the TAM questionnaire, but allowed for flexibility so that teachers could explore other directions. This approach provided a more

comprehensive understanding of their perceptions. After conducting the initial interview and analysing the students' texts with ChatGPT's feedback, the last two questions of the TAM questionnaire (sections 4 and 5) were asked again to gauge any changes in perception following the detailed analysis. In the next section, you will find the list of questions provided to the teachers.

3.3.5.1.1 Interview questions:

1. General information:

- What is your experience in teaching modern languages?
- Which language(s) do you primarily teach?

2. Use of ChatGPT:

- Have you ever used ChatGPT in your language teaching?
- If yes, how do you use ChatGPT?

3. Automatic corrections and feedback:

- Have you tested/used ChatGPT for automatic correction of spelling, vocabulary, grammar, punctuation, and syntax in students' written work?
- If yes, how effective do you find it for these corrections?
- Can you provide an example of a prompt you have used to guide ChatGPT in making corrections?

4. General perception:

- How do you perceive the use of ChatGPT for providing automated corrective feedback?
- What advantages do you see in using ChatGPT for grammar, spelling, punctuation, vocabulary, and syntax corrections?
- What disadvantages or limitations do you see in using ChatGPT for these corrections?

5. Corrective feedback:

- Do you think using ChatGPT for correction (grammar, syntax, spelling, vocabulary, punctuation) frees up time to focus more on content-related feedback in students' written work?

- How do you balance automated correction (grammar, syntax, spelling, vocabulary, punctuation) and content feedback in your teaching?

Teachers were encouraged to answer honestly to provide authentic opinions, which were crucial for better analysing the data from the interviews.

3.3.5.1.2 Objectives and insights

The primary goal of this activity was to make teachers aware of the potential impact of such tools on their productivity, particularly in saving time during the assessment of students' written work, while emphasising the importance of human interaction in EFL classrooms.

3.3.5.2 Student surveys

To evaluate students' perspectives on ChatGPT for feedback provision, a different study design was necessary compared to the teacher interviews. This methodology also employed a Technology Acceptance Model (TAM) questionnaire. However, unlike the teacher interviews, the questionnaires were distributed only once to each student. To facilitate the process, a Google Forms document was created, allowing students to complete the questionnaire at home at their own pace, thus not consuming any in-class time. TAM questionnaires were distributed to students to gather their initial perceptions of ChatGPT. Students' responses were collected and analysed. It should be noted that the TAM questionnaire was slightly modified to include more open-ended questions to better serve the study's purpose (refer to Appendix 5).

The strategy adopted for assessing students' perceptions focused on evaluating their opinions on ChatGPT for corrective feedback provision and their overall use of ChatGPT without any specific input. Below is the list of questions provided to the students:

3.3.5.2.1 TAM survey questions:

1. General information:

- In which year are you currently enrolled?
- What is your primary modern language (LM1) that you are learning at school?

2. Automated feedback:

- Have you ever received automated corrections for spelling, grammar, or vocabulary through automated tools in your modern language courses?
- If yes, how do you perceive these automated corrections?
- Have you used ChatGPT to correct spelling, vocabulary, grammar, punctuation, or syntax in your written work? If yes, are you satisfied with the feedback provided by ChatGPT?
- What type of questions do you ask ChatGPT to ensure you receive accurate corrections? Feel free to provide an example.
- Do you request corrections for other aspects of your text? If yes, which ones?

3. Trust in automated feedback:

- Would you trust corrective feedback generated by a machine (AI like ChatGPT) for your written work (e.g., grammar correction, spelling, syntax)?
- What do you see as the advantages of receiving automated corrective feedback compared to manual feedback (provided by the teacher)?
- What could be the disadvantages or limitations of automated corrective feedback?

4. Time dedicated to content:

- Do you think that using automated feedback tools (AI like ChatGPT) could save teachers' time on grammatical corrections, allowing more time to discuss the content of written work in class?
- Does this seem like a positive perspective to you? Explain why.

5. Suggestions or comments:

- Do you have any additional suggestions or comments on the use of automated feedback in modern language learning?

3.3.5.2.2 Objectives and insights

The goal of this activity was to gather students' opinions to better understand their perspectives on the use of Generative AI tools (ChatGPT) for corrective feedback provision.

The aim was to compare these perspectives with those of teachers to identify common trends and differences. This comparison will enable a discussion of the results and the development of recommendations for the potential implementation of GenAI tools (ChatGPT) for corrective feedback provision in EFL classrooms (see Appendix 7).

3.3.6 **Analytical methods**

In this study, various analytical methods were employed to evaluate the effectiveness of ChatGPT in providing corrective feedback in EFL (English as a Foreign Language) settings. Both qualitative and quantitative analyses were used to ensure a comprehensive understanding of the data collected. The following sections provide an overview of the analytical methods used.

3.3.6.1 *Qualitative analysis*

3.3.6.1.1 *Interviews with teachers*

The interviews conducted with teachers were transcribed using TurboScribe, a free AI tool that converts speech to text. While the transcription process went smoothly, there were a few notable challenges. The software does not always accurately distinguish between different speakers, even though this can be adjusted in the settings. Consequently, I had to manually review the transcription multiple times to separate the text and create paragraphs for each interviewee.

Additionally, the transcription accuracy can be affected by the speed of speech and the use of regional slang or argot. For instance, teachers from Tournai speak differently compared to those in Brussels. The tool appears to be trained on a neutral and standard French that is more formal, which may not always align with the natural and informal speech used in genuine conversations. This discrepancy required further adjustments and corrections to ensure the accuracy and authenticity of the transcriptions.

It is safe to say that the tool significantly speeds up the transcription process; however, it requires multiple reviews to ensure all errors are corrected. The efficiency of the tool can be debated, as a human transcriber might grasp nuances more easily and eliminate the need for extensive revisions. Therefore, while TurboScribe seems beneficial for quicker transcriptions, human oversight remains crucial to guarantee the accuracy and quality of the final transcript.

Once transcribed, the data were coded to identify recurring themes and patterns. Thematic analysis involved identifying key themes from the interviews that reflect teachers' perspectives on the use of ChatGPT for feedback provision. Themes such as usability, effectiveness, challenges, and benefits were explored in-depth.

3.3.6.1.2 Open-ended questions from student surveys

The responses to open-ended questions in the TAM questionnaires were analysed using content analysis techniques. This involved categorising responses into different themes and sub-themes to understand the range of student perspectives on AI feedback. The themes identified from the teacher interviews were used as a basis to compare and contrast with the student responses. This helped in understanding any alignment or divergence in perspectives between teachers and students.

3.3.6.1.3 TAM questionnaire for students

The data collected through Google Forms were exported to Microsoft Excel for initial cleaning and preparation. This included removing incomplete responses and coding categorical data for analysis. Additionally, an SPSS software was used to perform descriptive statistical analyses (such as calculating mean scores, standard deviations, and frequency distributions). These statistics provided an overview of student responses and their overall perceptions of ChatGPT.

3.3.6.2 Comparative analysis

A comparative analysis was conducted to cross-examine the themes derived from teacher interviews and student surveys. This involved aligning similar themes and identifying areas of agreement or discrepancy.

3.3.7 Tools and software

Various tools and software were employed throughout the research process to facilitate data collection, transcription, and analysis. The following section provides a detailed overview of the tools and software used:

3.3.7.1 Data collection tools

The TAM questionnaires were designed and distributed to students through google forms. This platform allowed students to complete the questionnaires at their own pace, either in class via QR codes or at home. Microsoft Excel was utilised for organising and managing the collected data from the questionnaires. Excel was also used for initial data cleaning and preparation before detailed analysis.

3.3.7.2 Transcription software

The software “TurboScribe” was used to transcribe the recorded interviews with teachers. This software facilitated the conversion of audio recordings into text, making it easier to perform qualitative analysis.

3.3.7.3 Data analysis software

ChatGPT-4(o) was used to generate feedback on student-written texts, which were then analysed by the teachers during the interviews. This AI tool played a crucial role in evaluating the efficiency of Generative AI tools for providing CF. Additionally, Google Forms and Microsoft Excel were essential for collecting the data from the surveys and organising the responses for the analysis.

3.3.7.4 Summary

In summary, using these tools and software allowed for thorough data collection, transcription, and analysis. Google Forms and Microsoft Excel were crucial for handling survey responses, while ChatGPT-4 played a key role in the study by providing AI-generated CF on student writing.

3.4 **Ethical considerations**

Prior to the interviews, all participating teachers were provided with detailed information about the study's objectives, procedures, and potential impacts. Written or oral consent was obtained from each teacher, ensuring they understood their participation was voluntary and they could withdraw at any time without any negative consequences. Similarly, students and their guardians (where applicable) were informed about the study's purpose and procedures. Information sheets and consent forms outlined the voluntary nature of participation and assured students they could opt out at any time without affecting their academic standing. Emphasising the voluntary nature of the study, participants were made aware that they were under no obligation to take part and could withdraw at any point without any repercussions.

The research design took care to minimise any potential harm to participants. For example, to reduce anxiety and stress among students, a less formal writing activity was chosen instead of a traditional essay task. The aim was to create a comfortable environment conducive to genuine responses.

To protect the privacy of participants, all collected data were anonymised. Personal identifiers were removed, and pseudonyms or codes were used in place of real names. This ensured that individuals could not be identified from the research outputs. Participants were assured that their responses would be kept confidential and used solely for the purposes of this research.

3.5 **Limitations of the research**

This study focused on female teachers in Wallonia, which might limit how broadly we can apply the findings. Because we didn't include male teachers or educators from other regions or contexts, the results might not fully capture the diversity of perspectives.

Another challenge is the rapid pace at which AI technology evolves. As these tools develop and new features are introduced, our findings could quickly become outdated. This makes it important to keep studying and adapting our research for it to stay relevant.

Our method of collecting data from students also has its drawbacks. Since participation was voluntary and students completed the questionnaires in different settings, their responses might not be entirely consistent. Factors like motivation and access to technology could have influenced who participated and how they responded.

Additionally, because we relied on self-reported data from both teachers and students, there is a risk of response bias. Participants might have given answers they thought were expected rather than sharing their true thoughts and experiences.

These limitations remind us to be cautious when interpreting our results and highlight the need for further research. Future studies should strive for a more diverse sample, incorporate the latest technologies, and use varied data collection methods to strengthen the reliability and applicability of the findings.

4 Data analysis and results

4.1 Introduction

This chapter is divided into several sections, each corresponding to a theme identified during the transcription and analysis of the teacher interviews (see Appendix 2 & 3). We begin with an overview of the data, highlighting the current use of GenAI tools (ChatGPT) among students and teachers. Following this overview, we will explore the different themes and sub-themes that emerged from the data. The identified themes are organised into two main sections: perceived benefits and potential drawbacks.

The section on perceived benefits contains four sub-sections, each representing a theme identified during the research and data interpretation. The first theme, efficiency, examines how ChatGPT could potentially enhance the efficiency of CF provision. The second theme, timesaving, discusses the time-saving aspects of using ChatGPT for teachers. The third theme, student autonomy, explores how ChatGPT promotes greater independence in students' learning processes. The fourth and last theme, personalisation, and adaptability, looks at how ChatGPT can tailor feedback to individual student needs and proficiency levels.

The section on potential drawbacks is divided into sub-sections, six to be exact, addressing the challenges and concerns associated with the use of ChatGPT. We will begin with the first sub-section, challenges of implementation, discussing the practical issues related

to integrating ChatGPT into classroom settings. In the second sub-section, over-reliance, we will examine the potential risk of students becoming overly dependent on AI tools in their learning process. The following and third sub-section, accuracy concerns, addresses issues related to the accuracy and reliability of AI-generated feedback. We will then move on to the fourth sub-section, ethical concerns, in which ethical considerations are explored, including academic dishonesty and the fair use of AI tools.

Once the perceived benefits and potential drawbacks have been covered, we will move on to teacher's role and training, which is a section that discusses the importance of teacher training and the evolving role of teachers in an AI-integrated classroom. And lastly, we will discuss future integration, looking at potential future developments, and how ChatGPT could be further integrated into educational practices. The last section of this practical chapter will be dedicated to the summary of the results. By analysing the themes presented above, this chapter aims to provide a comprehensive understanding of the current use, benefits, and challenges of integrating ChatGPT as a CF provision tool in EFL education.

4.2 **Overview of the data:**

4.2.1 **Students:**

A total of 86 students participated in our study. The transmission of the Google Forms survey was facilitated by the teachers we interviewed, as well as other teachers from the school where I completed my internships.

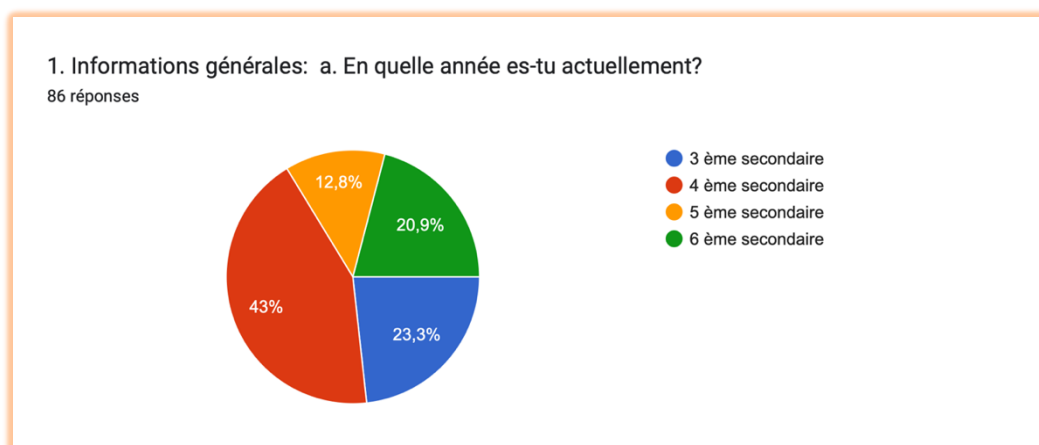


Figure 1: Participants information

Translation: In what grade are you?

Most respondents were 4th-grade students, as highlighted in Figure 2. Students from 3rd and 6th grades each represented around 20% of the sample, while a minority were in 5th grade. Regarding language proficiency, we note that 66.3% of the respondents had English as their first language (LM1), and 44.2% had Dutch as their LM1. To ensure inclusivity, we provided options for Spanish, German, and other languages, although we did not anticipate many responses in these categories. As a matter of fact, the participating students were all from the FWB network, which primarily includes Dutch and English as LM1. Spanish and German are typically categorised as LM2. This may have caused some confusion among the students when responding, leading to one student answering with Spanish and another one with Others.

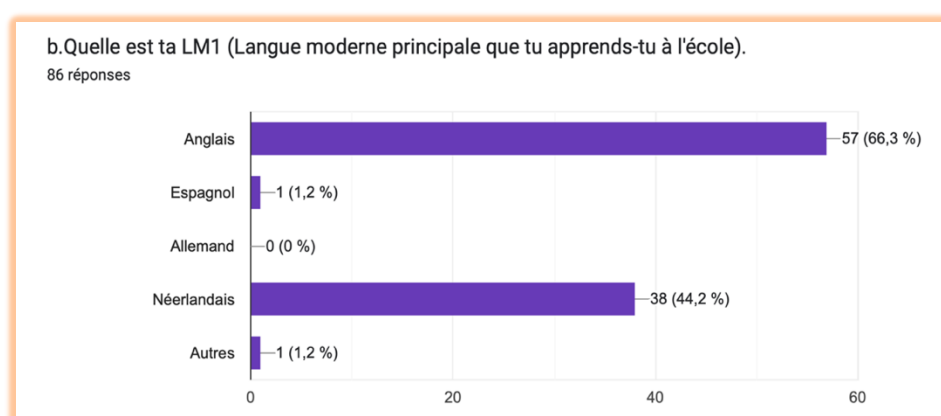


Figure 2: Students' LM1
Translation: What is your LM1

4.2.2 Teachers:

Three teachers participated in the interviews and will be referred to as Teacher 1, Teacher 2, and Teacher 3. The interviews were conducted using a semi-guided format based on an adapted TAM questionnaire. This approach provided in-depth and comprehensive perspectives on the various aspects of using AI tools for CF provision.

4.3 Current use of AI tools

4.3.1 Teachers:

When conducting the interviews, we realised that the use of ChatGPT varied greatly among the teachers. Some used AI tools minimally, while others experimented more actively. Teacher 1 for instance, had limited use of AI within the EFL classroom, but mentioned that AI

tools were a part of her daily life for checking vocabulary, sentence structures, and generating new ideas. Although Teacher 1 uses ChatGPT regularly, she has not yet integrated it into her EFL classrooms. She is the least experienced teacher of the sample, which could explain her potential lack of confidence in integrating new tools in the classroom, or her lack of time to experiment with them for professional purposes.

Teacher 3, on the other hand, had never used ChatGPT, either for teaching or personal life prior to the interview. She is aware of its potential but has not taken the leap, as she prefers spending her time away from screens. She also mentioned that she had no idea how to properly integrate ChatGPT into her classes. Despite her lack of experience with ChatGPT, Teacher 3 mentioned that she had tried a tool called "Magic School," which she describes as: "C'est un peu comme ChatGPT mais vraiment lié au domaine de l'éducation."¹ In her opinion, this education-centered tool is effective for creating teaching content and provides inspiration for teaching resources. So far, it is fair to say that both teachers have completely different profiles: Teacher 1 uses ChatGPT regularly, but only for non-scholarly purposes, while Teacher 3 does not use ChatGPT at all but finds "Magic School" helpful for creating teaching material.

Our next teacher, Teacher 2 falls right in between. She is aware of ChatGPT's potential in the education domain and has recently started using the tool to help students improve their writing skills. During the interview, she mentioned that in her Dutch classrooms, she had been conducting experiments with ChatGPT to create texts at different proficiency levels in order to show students language progression. The experiments consisted of the creation of AI-generated text based on prompts she asked ChatGPT. During the interview she mentioned a few prompts, the one she found herself using the most is the following: "Write a text on [the desired subject], in Dutch, at proficiency level B1". By doing this, she was able to provide students with examples of well written texts at their target grade level. This approach allowed students to learn from ChatGPT and replicate certain patterns (e.g., linking words, synonyms, tenses) to achieve a specific level of proficiency. Simply put, by asking ChatGPT to provide texts on a specific topic, Teacher 2 can analyse the texts with the students, showing them what makes the text produced by ChatGPT a B1 level text. Students can then learn, replicate certain sentence structures pattern and ultimately, adapt what they have learnt from the AI (with Teacher 2's guidance) into their own writing process.

¹ "It's a bit like ChatGPT but really focused on the field of education." (Teacher 3)

4.3.2 Students:

When analysing the data from the Google Forms' survey, we instantly noted that the use of ChatGPT among students varies widely. Some students use the AI tool extensively, while others are more cautious or unsure. In the Google Forms survey, students were asked the following question:

As-tu déjà utilisé Chat GPTpt pour corriger l'orthographe, le vocabulaire, la grammaire, la ponctuation, la syntaxe dans tes productions écrites ? (Que ce soit pour l'école ou pour ton utilisation personnelle) (Fr). Have you ever used ChatGPT to correct spelling, vocabulary, grammar, punctuation, or syntax in your written work ? (Whether for school or personal use)

As highlighted by the graph in **Figure 3**, most students (34.9%) are not interested in using ChatGPT for corrective feedback, be it for personal or school use. Nevertheless, 30.2% of the respondents mentioned they use it for both personal and school-related tasks. This indicates a significant portion of students find value in the tool despite having concerns about cheating and proper usage (see section 4.4 on potential drawbacks). It is important to note that this question was very specific and directed towards the use of ChatGPT for corrective feedback provision only. The responses might have differed if the question had included other uses of the AI tool (e.g., exercise creation, content creation, ideas suggestion etc.).

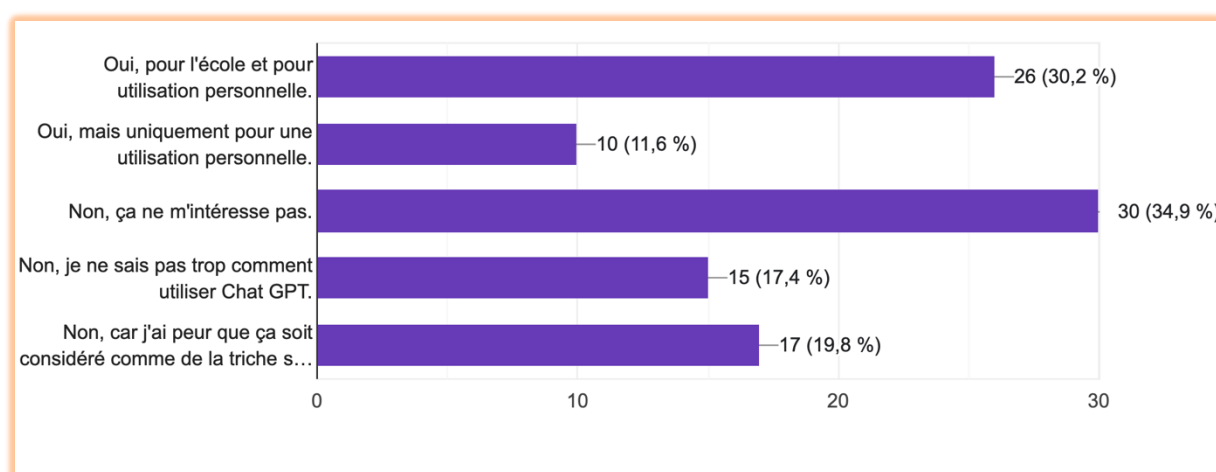


Figure 3: Students' overall use of ChatGPT as automated CF tool

Additionally, 19.8% of students expressed concerns that using ChatGPT for CF in school-related tasks might be considered cheating. Fifteen students (approximately 17.4% of participants) mentioned they were unsure how to use ChatGPT, and less than 12% used

ChatGPT exclusively for personal use. From these data, we can conclude that while most students are not interested in using AI tools for corrective feedback provision, either at school or for personal use, a significant minority (30.2%) do use it for both purposes. This result is quite unexpected, and astonishing. While carrying out the survey, we anticipated that most students would be in favour of the implementation of ChatGPT as CF provision tool.

Nevertheless, it should be noted that if we were to combine the groups of students who responded, “No, because I do not know how to use it,” (17,4%) and “No, because I fear that it would be considered as cheating,” (19,8%) they would form a majority (37,2%). This majority reflects an **uncertainty** about either the **impact of using the tool** or the overall **adequate use**, which clearly underlines a need for further research to be done on those aspects.

4.4 **Perceived benefits**

The perceived benefits of using GenAI tools are categorised into four sub-themes: efficiency, timesaving, student autonomy, and personalisation/adaptability.

4.4.1 **Efficiency**

This sub-section discusses how teachers and students perceive the efficiency of AI tools, specifically ChatGPT, in providing CF.

4.4.1.1 Teachers

All three teachers interviewed had moderate to high confidence in AI tools, such as ChatGPT, for accurate automated CF provision when handling basic errors. Even though some teachers, like Teacher 3 for example, were less favourable to the implementation of AI tools for CF provision, this factor did not impact how confident she was regarding its efficiency. In this section dedicated to teachers' perspectives of the efficiency of ChatGPT in providing CF, we decided to dedicate the first part to teachers' perception, before the analysis of CF provided by ChatGPT on three texts written by students of different proficiency levels, and the second part of the section will be focused on the perceptions of teachers after the analysis of ChatGPT's CF on those texts. The aim of this analysis is to monitor the change in teachers' perception when facing what is considered to be a good use of ChatGPT for CF provision.

4.4.1.1.1 Prior to ChatGPT corrective feedback on the three different proficiency levels:

Prior to the analysis of ChatGPT's CF on students' productions, Teacher 1 expressed quite a high confidence in the ability of ChatGPT to provide accurate corrections for basic grammatical and spelling errors, affirming its reliability for error correction. Teacher 2 also believed that ChatGPT could offer high-quality, immediate, and tailored feedback on grammar, vocabulary, and structure. Teacher 3, based on her experience with the tool Magic School, acknowledged that AI tools can effectively simplify or complexify texts to suit different learning levels. However, she remained uncertain about the effectiveness of AI CF. It could be argued that teachers' personal use and experience with AI tools significantly influence their perception of these tools' efficiency. Teacher 3 had no strong opinion on the potential of AI for corrective feedback; however, she mentioned that AI has been very helpful in building exercises, simplifying or complexifying texts to suit different learning levels, and creating activities. Teacher 2, on the other hand, had previous knowledge of using AI for corrective feedback and had implemented it in her class, allowing her to attest its efficiency. Teacher 1, being younger, has had more exposure to these kinds of tools and feels more comfortable using them for personal use, but being less experienced as a teacher, she has not tried to implement them in class yet. We assume that increased exposure and active use of AI tools lead to greater recognition of their efficiency and potential.

4.4.1.1.2 After ChatGPT corrective feedback on the three different proficiency levels:

Astonishingly, after reviewing the corrective feedback generated by ChatGPT, the teachers' opinions had not drastically changed. We had expected a significant shift in their perspectives, but instead, their initial views were only reinforced. Both the positive aspects and drawbacks previously identified were strengthened. All three teachers recognised the potential and efficiency of ChatGPT as an automated corrective feedback provision tool. However, each teacher has specific reasons why efficiency alone is not sufficient. Teacher 1 mentioned that while she could be inclined to use ChatGPT to correct texts, she would not rely on it systematically. She pointed out that AI tools require online functionality, meaning students must write their texts on a computer and submit them as PDFs or Word documents, which she considers a waste of time. Additionally, she highlighted practical challenges, such as limited

access to Wi-Fi and computers in some classes, making it impractical to use ChatGPT at school. Teacher 2 mentioned that she would be willing to use ChatGPT to correct texts with students in the classroom, rather than doing it by herself during the correction process. She does not see the point in using AI for the entire process of CF provision unless she is significantly pressed for time. However, she recognises the potential of AI tools for in-class teaching, using them to demonstrate what to do and what not to do in a text. She views AI more as a tool that could raise students' awareness on the level/skills that are expected from them rather than a tool used solely to provide CF. Teacher 3 firmly stated that she would not use AI as a correction tool. Despite acknowledging its potential, she feels she lacks the confidence and experience to integrate these tools into her teaching. She is also concerned that students might become over-reliant on AI for generating written texts, leading to ineffective learning. Furthermore, she worries about the negative consequences of increased screen time if AI tools were heavily integrated into EFL education. As a conclusion, it appears evident that when it comes to integrating ChatGPT for CF provision in EFL education, efficiency is not the only variable that matters by teachers. As we will discover in further sections of this thesis, there exist several other elements that are equally as important.

4.4.1.2 *Students:*

Similarly to teachers, students find ChatGPT helpful for basic corrections but not for complex issues. In the survey, the majority of students (53.7%) stated that they perceived ChatGPT's CF as useful. Meanwhile, 34.1% of students had a neutral perception of the feedback, and the remaining participants described the feedback as "peu utile" (4,9%) (not very useful) or "pas du tout utile" (7,3%) (not useful at all). (See **Figure 4**).

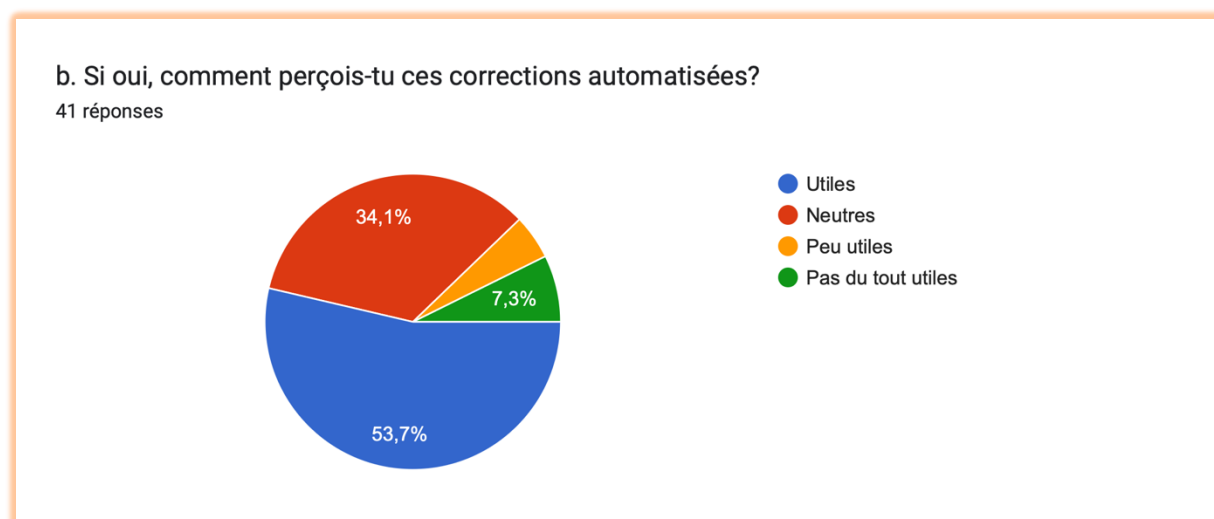


Figure 4: Participants' perceptions of automated CF

Translation: If so, how do you perceive automated corrective feedback

Contrarily to **Figure 3** which showed an overall lack of interest in automated CF provision by students, **Figure 4** highlights the fact that, students generally hold **positive attitudes** towards it. This indicates that there might be a possibility of integration in education if both party (students/teachers) find it useful and are satisfied with the tool. Besides, in **Figure 4**, about 30% of students who answered had neutral positions on the efficiency of the feedback received. It could be argued that their neutral perceptions of ChatGPT's automated CF could be induced by their lack of knowledge regarding prompting and maximising the tool's efficiency.

Even though some students hold neutral positions on ChatGPT's automated CF, 72,9% of students were generally satisfied with ChatGPT's CF as highlighted in **Figure 5**. This number is really promising as it indicates that students find ChatGPT's automated CF provision efficient, and along with the results displayed in **Figure 4**, we clearly see that there is a trend among students, which consist of holding a positive attitude towards automated feedback provision and being satisfied when using it.

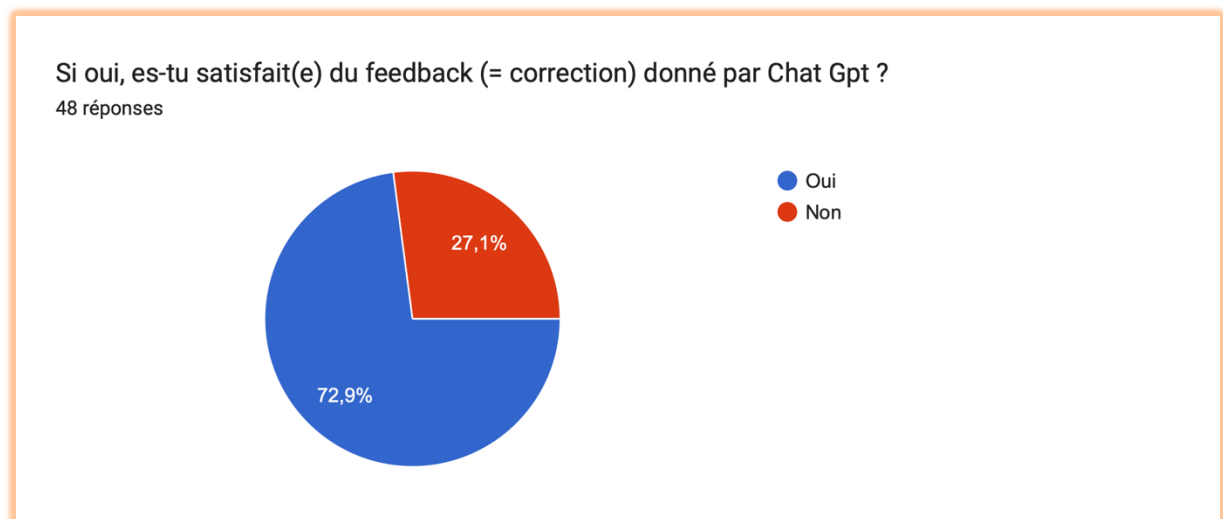


Figure 5: Participants' satisfaction of automated CF provided by ChatGPT

Translation: Are you satisfied by the feedback provided by ChatGPT

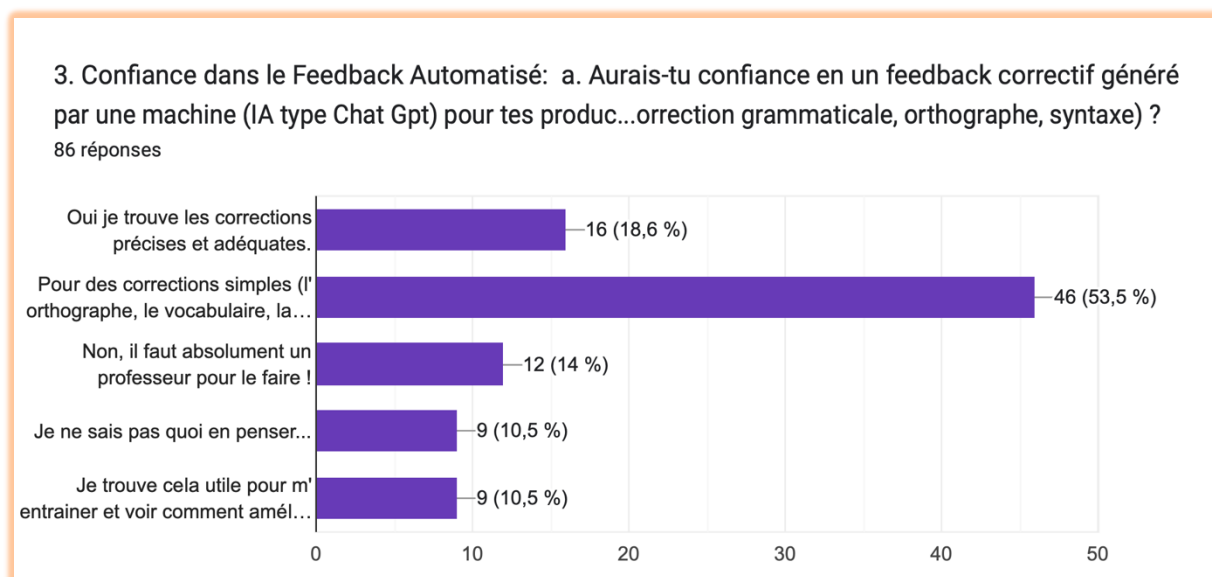


Figure 6: Students' trust in automated CF provided by ChatGPT

Translation: Would you trust ChatGPT's corrective feedback

With the information displayed in **Figure 4** and **Figure 5**, we now know that students hold positive attitude and find automated CF efficient. But what about their trust in AI tools, and specifically ChatGPT, for CF provision? **Figure 6** reveals that the majority of students (53,5%) trust ChatGPT's CF when it consists of simple tasks such as correcting grammar, vocabulary, and punctuation. A total of 18.6% of students noted that, regardless of the task, ChatGPT provided swift and accurate feedback. While most students have a positive view of ChatGPT's CF, some are unsure or have negative views. It should be noted that while many students find ChatGPT's CF useful, 10.5% of students are uncertain about the feedback provided. And another 10,5% of the sample find ChatGPT's CF useful for training and leveraging the corrections in their work and would trust the tool in that specific context. Lastly, 14% of students state that they do not trust AI tools for corrective feedback, emphasising the necessity of having teachers providing the CF.

4.4.2 Timesaving

The second theme that has been identified during the research and interviews within the perceived benefits is the time saving aspect of using GenAI tools, such as ChatGPT, for CF provision. In this section we will go over what teachers and students have mentioned on that very subject.

4.4.2.1 *teachers*

Through the semi-guided interviews based on a TAM questionnaire, we obtained not only answers regarding CF provision, but also comprehensive perspectives from teachers on the use of AI tools in EFL education in general.

For example, Teacher 1 expressed that AI tools are efficient and could result in significant time savings for teachers. She believes that AI tools like ChatGPT can greatly reduce the time spent on correcting basic errors, allowing more time to focus on content. She said, “C’est un gain de temps (...) parce que tous les trucs de base, les règles, vraiment quand c’est une règle du genre présent 3e personne du singulier: tu mets un-S, il le sait c’est automatisé.”² In her opinion, using these tools for basic grammar correction, could enable teachers to allocate more time for in-depth discussions on content. She fully concurs with this practice and believes it would allow her to dedicate more time to other aspects of teaching. She views automated CF as a way to free up teacher time outside of class, making grading or correcting written production easier and allowing her to concentrate fully on the content, and individual needs of her students.

Similarly, Teacher 2 highlights the efficiency and time-saving potential of AI tools for CF provision. She notes that AI tools, such as ChatGPT, provide immediate feedback, allowing students to learn at their own pace and freeing up teacher time for more complex feedback. This perspective is particularly interesting as she sees ChatGPT not only as a tool dedicated to CF destined to be used by teachers, but also as a way for students to receive personalised CF. This would lead to autonomous learning and free up time for more in-depth teacher feedback. However, Teacher 2 emphasises that she would not use these tools too often as she feels it might disconnect her from her students and their progress.

Teacher 3 mentioned that AI tools could be beneficial for time management. Initially unsure of the time-saving potential of using ChatGPT for corrective feedback, she admitted after analysing the feedback from texts of different proficiency levels that AI tools could save time by handling basic corrections. This, in turn, would allow teachers to focus on more complex feedback and lesson planning. She remarked, “Est-ce que c'est pas mieux de pouvoir

² "It's a time saver (...) because all the basic stuff, the rules, really when it's a rule like present third person singular: you add an 'S', it knows it, it's automated." (Teacher 1)

dégager ce temps-là pour s'informer sur d'autres choses ou corriger le contenu ou créer d'autres activités pour la classe etc."³ She concluded that AI tools could potentially improve time management for teachers due to the instantaneous nature of the CF. However, both Teachers 2 and 3 share a concern that using these tools frequently might disconnect them from their students' evolution, as they would not be able to monitor the mistakes themselves. This could be argued in the case where teachers rely 100% on automated CF provision. Here, it should be stressed that finding a balance in the automated and traditional approach is utterly important. Finding a balanced method would enable teachers to benefit from the advantages of automated CF while still being connected and monitor students' evolution.

4.4.2.1.1 Conclusion on teachers' perceptions:

All teachers recognise the potential time-saving benefits of incorporating AI for CF while correcting written assignments. As mentioned in the interviews, all teachers typically read through written assignments multiple times—initially to get an overall sense and spot obvious mistakes, and subsequently to address detailed errors, structure, and content. The analysis of CF generated by ChatGPT on texts of varying proficiency levels revealed that AI could provide immediate and accurate feedback (provided the prompt is adequate), making it a useful tool for saving time.

However, despite the time-saving aspect, teachers still expressed concerns about the ideal usage of AI tools. Teacher 3, for instance, emphasised that correcting grammar, syntax, and punctuation themselves allows them to sense the student's progression and maintain a stronger connection. Additionally, during the interview process Teacher 2 helped us realise that there are alternative ways to utilise AI tools for corrective feedback beyond just correcting written assignments. These aspects will be further discussed in following sections (see section 4.6 on future integration).

4.4.2.2 Students:

In the Google Forms survey, students were asked the following question:

³ "Isn't it better to free up that time to learn about other things, correct the content, or create other activities for the class, etc.?" (Teacher 3)

4. Temps consacré au Contenu: a. Penses-tu qu'en utilisant des outils de feedback automatisé (IA type Chat Gpt), les professeurs pourraient économiser du contenu des productions écrites en classe?

86 réponses

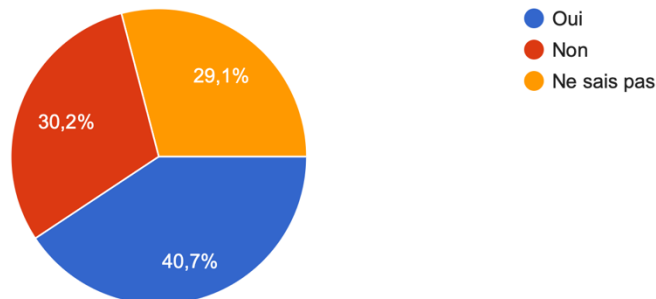


Figure 7: Students' perceptions of time saving for teachers linked to automated CF

Translation: Do you believe that by using automated CF, teachers could save time and dedicate more time in class for content correction.

Most students (40,7%) agree with the statement that using AI for CF provision could help teachers save time, allowing them to focus more on in-depth content feedback or other tasks. The rest of the sample of students who answered have mixed opinions. Some of them (30,2%) thought that teachers would not benefit from an increased timesaving when using ChatGPT for CF provision, and another 29,1% of students were uncertain whether it would benefit teachers or not.

Naturally, we wanted to gauge students' perspectives and investigate whether they believed that using ChatGPT for CF provision to save time and dedicate more of it in class for content correction was a good idea or not. In the Google Forms' survey, this question was followed by:

b. Est-ce que cela te semble être une perspective positive? Explique pourquoi.

Translation: "b. Does this seem to you to be a positive perspective? Explain why."

Students had the opportunity to answer using complete sentences. This is why we decided to utilise some of their statements to illustrate certain points. For the sake of presentation, we decided to highlight comments that could be categorised into three sections: Positive perceptions, mixed perceptions, and negative perceptions. We decided to select students'

comments for we thought it would be of use to better understand the current discussion. It should also be noted that it has been decided to preserve students' original comments, that is why some of the comments might be grammatically incorrect. Here is a selection of interesting statements made by students:

Students' positive perceptions of the use of automated CF by teachers

Understanding errors:

- **Comment:** "Oui, en grande majorité, indiquer juste une faute à tel ou tel endroit n'est pas toujours suffisant pour un élève dans le cadre où il veut la comprendre donc cela permettra de pallier à ce problème en en grande partie, je pense que **la taille des classes** joue beaucoup aussi pour que le professeur explique cas par cas."
- **Translation:** "Yes, for the most part, simply pointing out an error here or there is not always enough for a student who wants to understand it, so this would largely help to address that problem. I think class size also plays a big role in the teacher's ability to explain things on a case-by-case basis."

Ease of modern technology:

- **Comment:** "Je trouve que l'utilisation de la technologie moderne facilite tellement la vie. Je ne vois pas pourquoi les professeurs ne pourraient pas en bénéficier."
- **Translation:** "I find that the use of modern technology makes life so much easier. I don't see why teachers couldn't benefit from it."

Language richness:

- **Comment:** "Bien-sûr, comprendre la grammaire est important mais la richesse de la langue l'est encore plus. Nous n'apprenons pas assez d'expressions ou d'apprendre à écrire des phrases avec un sens plus profond car effectivement, les professeurs mettent l'accent sur d'autres choses."
- **Translation:** "Of course, understanding grammar is important, but the richness of the language is even more so. We don't learn enough expressions or how to write sentences with deeper meaning because teachers indeed focus on other things."

Timesaving:

- **Comment:** "Oui car on pourrait gagner énormément de temps sur beaucoup de choses."
- **Translation:** "Yes, because we could save a lot of time on many things."

Future efficiency:

- **Comment:** "Je pense que dans le futur proche cela pourra aider les professeurs à corriger des écrits et d'autres projets plus rapidement et d'en parler plus longtemps en classe."

- **Translation:** "I think in the near future this could help teachers correct writings and other projects more quickly and discuss them for longer in class."

Teacher's role in explanation:

- **Comment:** "Oui car comme ça, l'IA corrige, et le professeur n'a plus qu'à expliquer les erreurs. Mais il faut pour cela que l'IA mette en évidence là où il y avait des erreurs."
- **Translation:** "Yes, because that way, the AI corrects, and the teacher only has to explain the errors. But for that to work, the AI must highlight where the errors were."

More interactive and pedagogical classes:

- **Comment:** "Bien sûr, comme ça les professeurs pourraient rendre leurs cours interactifs et plus pédagogiques."
- **Translation:** "Of course, in that way teachers could make their classes more interactive and pedagogical."

Table 2: Students' positive perceptions of the use to automated CF by teachers

What can clearly be seen in this table is the fact that students hold positive perceptions of the use of automated CF by teachers. Their comments reflect the potential benefits they see in integrating AI tools like ChatGPT into the educational process. As presented above, one student noted that simply pointing out an error here or there is not always enough for a student who wants to understand it fully. They suggested that automated CF could help address this problem, especially in larger classes where it is challenging for teachers to provide individualised explanations. Students also recognised the time-saving benefits of automated CF. Another student echoed this perspective, envisioning a future where teachers could use AI to correct writings and other projects more quickly, allowing more time for in-class discussions. Besides, students appreciated the idea that AI could handle the initial correction, leaving teachers to explain the errors in more detail. This process could be dangerous if used unduly, for as Teachers 2 and 3 mention, this could lead to a form of disconnection between the teacher and their students. However, it remains a possible use of the tool that could be useful and handy from time to time if properly organised. This last statement could directly be linked with students' concerns presented in **Table 3**, in which students mentioned that AI tools would be helpful only if they are controlled and used properly. Here are some statements from students sharing uncertainties:

Students' mixed perceptions of the use of automated CF by teachers
Management of AI tools: • Comment: "Oui mais il faut savoir la gérer." • Translation: "Yes, but you need to know how to manage it." Effective use: • Comment: "Je pense que ça peut l'être mais que si elle est bien utilisée, ça permettrait de pouvoir se concentrer sur d'autres points." • Translation: "I think it can be, but only if it is well used, it would allow us to focus on other things."

Table 3: Students' mixed perceptions of the use to automated CF by teachers

If we analyse the different comments of **Table 3**, we can observe that in the first comment, the student recognises that while AI tools like ChatGPT can be beneficial, their effectiveness heavily depends on how they are used both by teachers and students. Poor management or misuse of these tools can lead to dependency and superficial learning, rather than a thorough understanding of the subject. It appears obvious that proper training and guidelines are essential to ensure that AI tools enhance the learning process without replacing critical thinking. In the second comment, the student acknowledges that AI tools can be helpful but emphasises that their utility is contingent upon proper use. When used correctly, AI tools can free up time and cognitive resources, allowing both students and teachers to focus on more complex aspects of learning, such as understanding nuanced language structures, developing critical thinking skills, and engaging in more in-depth discussions, etc. This upside is only achievable if AI tools are used as **supplements** to, rather than replacements for, traditional learning and teaching methods. Naturally, some students held negative perspectives and expressed their concerns in the Google Forms survey:

Students' negative perceptions of the use to automated CF by teachers
Preference for human correction: • Comment: "Non, Je préfère que les profs corrigent eux-mêmes. Ils sont déjà assez fainéants comme ça. Et c'est mieux que ce soit un humain qui corrige --> il comprend les sentiments, etc..." • Translation: "No, I prefer that teachers correct the work themselves. They are already lazy enough as it is. And it's better for a human to correct it as they understand the feelings, etc..." Value of human teachers:

- **Comment:** "Le rôle du prof est d'enseigner de la meilleure façon qu'il soit. Un bon prof surpasse LARGEMENT un robot en termes de créativité, mettre en évidence les fautes de l'élève. On n'est pas à l'usine ici. ChatGPT, c'est bien pour corriger du vocabulaire ou de la grammaire si vraiment personne n'est là pour corriger l'élève ou, à la limite, répondre à un doute qu'aurait le prof. Mais où va le monde si les profs, eux-mêmes, commencent à corriger les copies avec une IA? Je vous le demande..."
- **Translation:** "The role of the teacher is to teach in the best possible way. A good teacher far surpasses a robot in terms of creativity and highlighting students' mistakes. We are not in a factory here. ChatGPT is fine for correcting vocabulary or grammar if no one else is there to correct the student or, at the very least, to answer a teacher's doubt. But where is the world going if teachers themselves start correcting papers with AI? I ask you..."

Table 4: Students' negative perceptions of the use to automated CF by teachers

The first student expresses a clear preference for human correction. He mentions the unique ability of teachers to understand and consider students' emotions and individual circumstances. The comment also reflects a critical (yet extremely judgmental) view of teachers' workload, suggesting that reliance on AI could exacerbate perceptions of teacher laziness. The second comment highlights the irreplaceable value of human teachers, particularly in their ability to provide creative, nuanced, and personalised feedback. The student argues that teaching should not be reduced to an automatic process, as the human element is crucial for effective learning. They acknowledge that AI can be useful for simple tasks like correcting vocabulary or grammar but insist that it should not replace the comprehensive feedback provided by teachers. These negative perceptions highlight the importance of maintaining a balanced approach when integrating AI tools into education. While AI can provide valuable support, it is crucial to ensure that human teachers remain central to the educational process, providing the empathy, creativity, and nuanced understanding that are essential for effective learning.

Even though we have had mixed opinions and attitude towards the use of AI tools for automated CF provision in the previous part of the research, it is important to note that one striking element that has been noticed throughout the research process is the the time-saving benefits caused by AI use for CF provision among students. In the survey, students were asked the following question:

b. Quels seraient, selon toi, les avantages de recevoir un feedback correctif automatique (IA ChatGPT) par rapport à un feedback manuel? (fait par le professeur).

Translation: "b. What do you think would be the advantages of receiving automated corrective feedback (AI ChatGPT) compared to manual feedback (done by the teacher)?"

When answering this question in the google forms, students also had the opportunity to answer with full sentences, which we thought would be beneficial as we would be able to get a greater grasp of their opinions on the matter. We decided to include some of the comments we deemed interesting in the **Table 5** below.

Students' perceptions of the advantages from receiving automated CF
Speed and efficiency: • Comment: "C'est plus rapide." • Translation: "It's faster." • Comment: "Cela irait plus vite." • Translation: "It would go faster." • Comment: "Pour avoir une réponse rapidement." • Translation: "To get a quick response." • Comment: "Plus rapide, pas besoin de déranger quelqu'un." • Translation: "Faster, no need to bother anyone." • Comment: "Gagner du temps." • Translation: "Saving time." Availability and convenience: • Comment: "Les professeurs n'ont pas toujours voire jamais du temps à nous accorder pour ce genre de choses." • Translation: "Teachers don't always, or even ever, have time to give us for this kind of thing (CF)." • Comment: "C'est plus rapide et on peut l'utiliser à n'importe quel moment." • Translation: "It's faster and we can use it at any time." • Comment: "L'IA est plus rapide pour corriger, ce qui serait plus cool au lieu de recevoir des copies 2 mois plus tard parce que certains profs n'ont pas que ça à faire." • Translation: "AI is faster at correcting, which would be cooler instead of receiving papers 2 months later because some teachers have other things to do." • Comment: "On le reçoit directement et on peut l'utiliser quand on veut." • Translation: "We get it directly and can use it whenever we want." • Comment: "Nous pouvons le faire directement nous-mêmes." • Translation: "We can do it ourselves directly." • Comment: "Plus rapide et moins de gêne pour les timides."

- **Translation:** "Faster and less awkward for shy people."

Enhanced learning experience:

- **Comment:** "Oui, le cours irait certainement plus vite et on pourrait apprendre plus vite."
- **Translation:** "Yes, the class would certainly go faster and we could learn faster."

Table 5: Students' perceptions of the advantages from receiving automated CF

What stands out from **Table 5** is the fact that all the comments collectively highlight the positive perceptions students have regarding the timesaving aspect linked to the use of AI for CF. The primary advantages they identify are the speed/immediacy and efficiency of AI CF. Students believe that those two factors could significantly enhance the learning process. The convenience and flexibility of using AI tools at any time further add to their appeal, especially for students who need timely feedback to continue their studies effectively. Moreover, the ability of AI tools to provide immediate and private feedback is particularly beneficial for shy students who might be reluctant to ask for help in a classroom setting. This can lead to a more inclusive learning environment where all students feel supported.

4.4.2.2.1 Conclusion on students' opinions on the use of AI for CF:

Students' opinions on the use of AI for CF vary. Some believe that teachers using AI for CF is a good way to save time, allowing for more content-based feedback. Others have mixed opinions or feel that providing CF is an integral part of the teacher's job, which AI can never fully replicate. Despite varying opinions on teachers using AI for CF, students generally agree that AI provides a faster way to receive feedback, especially when teachers are unable to provide timely corrections due to large class sizes or other constraints. Additionally, some students noted that shy students or those who prefer to work at home could benefit from the increased autonomy that AI tools offer.

4.4.3 Student autonomy

One might wonder why this theme has been selected, given that we have primarily discussed the implementation of AI for CF among teachers and its perception amongst students. The study revealed that AI and CF in EFL education have multiple applications. While AI CF can help teachers speed up their workflow and focus more on content-based feedback, it has

been underlined that teachers were not yet ready to rely on it as of yet. Students also have diverse opinions about teachers using AI for CF, although most are not opposed to the process.

Using GenAI tools such as ChatGPT in EFL education could enhance student autonomy. Teacher 2, for example, demonstrated in an in-class activity how students could use AI to receive appropriate CF, providing them with a clear idea of what a text at their grade level should look like. With proper training and awareness, students could independently use AI tools to check their mistakes, much like traditional tools (e.g., *Bescherelle*), both in class and at home. AI tools can offer quick, tailored feedback, making them especially useful given the increasing class sizes and varying proficiency levels. This use of AI would allow students to address questions related to grammar, spelling, syntax, and punctuation, freeing up teachers to assist students who need more help with content or other aspects.

Teacher 1 mentions that using AI tools could help students become more independent in their learning and less reliant on teachers for minor corrections. She states: "Je pense que c'est positif parce que (...) ça permet aux élèves d'être plus autonomes." She encourages the development of self-editing skills among students. According to Teacher 3, AI is a good way of providing immediate and adaptive CF on student work, thus helping them improve their writing. However, she insists on the fact that the text itself already must have a decent foundation. That way, AI tools could help bring out aspects that were not previously tackled. She states, "Si on utilise ce genre d'outil pour justement corriger une base qui est déjà bien (...) ça peut rajouter quelque chose de plus."⁴ She believes that AI, supports personalised learning and development through constructive feedback.

4.4.4 Personalisation and adaptivity

As demonstrated in the CF provision provided by ChatGPT on the three written texts of different proficiency levels (see Appendix 1), the AI tool can adapt to the input given. For this to work most efficiently, it is crucial to know how to provide the right prompt for the task (see section on prompting in the methodology). With the correct prompt, students can engage with the AI and receive immediate personalised feedback.

⁴ "If we use this kind of tool to correct a base that is already, quote-unquote, decent, it can add something extra." (Teacher 3)

4.4.4.1 Teachers

All three teachers believe that AI tools can provide personalised and adaptive feedback. Teacher 2 believes that AI tools can tailor feedback to individual student levels, offering personalised learning experiences that foster student engagement, and understanding. As mentioned before, she conducted an experiment during which she used texts of different proficiency levels, analysed ChatGPT's CF on those latter, and realised that, with the right prompt, the tool could effectively adapt to the student's level (input) and provide appropriate CF (output). Even though Teachers 1 and 3 also believe in AI's ability to provide adapted CF, they have not conducted any in-class experiments to validate this, so they lack the certainty and confidence in its effectiveness.

4.4.4.2 Students

While teachers openly spoke about the potential benefits of this adaptability, students, on the other hand, did not explicitly mention any benefits of this adaptability. This could be explained by the fact that they were not presented with the analysis of the three texts that ChatGPT analysed and provided CF on. Additionally, although not directly linked to the adaptability aspect, some students mentioned that the automated CF could offer clearer and different explanations compared to their teachers, which they found helpful as they could get more diverse insights. This echoes what Teacher 3 mentioned in **section 4.3.3** (student autonomy), in which she suggests that using AI for CF provision on an already existing solid basis (student's text) could provide other insights on their work and promote students' autonomy.

In the google forms survey, students were also given the opportunity to answer with full sentences, as we believed it would be of use to get a better understanding of their perceptions. Here are some comments students made regarding the adaptability of automated CF:

Students' positive perceptions of the adaptability of automated CF	
Clarity of explanation:	
• Comment: "Le feedback correctif automatique pourrait nous donner une autre explication que le professeur, parfois + clair."	

- **Translation:** "Automated corrective feedback could provide us with an explanation different from the teacher's, sometimes clearer."

Some students find AI-generated explanations to be clearer than those from teachers. AI tools could thus complement traditional teaching by providing additional perspectives or explanations.

Table 6: Students' positive perceptions of the adaptability of automated CF

We decided to select this statement as it highlights the fact that automated CF could provide student with a different, additional explanation from the teacher's and could thus be categorised as more adaptable tools. However, most of the comments received did not support the idea of the adaptability of AI tools. On the contrary, students seemed to view ChatGPT as impersonal, lacking depth and personalised explanations. This perception could be attributed to their own use of ChatGPT, which might not be optimised for EFL learning. Here are a few comments on students' negative perceptions of the potential adaptability of automated CF:

Students' negative perceptions of the adaptability of automated CF

Expectation vs. reality:

- **Comment:** "Il ne répond pas toujours bien aux attentes du prompt envoyé."
 - **Translation:** "It does not always respond well to the expectations of the prompt sent."

This comment reflects a frustration that AI tools do not always meet the specific needs or expectations of the students' prompts.

Quality and personalisation:

- **Comment:** "Moins bien fait, moins professionnel, moins personnalisé pour chaque élève."
 - **Translation:** "Less well done, less professional, less personalised for each student."

Students express concerns that AI-generated feedback lacks the professionalism and personalised touch, that a human teacher can provide.

Lack of personalised explanation:

- **Comment:** "Le bot ne te connaît pas, il ne sait pas vraiment expliquer quelques choses selon la personne. Par exemple, j'ai un problème avec le past continuous, le bot va juste m'expliquer de manière simple avec deux ou trois exemples mais voilà sans plus, tandis qu'une personne peut t'expliquer de manière plus concrète !"
 - **Translation:** "The bot doesn't know you, it doesn't really explain things according to the person. For example, if I have a problem with the past

continuous, the bot will just explain it simply with two or three examples but that's it, whereas a person can explain it in a more concrete way!"

This comment highlights a significant limitation of AI tools: their inability to tailor explanations to individual students' needs. Unlike human teachers, AI lacks the ability to adapt its explanations to the specific learning context of the group, and the difficulties of each student.

Table 7: Students' negative perceptions of the adaptability of automated CF

What is interesting in the comments made by students is that it could be argued that their opinions on the matter is a direct reflection of their lack of knowledge and misuse of the tools. Students do not know how to use these tools, and therefore do not see the advantages those tools could bring. In the first comment, the student mentions that the tool might not always answer well to the expectations of the prompt they sent, but are they prompting well? The second comment highlights the fact that AI CF provision is less professional, and less personalised. Here again, it could be argued that with a proper use of prompting, these concerns could disappear. This phenomenon, in other words, the misuse caused by the lack of knowledge on prompting was anticipated and triggered our curiosity regarding the prompts students were using. Therefore, we included a question in students' survey, about what prompts and aspects they were using when interacting with ChatGPT. We discovered that students were not optimising their use of AI, either due to a lack of interest in these tools or a lack (as underlined in **Figure 3**) of knowledge on how to use them effectively. This lack of knowledge leads to misuse and feelings of guilt related to "cheating." In the student survey, we asked what kinds of questions they were asking ChatGPT (prompts) and what other aspects of corrections, besides CF, they were seeking.

d. Quelle genre de question poses-tu à *Chat Gpt* pour être sûr d'avoir une correction adaptée ?
N'hésite pas à nous donner un exemple.

Exemple:

Toi: J'ai écrit ce texte en anglais, peux tu corriger la grammaire?

ChatGPT: Bien sur, voici la version corrigée...

Translation: "d. What kind of question do you ask ChatGPT to ensure you get an appropriate correction? Feel free to give us an example. Example: You: I wrote this text in English, can you correct the grammar? ChatGPT: Of course, here is the corrected version..." In the table below, you will find example of comments made by students when answering the google forms survey:

Students' examples of prompts when using AI tools for CF

Simplifying texts:

- **Comment:** "Réécris ce texte d'une manière d'un élève de 5ième en simple et sans mots compliqués."
 - **Translation:** "Rewrite this text in the manner of a 5th-grade student, simply and without complicated words."

This comment shows that students use AI tools to **simplify complex texts**, making them more understandable at their proficiency level. This can be useful for younger students or those struggling with language complexity.

Summarising literature:

- **Comment:** "Fais-moi un résumé du poème de Victor Hugo 'Demain dès l'aube.'"
 - **Translation:** "Create a summary of the poem 'Tomorrow, at Dawn' by Victor Hugo."

Here, students use AI assistance to summarise literature, which can help them grasp the main ideas of the text more quickly. This can be a useful tool for studying/revising literature. It should be noted this is not an example of AI CF but is helpful in understanding how students might use the tools.

Text correction and improvement:

- **Comment:** "Oui, je lui demande de corriger le texte et de l'améliorer. Ou parfois je lui donne des idées pour le texte et il l'écrit à ma place."
 - **Translation:** "Yes, I ask it to correct the text and improve it. Or sometimes I give it ideas for the text and it writes it for me."

This comment indicates that students rely on AI to not only correct their texts but also to enhance them. While this can help in refining their work, it also raises concerns about over-reliance. The last part of the comment is actually worrying as the student mentions AI generated text, which are extremely problematic in the field of EFL education.

Generating texts:

- **Comment:** "Si sujet pas trop complexe, 'rédige-moi un texte sur...'"
 - **Translation:** "If the topic is not too complex, 'write me a text about...'"

Here again, the student uses AI to generate entire texts on given topics, especially when the topics are not too complex. This can aid in quick content creation but, and most importantly, limits their engagement in the actual writing process.

Translation and language assistance:

- **Comment:** "Comment écrirais-tu ce(tte) mot/phrase en anglais?"
 - **Translation:** "How would you write this word/phrase in English?"

This comment demonstrates the use of AI (as a dictionary/bescherelle) for translation and language assistance, helping students learn the correct way to phrase words and sentences in English.

Table 8: Students' examples of prompts when using AI tools for CF

What comes out of the comments above is that it could be said that it is not astonishing that students are not interested in using AI (see **Figure 2** for illustration) for CF if they use it that way. Those comments highlighted, yet good uses of AI tools, but mainly underlined how students used AI tools for generating texts. This overall trend is not astonishing as students have not been trained to use those AI tools properly and thus fall into the convenience of asking the AI to do everything for them. After having analysed the prompts students used, we decided to look at what other aspects of corrections students were asking AI for.

e. Demandes-tu la correction d'autres aspects (que l'orthographe, le vocabulaire, la grammaire, la ponctuation, la syntaxe) de ton texte ? Si oui, lesquels ?

Translation: e. Do you ask for the correction of other aspects (besides spelling, vocabulary, grammar, punctuation, syntax) of your text? If yes, which ones?"

In the following table you will find comments made by students in the survey, on the question e. presented above:

What do students ask for when using ChatGPT for written tasks**Aesthetic rephrasing:**

- **Comment:** "Parfois de reformuler le texte pour qu'il soit plus joli."
 - **Translation:** "Sometimes to rephrase the text to make it seem nicer."

This comment indicates that students use AI tools to enhance the aesthetic quality of their writing. By rephrasing text to make it more appealing, they aim to improve the overall presentation of their work.

Increasing complexity:

- **Comment:** "Reformuler les phrases pour en faire des plus complexes."

- **Translation:** "Rephrase the sentences to make them more complex."

Students utilise AI tools to increase the complexity of their sentences, potentially to meet higher academic standards or to challenge themselves with more sophisticated language structures.

Emulating native speakers:

- **Comment:** "La formulation du texte pour qu'il ait l'air écrit par un américain natif."
 - **Translation:** "The phrasing of the text so that it sounds like it was written by a native American."

The comment highlights the use of AI tools to modify the phrasing of their text to emulate native American speakers, aiming for a more authentic and fluent-sounding writing style. This use is not wrong if used for training purposes. It could actually concur with Teacher 2's in class experiment using ChatGPT.

Table 9: What students ask for when using ChatGPT for written tasks

As highlighted in the tables (**Table 8**, and **Table 9**) above, while some students use ChatGPT for word translation purposes, poetry summaries, and orthography questions, others ask the AI to generate complete texts adapted to their level. This practice, as we will cover in following sections, presents an ethical issue that can lead to misuse of the tool and, as Teacher 3 mentions, a form of self-sabotage. In **Table 9**, students also mentioned the use of AI as editing tools. Unlike asking the AI to write an entire text, this can be beneficial, as students can integrate the AI's suggestions into their future written tasks. This process could be used for training purposes, matching Teacher 2's vision and experiment. However, this type of use would not be adequate for graded assignments as it would distort teachers' perceptions of students' writing abilities. We will discuss these concerns in the following section, which will delve deeper into the potential drawbacks of implementing AI as a corrective feedback provision tool in EFL education.

4.5 **Potential drawbacks**

This section on potential drawbacks is divided into 4 sub-sections: Challenges of implementation, Over-reliance, Accuracy concerns and Ethical concerns.

4.5.1 **Challenges of implementation**

The three teachers demonstrated varied use of the AI tool in their personal and professional lives. In this section, we will explore the factors that could facilitate or challenge the implementation of ChatGPT in EFL classrooms.

The first factor identified from the teacher interviews is **technological accessibility**. All teachers emphasised that integrating AI tools into the curriculum requires each student to have access to a dedicated device. For instance, Teacher 1 mentioned that her institution provides each student with a Chromebook at the beginning of the year, which could facilitate the implementation of new technological tools in EFL classes. However, this is not the case for all schools. Teacher 2 and Teacher 3, who both work in the same school, noted that they must share 20 iPads with other teachers, requiring advance booking of at least one week. The same applies to classrooms equipped with computers. This aspect of accessibility clearly poses a significant challenge to the implementation of AI technology in their teaching practices.

Teacher 3 also expressed concerns about plagiarism and cheating due to her lack of personal **experience** with the tool. She feared that students might become overly reliant on AI tools and preferred not to take the risk. However, she mentioned that she would be more inclined to use AI with her students if she received proper **training** and guidance on how to effectively integrate the tool into EFL learning, a point we will cover later.

Teachers 1 and 2 highlighted the challenge of varying proficiency levels within the same classroom when implementing AI tools. They noted that each student has specific needs, and AI tools might not address these needs due to their lack of human critical thinking and emotional understanding. Additionally, Teacher 1 pointed out that some students with **dyslexia** or **dyspraxia** face difficulties using Chromebooks. She also mentioned that some parents are opposed to computer use at home, prohibiting their children from using screens, which could hinder the effective use of AI tools for home practice. Addressing the unique needs of students with disabilities and creating strategies to prevent **misuse** can ensure **equitable and ethical** use. Students also voiced concerns about academic dishonesty and **over-reliance** on AI tools

for completing assignments. Interestingly, this concern highlights the reassuring desire students have to maintain their ability to work autonomously and avoid becoming completely reliant on these technologies. This implies that there is a certain degree of consciousness and accountability in utilising AI, which may be developed through guided instruction.

While students were not directly asked about these challenges in the survey, accessibility and over-reliance emerged as recurring themes in their open-ended responses. Both teachers and students highlighted accessibility as a key issue. To ensure equitable access and effective use of AI tools in education, efforts are needed to provide the necessary devices and training. The findings presented in the section above are supported by the following graph, **Figure 8**, from the students' Google Forms survey, which clearly indicates that the majority of students have never received any AI-generated corrective feedback for their language classes. Students were asked the following question:

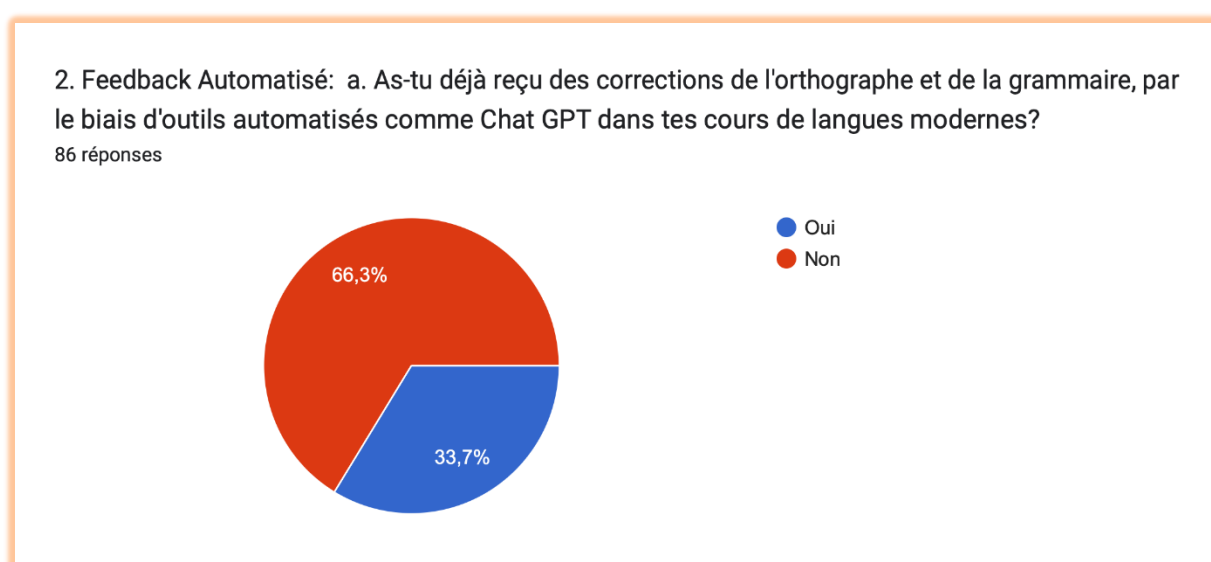


Figure 8: Percentages of students who received CF mediated by AI tools

Given all the information retrieved up to now, it is not surprising to find out that 66,5% of students never received automated CF.

4.5.2 Over-reliance

4.5.2.1 *Students*

When asked in the survey what kinds of prompts students were using for ChatGPT, many responses were problematic and aligned with teachers' concerns about cheating and over-reliance on these tools to produce content. As mentioned before, teachers are concerned with

the potential misuse, over-reliance, and cheating risks that AI use could provide. With the insights from **Table 8**, and comments presented in **Table 10**, we can attest that this concern is justified as misuse seems to be a trend among students. Here are some examples of prompts that clearly go well beyond ethical use and unfortunately align with teachers' apprehensions:

Students' examples of problematic prompts when using AI tools for CF
Text correction and improvement: • Comment: "Oui je lui demande de corriger le texte et de l'améliorer. Ou parfois je lui donne des idées pour le texte et il l'écrit à ma place." ◦ Translation: "Yes, I ask it to correct the text and improve it. Or sometimes I give it ideas for the text and it writes it for me." This comment indicates that students rely on AI tools not only to correct their writing but also to improve it. Additionally, some students use AI to generate entire texts based on their ideas, which <i>could</i> be beneficial for refining their work but highly raises concerns about academic integrity and ownership of their work. Translation tasks: • Comment: "Retraduis-moi ce texte en néerlandais (Mon texte que j'ai écrit)." ◦ Translation: "Translate this text back into Dutch (The text that I wrote)." Students use AI tools for translation tasks, helping them switch between languages quickly. This can be particularly useful for bilingual or multilingual students who need to understand and produce content in different languages. Using translation services: • Comment: "Je fais sur Deeple ou Google Traduction donc j'ai simplement à écrire en français et il génère automatiquement et instantanément dans la langue choisie. Je n'ai plus qu'à copie coller." ◦ Translation: "I use Deeple or Google Translate, so I just have to write in French and it automatically and instantly generates it in the chosen language. I just have to copy and paste." This comment illustrates how students use online translation services to quickly convert their work from one language to another. While this is efficient, it can/will eventually lead to dependency and also raises concerns about academic integrity, critical thinking and language skills overall.

Table 10: Students' examples of problematic prompts when using AI tools for CF

These examples highlight a worrying trend where students rely heavily on AI tools to not only correct their work but also to produce content on their behalf. Such practices raise

significant concerns about academic integrity and the students' development of critical thinking and writing skills. This reliance on AI can lead to a superficial understanding of the material, as students may not engage deeply with their errors or the learning process. On the other hand, some students made very good and ethical use of the AI resources. Here are a few examples of comments made by students that highlight ethical use of AI in their work, fostering learning rather than text generation:

Students' examples of adequate prompts when using AI tools for CF

Requesting error correction:

- **Comment:** "J'ai écrit ce texte; peux-tu regarder et corriger les fautes?"
 - **Translation:** "I wrote this text; can you look at it and correct the mistakes?"

This comment shows students using AI tools for a straightforward error correction, seeking assistance to identify and correct mistakes in their writing.

Specific error correction requests:

- **Comment:** "Je lui demande : Corrige l'orthographe et les fautes présentes dans ce texte."
 - **Translation:** "I ask it: Correct the spelling and mistakes present in this text."

Here, students are making specific requests for spelling and error correction, indicating a targeted use of AI tools to improve their writing accuracy.

General error correction:

- **Comment:** "Corrige-moi s'il y a des fautes."
 - **Translation:** "Correct me if there are any mistakes."

This rather general request for error correction reflects students' reliance on AI tools to identify any mistakes they might have missed. This use provides an additional layer of review.

Spelling correction in English:

- **Comment:** "Peux-tu corriger l'orthographe de mon texte en anglais?"
 - **Translation:** "Can you correct the spelling of my text in English?"

Students use AI tools specifically for spelling corrections in English, demonstrating how they leverage technology to enhance their language learning and writing skills.

Specific context request:

- **Comment:** "Je suis une fille en 6e année secondaire, j'ai rédigé ce texte; peux-tu le corriger?"

- **Translation:** "I am a girl in 6th year of secondary school, I wrote this text, can you correct it?"

What is interesting here is that this comment includes context about the student's educational level, indicating that students might provide additional information to get more tailored feedback from AI tools.

Table 11: Students' examples of adequate prompts when using AI tools for CF

These prompts are more appropriate as they focus on using AI tools to enhance the students' learning by identifying and correcting errors rather than generating content. By seeking specific corrections, students can learn from their mistakes and improve their language skills.

As Teacher 3 mentions, there is also a risk of over-reliance on screens, both for students and teachers. She has concerns about increased screen time and its potential impact on mental health and well-being. During the interview she stated: "(...) j'ai toujours peur aussi qu'on tombe toujours dans ce monde des écrans."⁵ She calls for a balanced approach to integrating technology in education to avoid negative impacts on student health.

Teacher 3's concerns are echoed by the need to maintain human interactions in the educational process. While AI tools can provide quick and efficient CF, they cannot replace the nuanced understanding, and personalised support that human teachers offer. It is crucial to balance the use of technology with traditional teaching methods. This would ensure that students develop a well-rounded skill set and do not become overly dependent on AI.

4.5.3 Accuracy concerns

4.5.3.1 *Teachers*

Both students and teachers have accuracy concerns regarding the use of those tools. While Teacher 1 and 2, seem to trust the CF provided by ChatGPT, Teacher 3 holds some concerns regarding the database ChatGPT is feeding itself onto. She fears that, ChatGPT's database might not be up to date and thus causing issues. Teacher 3 expressed concerns about the accuracy and reliability of AI-generated corrections, stating, "Est-ce que ça va marcher à

⁵ I am afraid that we are falling into this world of screens." (Teacher 3)

100% tout ce logiciel? Je ne sais pas."⁶ emphasises the need for teachers to review and verify AI-generated feedback to ensure its quality and reliability.

4.5.3.2 *Students*

Students also hold concerns about the accuracy of Chat GPT for corrective feedback provision. Their comments highlight various issues they have encountered or anticipate with the use of AI tools for CF.

Students' accuracy concerns when using AI tools for CF
Ambiguity and multiple meanings: • Comment: "Les phrases ont plusieurs sens donc l'orthographe peut être différente." ◦ Translation: "Sentences have multiple meanings, so the spelling can be different." This comment highlights a concern that AI tools might struggle with the nuances of language. Since sentences can have multiple meanings, the AI might choose a spelling or correction that is contextually inappropriate. Error residue: • Comment: "Qu'il laisse des erreurs." ◦ Translation: "It leaves errors." Some students are concerned that AI tools are not infallible and might leave errors uncorrected. Handling exceptions: • Comment: "Les exceptions." ◦ Translation: "The exceptions." Language is full of exceptions to grammatical rules, and students worry that AI tools might not handle these exceptions well. Lack of precision: • Comment: "Pas assez précis." ◦ Translation: "Not precise enough." This comment expresses a general concern about the precision of AI-generated feedback. Students fear that the feedback might be too broad or vague.

⁶ "Will this software work 100% of the time? I don't know." (Teacher 3)

Spelling mistakes and cognitive engagement:

- **Comment:** "Si les professeurs utilisent ChatGPT, ça peut laisser des fautes d'orthographe sur nos exercices et ça ne fait plus travailler le cerveau d'utiliser ChatGPT."
 - **Translation:** "If teachers use ChatGPT, it might leave spelling mistakes in our exercises and ChatGPT doesn't require the brain to work."

This comment combines concerns about accuracy with a broader worry on cognitive engagement. The student fears that reliance on ChatGPT might result in unchecked spelling errors and reduce the mental effort required to learn and correct mistakes.

Table 12: Students' accuracy concerns when using AI tools for CF

These comments reflect a broad spectrum of accuracy-related concerns among students. Some students worry that AI-generated feedback might be too generalised or not sufficiently precise to address the nuances of language learning. They fear that ChatGPT might not accurately interpret sentences with multiple meanings or handle exceptions well, potentially leading to incorrect corrections. Additionally, there is concern that over-reliance on ChatGPT might reduce the cognitive effort students put into learning, as students might not engage deeply with the material.

4.5.3.3 *Summary of accuracy concerns*

The concerns raised by both teachers and students emphasise the need for a cautious approach to integrating AI tools like ChatGPT into educational settings. As mentioned before, these tools can offer valuable support for corrective feedback, their accuracy and reliability **must** be continually assessed and verified by educators. Teachers play a crucial role in ensuring that AI-generated feedback is accurate and meaningful, supplementing it with their expertise and personalised guidance to address the specific needs of their students.

4.5.4 **Ethical concerns**

Ethical concerns about using AI tools for CF provision in EFL education include among other factors, over-reliance, and academic dishonesty. To tackle these issues, it is crucial to create clear guidelines for ethical use and integrate AI tools as **supplementary aids** rather than primary sources of CF. Teachers should educate students on the appropriate use of AI tools and encourage critical thinking as well as self-editing skills.

4.5.4.1 Students

The first trend that has been observed is that students worry about the ethical use of those tools. As presented in **Table 13**, students they believe that excessive use of AI would hinder their ability to reflect independently, prevent them from working alone without external AI input, and, most importantly, lead to the risk of it being considered cheating. They have concerns about academic dishonesty and over-reliance on AI tools for completing assignments. Below, we included examples of statements made by students that highlight their ethical concerns when using AI tools for CF.

Examples of students' ethical concerns when using AI tools for CF
Loss of independence: • Comment: "Ne plus savoir travailler tout seul." ◦ Translation: "Not being able to work alone anymore." This comment highlights a significant concern that over-reliance on AI tools could lead to a loss of independent working skills. Students worry that constant use of automated CF might hinder their ability to solve problems and work through errors on their own. Reduced critical thinking: • Comment: "Amène à la facilité et plus à la réflexion." ◦ Translation: "Leads to ease rather than reflection." Here, the student suggests that using AI for CF might promote a culture of convenience over deep thinking. There is a concern that students might prefer easy solutions provided by AI, rather than engaging in critical thinking. Decreased cognitive engagement: • Comment: "On réfléchit moins." ◦ Translation: "We think less." This comment echoes the previous one, emphasising that reliance on AI tools might result in reduced mental effort. Lack of understanding: • Comment: "Ne pas comprendre ses erreurs." ◦ Translation: "Not understanding one's mistakes." This student is concerned that AI tools might correct mistakes without providing the needed explanation, which would lead to a lack of understanding. Without

knowing why something is wrong, students are less likely to learn from their errors and improve.

Ethical concerns:

- **Comment:** "On pourrait considérer ça comme de la triche."
 - **Translation:** "It could be considered cheating."

Using AI tools for corrective feedback raises ethical questions for some students. They worry that relying on AI to correct their work might be viewed as cheating, for it bypasses the effort needed to identify and fix mistakes by themselves.

Table 13: Examples of students' ethical concerns when using AI tools for CF

4.5.4.2 *Teachers*

All teachers express concerns about dependency on AI tools, highlighting the risk of over-reliance and misuse. Teacher 3 specifically mentions plagiarism and cheating as issues arising from the potential implementation of GenAI as a CF provision tool. She is worried that students might use AI tools to produce work dishonestly, impacting the integrity of their learning. During the interview she stated: "(...) tu te bernes en tant qu'élève, tu te bernes sur toi-même, tu bernes les profs et ça ne sert à rien."⁷ She emphasises the fact that a misuse of AI tools for CF will prevent the student from learning and developing their cognitive skills, failing themselves as students and their teachers. There is a necessity for clear guidelines and education on the ethical use of AI tools to prevent academic dishonesty. Teacher 3 also mentions the risk of over-reliance on screens, expressing concerns about increased screen time and its potential impact on mental health and well-being.

4.6 Teacher's role and training

Throughout the research, teachers frequently mentioned the potential of integrating AI tools for corrective feedback and other instructional practices in EFL education. However, as mentioned in previous sections, they expressed concerns about students' over-reliance, misuse, and cheating induced by these tools.

All three teachers highlighted their lack of knowledge and time to investigate these tools in their free time, which explains their reluctance to integrate them further into their

⁷ "Because you fool yourself as a student, you fool yourself, you fool the teachers, and it's pointless." (Teacher 3)

teaching practices. Even though they see the potential, they do not know how to implement those tools effectively. The teachers interviewed expressed a need for training by professionals who could teach them how to use these tools within their discipline. They emphasised that the training should focus on integrating these tools into teaching, not just on how to use them. They stressed the importance of having instructors with teaching knowledge in addition to AI knowledge. In other words, professional development programs that focuses on practical applications and ethical considerations. Teachers believe that with proper training, they could become more comfortable using AI tools and pass this knowledge on to their students. For instance, we observed that some teachers, like Teacher 3, do not allow the use of these tools in any aspect of students' production because they themselves do not understand them.

If we can reverse this tendency and train teachers, it would be beneficial for everyone, as they are at the centre of the classroom and play a crucial role in educating students on how to use these tools appropriately. Providing training for teachers would make them confident in their ability to use the tools, enabling them to educate students on their proper use and set a good example.

In the Google forms survey, a student states: "Il faudrait nous montrer comment utiliser correctement ChatGPT."⁸ This comment emphasises the necessity of training both teachers and students on the appropriate use of AI tools, so that they understand how to leverage these tools without compromising learning integrity. In today's world, it is extremely important to educate students about the new technologies they are exposed to daily. Instead of prohibiting and demonising these tools, teachers should educate students on how to use them effectively and ethically.

The Fédération Wallonie-Bruxelles (FWB) could potentially provide training initiatives. However, as a governmental institution, the FWB might take time to develop and implement comprehensive training programs. In the meantime, individual schools could take the initiative to offer training sessions. By doing so, schools can ensure that their teachers are not only prepared to use AI tools like ChatGPT effectively but also confident in integrating these tools into their teaching practices. This proactive approach could bridge the gap until

⁸ "We should be shown how to use ChatGPT correctly."(Student)

official training programs are in place. And thus, responding to students' need and educating them.

4.7 **Future integration**

4.7.1 **For teachers**

AI tools can be used for various **resources**, such as creating teaching materials, providing inspiration, adapting texts to the expected level, and generating content. Although highly practical, these applications are outside the realm of corrective feedback provision.

For corrective feedback provision, all three teachers mentioned that when grading a paper or written production, they first scan the text for a general sense while correcting mistakes in grammar, punctuation, syntax, etc., and then tackle the content and structure. AI could be particularly useful for correcting these mistakes, allowing teachers to focus more on the structure and content. This would result in efficient time management and significant time savings, enabling teachers to further analyse the content. In the Google Forms survey, a student suggested, "Corriger les erreurs par l'IA et les expliquer par le professeur."⁹ This comment is perfect as it highlights the need for a balanced approach where AI is used for initial corrections, and teachers provide the final review and detailed feedback. Having a balanced approach ensures that students benefit from the efficiency of AI while still receiving the nuanced and personalised feedback that only a teacher can provide. It goes without saying that teachers should also verify ChatGPT's corrective feedback. This verification provides accuracy and helps teachers maintain a close connection with their students and their progress. As Teacher 3 brought up during the interview, relying solely on AI for corrective feedback might make teachers feel less connected to their students and their progression. Using AI as a supplementary tool for initial corrections, with teachers carefully verifying the CF, and focusing on content and structure, would be a balanced approach.

4.7.2 **For teachers and students**

AI for corrective feedback provision could also be **used in class**. As highlighted in this research, class sizes are increasing, and the differences in proficiency levels within the same

⁹ "Correct the errors with AI and have the teacher explain them." (Student)

class are becoming more pronounced. Teachers could make AI tools available for students to check their vocabulary, grammar, punctuation, and syntax during the writing process. Rather than using AI at the start of a written assignment, students could use it at the end of their production, similar to using a *Bescherelle* or dictionary, to check their mistakes. For this to be effective, teachers would need to provide swift and accurate prompts to ensure students use the tools correctly for grammatical corrections only. As one student suggested, "Je pense surtout qu'il faudrait l'utiliser comme un simple outil car dans le fond, il est comme une sorte de dictionnaire amélioré."¹⁰

AI tools for corrective feedback can also serve as a demonstration of the **level students need to reach**. Teacher 2 mentioned an activity where she compared different texts using ChatGPT for corrective feedback. She used a prompt to indicate the level the students needed to reach, and the corrections provided by ChatGPT were adapted to each text's level. Such activities can show students what their texts are missing to achieve a better grade or improve their overall writing skills. As Teacher 2 noted, in English classes, the situations and tasks in a written assignment may be similar across different grade levels, but the expected production differs depending on the year. Using AI this way can make students aware of the required standards, helping them learn from texts appropriate for their grade level, understand the structures used by the AI, and apply them in their work.

Similarly, students could use AI tools for corrective feedback **at home** to check their homework after completing it. This way, they do not feel like they are cheating but are using AI as a tutor to highlight their mistakes. Implementing this practice will require maturity from students and training from teachers to prompt effectively and avoid receiving corrective feedback meant for a different grade level.

Implementing AI tools for corrective feedback in this manner would prevent students from feeling like they are cheating. With guidance from their teachers, students can learn to use the tools effectively for their level. They would not become overly reliant on the tool since it would only be used at the end of the writing task, similar to a dictionary. Many students believe that these tools should only be used for non-graded assignments and not systematically, to prevent over-reliance and ensure they gain knowledge from the tool. This approach preserves

¹⁰ "I think it should mainly be used as a simple tool because, in essence, it is like an enhanced dictionary." (Student)

the human connections that are crucial in language learning and helps find a balance between technology and traditional methods. Balance and awareness are the two most important concepts.

4.7.3 Conclusion on future integration

While AI tools like ChatGPT offer significant benefits in terms of efficiency and timesaving, there are notable concerns about accuracy and ethical use. Future integration should focus on balancing AI-generated feedback with traditional teaching methods, ensuring that teachers and students receive adequate training to use these tools effectively and ethically.

4.8 Summary of the results

This study explored the integration of AI tools, particularly ChatGPT, for CF provision in EFL education. The results provide insights into the perceptions and practical implications from both students and teachers.

4.8.1 Overview of the data

A total of 86 students participated in the study, with the survey facilitated by their teachers. Most respondents were 4th-grade students, with fewer participants from 3rd, 5th, and 6th grades. Regarding language proficiency, 66.3% of students had English as their first language (LM1), and 44.2% had Dutch as LM1. Options for Spanish, German, and other languages were included but received limited responses. Three teachers participated in the interviews, referred to as Teacher 1, Teacher 2, and Teacher 3. Their use of ChatGPT varied significantly.

4.8.2 Current use of AI tools

All three teachers have different use of AI tools. Teacher 1 utilises AI tools for checking vocabulary and sentence structures outside the classroom but has not integrated them into her teaching practices. Teacher 2 has used ChatGPT to create texts at different proficiency levels, demonstrating language progression to students. Teacher 3 has tried "Magic School" but avoids using ChatGPT due to concerns about increased screen time and a preference for traditional methods.

Student use of ChatGPT is diverse. While 34.9% are not interested in using it for academic purposes (corrective feedback), 30.2% use it for both personal and academic purposes. Some students expressed concerns about potential cheating and proper usage, with 19.8% worried about being accused of cheating.

4.8.3 Perceived benefits

1) Efficiency:

The teachers interviewed recognise the efficiency of AI tools in handling basic grammatical and syntactical errors, allowing them to focus more on content and structure. This leads to better time management and more in-depth feedback.

2) Timesaving:

This study underlined the fact that AI tools could significantly reduce the time teachers spend on basic corrections, enabling them to focus on more complex aspects of student work. Students also see the benefit of quick, accessible feedback that provides greater autonomy.

3) Student autonomy:

In this study, it has been highlighted that AI tools could enhance student autonomy by allowing self-correction and independent learning. However, proper training and awareness are necessary to ensure effective and ethical use.

4) Personalisation and adaptivity:

Teachers believe AI tools can provide personalised and adaptive feedback. Teacher 2's classroom experiments showed that with the right prompts, ChatGPT could tailor feedback to students' proficiency levels. However, students did not explicitly recognise these benefits, likely due to their unoptimized use of the tools.

4.8.4 **Potential drawbacks**

1) Challenges of implementation:

Technological accessibility is a significant barrier. Not all schools have the necessary resources, which hinders effective integration. Teachers also noted the challenge of addressing varying proficiency levels and the needs of students with disabilities.

2) Over-reliance:

There is a risk of students and teachers becoming overly dependent on AI tools, which could reduce critical thinking and increase screen time, potentially impacting mental health.

3) Accuracy concerns:

Concerns about the accuracy and reliability of AI-generated feedback were prevalent. Teacher 3 specifically questioned the currency of ChatGPT's database.

4) Ethical Concerns:

Ethical issues include potential over-reliance and academic dishonesty. Establishing clear guidelines and integrating AI as a **supplementary** tool is crucial. Teachers need to educate students on ethical use, encourage critical thinking and self-editing skills.

4.8.5 **Teacher's role and training**

The teachers interviewed see the potential of AI tools but feel unprepared to integrate them due to a lack of training. Professional development programs focusing on both technical and pedagogical aspects appear to be a necessity. Having an effective training would enable teachers to use AI tools confidently while also educating students on their appropriate use.

4.8.6 **Future integration**

AI tools could be used for creating teaching materials, adapting texts to the appropriate levels, and generating content. As far as CF is concerned, we can say that AI can handle initial errors, allowing teachers to focus on structure and content. This balanced approach ensures efficiency while maintaining the personalised support that only teachers can provide. Teachers

should verify AI-generated feedback to ensure accuracy and maintain a connection with students' progress.

5 CHAPTER 5: Conclusion

This dissertation has shown that the FWB has achieved substantial progress in improving digital infrastructure and competencies. However, the integration of AI into the educational system is still in its early stages. While the groundwork for digital literacy has been established, effectively integrating AI into education requires careful planning, policy development, and ongoing teacher training. As the FWB continues to refine its educational strategies, there is a clear opportunity to incorporate AI in a way that enhances the learning process while carefully addressing the ethical and practical challenges associated with this technological shift (Stratégie numérique pour l'éducation, 2019; FMTTN, 2019). It is crucial to note that this dissertation accurately reflects the current state of governmental legislation regarding the integration of AI in education at the time of writing. However, these regulations can be changed, and it is possible that new efforts or amendments may have been enacted by the time this dissertation is read. It is thus crucial to bear this in mind when assessing the findings of this study.

This study sought to examine the viewpoints of teachers and students regarding the use of ChatGPT for delivering corrective feedback (CF) in English as a Foreign Language (EFL) training in the Fédération Wallonie-Bruxelles (FWB). The findings indicate that both groups largely recognise the capability of ChatGPT as a tool to enhance the CF process, particularly in terms of efficacy, accessibility, and student engagement.

An analysis of the collected data reveals that instructors recognise the advantages of ChatGPT in terms of reducing their workload and providing timely feedback. Nevertheless, they also voice concerns regarding the tool's accuracy and the potential for pupils to overly rely on AI-generated output. Students appreciate the timeliness and ease of access to feedback provided by ChatGPT, allowing them to independently correct their work. However, they also have concerns about the accuracy of the feedback and the lack of personalised, face-to-face interaction that they value greatly in the learning process.

Despite these concerns, the study reveals that teachers and students are typically open to integrating AI tools like ChatGPT into the classroom, provided that there is adequate training and supervision. Using ChatGPT for computer-based instruction shows effectiveness in

promoting student independence and involvement, while it may not completely replace the need for human-guided feedback, particularly in more complex language tasks.

The results of this study somewhat confirm the initial hypotheses proposed at the beginning of the examination. ChatGPT exhibits promise as a supplementary instrument for instructing English as a Foreign Language (EFL), offering tangible benefits such as time reduction and enhanced student engagement. However, the findings also suggest that the effectiveness of the tool is greatly affected by how well it is incorporated into the teaching process and the amount of support it receives from the instructor's guidance and feedback.

While the findings offer valuable insights into the potential of AI in education, this study does have several limitations. The study's limited focus on female instructors in Wallonia limits the generalisability of the findings to a wider population. Furthermore, the rapid progress of AI technology presents challenges in guaranteeing the relevance of the study, as subsequent versions of AI tools may possess unique capabilities and limitations. The study's reliance on self-reported data and the voluntary nature of participation may create biases that could affect the reliability of the findings.

These limitations highlight the need for further research that employs larger and more diverse samples, incorporates both quantitative and qualitative techniques, and aims to acquire a more comprehensive understanding of the impact of AI tools like ChatGPT on English as a Foreign Language (EFL) instruction. Further enquiries could augment this study by conducting a comparison examination between groups that employ artificial intelligence (AI) technology and those who abstain from it, with the aim of more precisely assessing the impact on language acquisition outcomes. Moreover, undertaking an inquiry into the long-lasting effects of AI implementation in education will result in a deeper comprehension of its potential benefits and challenges.

Overall, this study contributes to the ongoing discussion on the use of AI in education by providing evidence that AI technologies like ChatGPT offer significant benefits. Nevertheless, it underscores the significance of adopting a prudent and deliberate strategy when incorporating these tools into the educational setting. It emphasises the importance of taking into account the needs and perspectives of both educators and learners.

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