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**Investigating the Role of Artificial Intelligence Tools on EFL
Students' Learning Autonomy: The Case of Third-Year EFL
Students at the Department of English at Tlemcen University**

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Declaration

I hereby declare that this submission is my own work, and I verified that I have acknowledged all external materials used in the present work through appropriate referencing.

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Date:16/06/2025

Dedication

To the spirit of my dear grandmother, who always dreamed of seeing me graduate and succeed. Even though she is no longer with me, her dream lives on in every step I take.

To my wonderful parents, whose unconditional love and support have been the foundation of my educational journey. Special thanks go to my mother, who taught me from a young age how to be strong just like her, happy, and believe in the best version of me.

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Abstract

The main purpose of this study was to explore the integration of Artificial Intelligence (AI) tools in English as a Foreign Language (EFL) traditional classroom, and how these tools can influence the development of autonomy among third-year students in the Department of English, Faculty of Letters and Languages, at Abou Bekr Belkaid University in Tlemcen. Additionally, it examined the students' and teachers' perspectives on the benefits and challenges of AI in fostering independent learning. To achieve these objectives, this study adopted an exploratory research design based on a mixed-method approach that involved both quantitative and qualitative data. These data were collected from an online questionnaire for 42 EFL students and structured interviews with 10 EFL teachers in the English Department of the University of Tlemcen. The results revealed that students believed that AI technologies enhanced their autonomous learning, especially when the guidance of their teachers supported it. Teachers also mentioned that AI tools should be limited to the role of an assistant only and not replace the human touch. Furthermore, teachers emphasised the need for close supervision to ensure that students use AI responsibly and ethically. In fact, AI tools enabled personalised learning and idea generation, but learners remained primarily responsible for developing and analysing these ideas. However, the study highlighted concerns about over-reliance on artificial intelligence, which may negatively impact students' critical thinking skills. Therefore, if students use AI wisely and are well supervised by teachers, it effectively enhances learner independence and helps create a more supportive and effective learning environment.

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List of Abbreviations and Acronyms

AI: Artificial Intelligence

ALSs: Adaptive Learning Systems

CALL: Computer-Assisted Language Learning

CBA: Competency-Based Approach

CEO: Chief Executive Officer

ChatGPT: Chat Generative Pre-trained Transformer

CLT: Communicative Language Teaching

CWP: Comprehension and Writing Production

EFL: English as a Foreign Language

ELSA: English Language Speech Assistant

ESP: English for Specific Purposes

Hyp: Hypothesis

ICT: Information and Communication Technology

L3: Third year

MOOCs: Massive Open Online Courses

RQ: Research Questions

SDL: Self-Directed Learning

TED: Teacher Education Development

TEFL: Teaching English as a Foreign Language

General Introduction

The integration of Artificial Intelligence (AI) tools into English as a Foreign Language (EFL) traditional classroom represents a transformative approach to enhancing the autonomy of learning processes. Recently, there has been a significant shift towards the need for learners to take responsibility for their own learning. Nowadays, the concept of autonomy in the educational field goes beyond motivation, it also encourages students to think critically, solve problems and many other skills essential for language acquisition. Traditional teacher-centered or talk and chalk teaching methods may weaken student autonomy, forcing teachers to develop new approaches and call for innovation to inspire students. AI tools, as an assistant, can adapt to learner's individual needs and preference. These technologies offer personalised learning experiences, enabling students to interact with language materials tailored to their interests and requirements through immediate feedback on their language use. Such tools not only provide accessible resources but also encourage autonomy by allowing learners to take control of their learning. As a result, the traditional classroom environment may be modified, moving away from passive recipients of knowledge to active independent learners.

However, despite AI's benefits in education, many teachers are concerned about students misusing these tools. Their concerns arise from the observation that over-reliance on AI may, instead of promoting autonomy, lead to a decline in basic cognitive and academic skills. Students may become less involved in active learning and critical thinking abilities, and develop a negative attitude toward their educational responsibilities. In some cases, they may be so satisfied that they do not seek to question or even understand the answers generated by AI, which in turn weakens their ability to learn independently. Therefore, the central research problem of this study is whether the use of AI tools in Algerian EFL classrooms support or hinder the development of autonomy among students.

The choice of this study is particularly relevant in the Algerian context, where the integration of AI tools into classrooms is still in its early stages and where autonomy remains a challenge. Incorporating artificial intelligence tools into academic settings

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will undoubtedly represent a significant transformation that affects teaching and learning. AI technologies have made their mark in the educational field with tools specifically designed to address the diverse needs of students, from personalised learning to immediate assistance and feedback. However, the use of these tools at the English Department of Tlemcen University is still not officially allowed, as many EFL teachers believe that AI kills students' creativity and encourages overreliance. This belief has led EFL students to use AI secretly, without the teacher's guidance. Still, the rapid development of technology highlights the need for Algeria to modernize its educational system and adapt to global trends. If used wisely, AI can be a strong support for autonomous learners by helping them improve in areas like language proficiency, critical thinking, problem-solving, and creativity. The findings may also help teachers, universities, and decision-makers make better choices about using AI in a way that supports student autonomy.

The main objective of this research is to examine the role of AI tools in fostering or limiting autonomy among students in traditional EFL classrooms. It also aims to explore students' opinions about learning with the AI assistance and the risks learners may face, such as over-reliance or ethical concerns. Furthermore, the study intends to identify the challenges and opportunities AI presents for both learners and educators. In the end, the study proposes a set of suggestions and recommendations for integrating AI in ways that complement traditional teaching while helping students become more autonomous in their learning. In order to achieve the primary objectives of the present study, the following research questions were developed within the suggested hypotheses.

RQ1: How do third-year EFL students perceive the role of AI tools in their learning autonomy?

RQ2: How can AI tools benefit third-year EFL students' learning autonomy?

RQ3: How can an over-reliance on AI tools impact third-year EFL students' learning autonomy?

To answer the questions above, the following hypotheses are formulated:

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Hyp1: Third-year EFL students view AI tools as beneficial in fostering greater learning autonomy.

Hyp2: When combined with traditional teacher guidance, AI tools can enhance third-year EFL students' learning autonomy by offering personalised feedback and learning support.

Hyp3: An over-reliance on AI tools may decrease third-year EFL students' critical thinking and lead to reduced self-driven learning efforts.

To confirm or reject the hypotheses, the current research employs an exploratory case study (mixed-method approach) using two research instruments. The case study is conducted with third-year EFL students in the Department of English, Faculty of Letters and Languages, at Abou Bekr Belkaid University in Tlemcen. The research instruments are administered to 52 participants, including an online questionnaire addressed to 42 students and a structured interview for 10 English teachers at the same department. The primary purpose behind using these instruments is to explore how the integration AI tools in traditional EFL classrooms affects students' ability to learn autonomously, focusing on the impact of overreliance on critical thinking, problem solving and self-driven learning. The data gathered from these tools are then analysed quantitatively and qualitatively.

The dissertation is divided into two chapters. The first chapter covers the theoretical part, identifying the concept of autonomy, factors and challenges influencing autonomous learning, introducing AI tools in EFL traditional classrooms and the impact of these tools on autonomous learning. The second chapter covers the practical part that includes research design, sample population, research instruments, data analysis and interpretation, and a set of suggestions and recommendations.

Chapter One:

Literature Review of Artificial Intelligence and Autonomous Learning

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1.1. Introduction

In the last few years, the educational landscape has experienced an important transition towards a learner-centred approach that focuses more on the students' crucial role in improving their learning process. This shift reflects an increasing awareness that students do best when they are actively engaged and given the freedom to direct their own educational experiences. Modern teaching methods aim to help learners build skills for lifelong learning, transforming them from passive recipients of knowledge into active and autonomous learners. As Light (2001) highlights, students who take charge of their learning, study independently, and reflect on their learning generally achieve better results than those who just rely on classroom instruction.

On this basis, this chapter introduces the concept of autonomy in the traditional EFL classrooms and investigates the effectiveness of artificial intelligence tools in improving the ability of students to learn independently. It explores the relationship between autonomous learning and the rise of AI instruments, highlighting both the opportunities and challenges these technologies present. Reviewing previous research aims to provide a clear understanding of how AI influences the study strategies that learners use on their own.

1.2. Autonomy

The notion of autonomy has historically been a significant area of interest and a central research subject in learning and teaching foreign languages. This term is derived from the Greek words *auto*, meaning 'self,' and *nomos*, meaning 'rule' or 'law.' Autonomy signifies the capacity to self-manage and make choices (Agich, 1993). Benson (2001) notes that autonomy is a fundamental precondition for effective learning, emphasising its crucial role in enabling learners to take responsibility for their educational learning process.

Autonomy began to gain recognition in the 1970s with the founding of the Centre de Recherches et d'Applications en Langues (CRAPEL) at the University of Nancy in France. This project was initially led by Yves Châlon and later by Henri Holec, who is referred to as the father of learner autonomy. Holec (1981, as cited in Benson, 2001) describes autonomy as the capacity to take responsibility for and manage one's

learning process. Additionally, Joshi (2012) describes an autonomous person as someone who can freely make his or her decisions and act on them without relying on others.

Despite its broad recognition, autonomy is still a debated notion. Scholars have found it challenging to agree on one definition because it includes various aspects of free will, self-governance and critical reflection. Dworkin (1988) perceives autonomy as a skill that enables individuals to critically assess their desires, values, and actions, ensuring their choices are aligned with their higher-order goals. Furthermore, Wermke and Salokangas (2015) explain that discussions about autonomy as a concept focus on whether people or groups are able to govern themselves or not, in addition to rules or restrictions that may hinder them. Dworkin (2015) argues that autonomy is a complex idea devised by scholars to help untangle a combination of personal beliefs, theoretical problems and moral arguments. At its core, autonomy is the individual's ability to make choices and critically evaluate them.

1.2.1. Self-Directed Learning

The concept of Self-Directed Learning (SDL) is frequently used interchangeably with autonomous learning; however, researchers point out nuanced distinctions. Autonomy refers to the capacity to critically reflect on one's learning objectives and align them with personal values (Dworkin, 1988). Self-directed learning means taking charge of one's learning process while also having traits including self-efficacy and motivation (Ruttencutter, 2018). On the other hand, SDL focuses on the practical methods learners use to navigate their learning, including goal setting and material selection (Holec, 1981). Dickinson (1987) explains that SDL requires that learners assume responsibility for their choices regarding their progress and pacing, even when collaborating with others. Meanwhile, Little (1991) adds that autonomy is not just independence but a mindset in which learners actively develop a psychological connection with their learning experience, promoting their critical thinking and independent actions.

At its core, SDL directly relates to both freedom and responsibility. Researchers such as Knowles (1975) describes it as a method in which learners identify

their needs, establish goals, and evaluate results, whether they receive external support or not. Similarly, Candy (1991) argues that self-direction is both a goal (achieving independence as a learner) and a process (controlling one's learning path). Nevertheless, this independence does not mean isolation, as Dickinson (1987) points, SDL can still incorporate teamwork and collaboration, but the learner remains the primarily responsible person for his/her learning, guiding his/her choices even in group settings. Du Toit-Brits and Van Zyl (2017) suggest that people who are good at self-directed learning can effectively set goals, plan their learning, and develop motivational techniques when needed. This approach shifts students from passive listeners to active learners in their education journey.

1.2.2. Independent Learning

Independent learning is characterized by an individual's capacity to master skills or understanding through dedicated, self-driven efforts, and sometimes in isolation. Unlike traditional classrooms, where students passively receive knowledge from the teacher, independent learning requires learners to actively engage with concepts, refine skills through repetition, and assimilate information independently without ongoing guidance (Sennett, 2008). Feynman (as cited in Robbins, 1999) argued that true comprehension happens when learners engage with ideas on their own, developing personal interpretations of theoretical concepts. This kind of isolated commitment develops flexibility, adaptability, and intellectual curiosity, by encouraging learners to define their objectives, seek resources, and assess their progress without external support or intervention (Pintrich, 2000).

In the same line of thought, Pintrich (2000) points out that those who manage their own motivation and methods during independent study are more likely to achieve mastery through adjusting their strategies to overcome challenges. Similarly, Brookfield (1985) highlights that independent learning increases when learners develop their critical thinking skills, questioning preconceptions and integrating new knowledge by individual study. Sheerin (2014) claims that developing independent learning is a slow and complex process, but ultimately leads to more significant benefits and progress for learners. Dron (2018) explains that what makes independent learning unique goes

beyond just the process of learning itself because it involves factors that are difficult to measure but important like motivation, sense of connection and belonging. Although collaboration can enrich the educational experience, the core of independence lies in disciplined engagement with the adequate materials, transforming theoretical notions into practical expertise (Sennett, 2008).

1.2.3. Lifelong Learning

Lifelong learning refers to a continuous quest for knowledge and skills beyond traditional schooling, extending throughout adulthood. It encompasses both formal classes and informal learning that occurs through personal experiences or personal interests. Jarvis (2007) clarifies that lifelong learning is not limited to standard educational settings; it also involves self-directed and informal learning, where learners purposely seek knowledge in order to expand their understanding. Lifelong learning nowadays has become a necessity rather than a choice for adapting to new challenges and opportunities.

Cohen (1975) highlights the idea that in today's world people have come to understand that learning should not stop. Instead, it is a lifelong process that starts from birth and continues throughout a person's entire life, forming a continuous and never-ending cycle. This leads to the idea of autonomous learning in education, where learners take responsibility for what, how, and when they have to learn independently.

1.3. Autonomous Learning in Education

Autonomous learning has emerged as a key element in modern educational methodologies, especially in teaching foreign languages, due to its strong link to learner-centred approaches that align closely with Communicative Language Teaching (CLT). Scholars emphasise that autonomous learning is not simply a self-study, but a dynamic process in which learners actively manage and evaluate their educational experiences. Kaufmann (2005) further explains that individuals who engage in autonomous learning develop their methods and strategies, assuming complete responsibility for their learning process. Boud (2012) describes autonomous learning as students studying independently without directions from their teacher and taking more responsibility for their education. In a similar vein, Oxford and Nyikos (1989) highlight the importance

of learning strategies, such as selecting personalised techniques or assessing progress, to make learning easier, faster, more effective, enjoyable, self-directed, and more adaptable to new situations.

The effectiveness of autonomous learning relies heavily on the collaboration between learners and teachers inside classrooms. Lynch notes that autonomy improves when students select their materials and techniques, while teachers create frameworks that balance independence and guidance (Lynch 2001, as cited in Zohrabi, 2011). Dickinson (1987) states that learner autonomy includes responsibility for and implementation of decisions relating to student learning. However, Benson and Voller (1997) clarify that this sense of responsibility does not mean solitude; instead, educators are essential in guiding students to reflect on their learning, assess their progress, and modify their strategies.

Khan et al. (2022) highlight that autonomous learning is a strong educational mechanism to promote and encourage learner independence. Benson (2016) notes that autonomous learners feel they have control over their learning, but the sociocultural factors influence the educational contexts these learners expect. Autonomous learning is supported by four motivational factors: drive, creativity, proactiveness, and perseverance that help learners successfully manage their education (Yurdakul, 2017). Additionally, Little (2000) asserts that learning effectively requires the development of learner autonomy in both the process and the content of learning. Fostering authentic learning that leads to success requires autonomy in both the process and the subject matter by enhancing critical reflection and adaptability. Autonomous learning is a big step toward change in education. The next section looks at how autonomous learning differs from traditional learning.

1.3.1. Autonomous Learning versus Traditional Learning

The shift from traditional to autonomous learning represents a significant change in the educational landscape. The focus shifts from strict teacher-led instruction to freer environments where students play a crucial role in guiding their learning. In traditional classrooms, the teacher controls the curriculum, content, and scheduling that limit learners' chances to take responsibility for their learning (Dam, 2018). Such a model of

teaching often limits students' creativity and deep engagement with content due to their overreliance on being spoon-fed by the teacher (McKay & Kember, 1997). On the other hand, autonomous learning enables students to take control of their educational progress by freely selecting materials, setting their own goals and objectives, and working at their own pace (Wyner, 2014). This transition increases students' motivation and enhances their creativity and critical thinking.

Educational theorists have emphasized how crucial autonomy is in learning. Piaget (1965 as cited in Jiménez, 2009), for instance, stated that the ultimate goal of education should be to develop autonomous thinkers who generate original ideas instead of just recycling existing ones. According to Kenny (1993), education empowers autonomy, and autonomy in turn gives people the power to become independent thinkers who generate knowledge instead of just be passive consumers of it. This transition from knowledge consumers to creators is fundamental to autonomous learning, equipping students with the necessary skills for lifelong learning (Jiménez, 2009). There are different ways to support autonomous learning. The next section explores the six main approaches used in education.

1.3.2. Approaches to Learner Autonomy

In modern teaching methods, the focus has changed to concentrate mainly on the students. The ultimate goal is to discover helpful methods that support the learners to improve their skills and learn new languages while also appreciating the teacher's role and guidance. Benson (2001) suggests that six distinct approaches: resource, technology, curriculum, teacher, classroom, and learner-based approach are used to motivate students to take control of their own autonomous learning.

a- Resource-Based Approach

The primary focus of the resource-based approach is on providing students with tools that help them take charge of their independent learning. Resources like libraries, self-access centres, and books give students the chance to choose materials that align with their goals. Teachers support by helping students set objectives and evaluate their

progress. Letting learners make decisions about their studies aims to promote their autonomy.

b- Technology-Based Approach

The frequent use of technology greatly aids in acquiring new languages. Motivating learners to manage their studies by using tools like Computer-Assisted Language Learning (CALL) creates many chances for learning independently. According to Benson (2004), CALL is a powerful tool that helps students to develop their learning autonomy.

c- Curriculum-Based Approach

The curriculum-based approach engages students in designing their own 'process syllabus' by working with the teacher to decide what to study and how to approach it, rather than following a fixed curriculum.

d- Teacher-Based Approach

The teacher-based approach emphasizes the importance of teachers in encouraging independence. Educators might have to change from being the main decision makers to facilitators or mentors who motivate students to take more responsibility and develop a classroom setting where learners can be autonomous.

e- Classroom-Based Approach

The classroom-based approach includes encouraging autonomy inside the classroom by involving learners in making their decisions that are closely related to their learning. It centers on a collaborative responsibility among both the educator and the learners.

f- Learner-Based Approach:

The learner-based approach focuses on "learning how to learn," this method trains students to develop the metacognitive skills they need to assume their responsibility.

Even if these approaches help students become autonomous, several factors still affect how well they learn on their own. The following section looks at the main ones.

1.3.3. Factors Influencing Autonomous Learning

While learning a foreign language independently, learners frequently face different factors that can hinder their progress. These factors, which include psychological and environmental, play a significant role in shaping the success of autonomous learning. As Benson (2001) notes, autonomy is strongly influenced by external factors such as institutional constraints, cultural norms, and access to learning resources. More specifically, they include: Anxiety, motivation, self-efficacy, and metacognitive strategies each factor will be explained in the following sub-headings.

1.3.3.1. Anxiety

Anxiety, especially in foreign language classrooms, is a major psychological issue for autonomous learners. This phenomenon can make it difficult for many students to stay engaged and make confident decisions about their learning. As Horwitz (2001) states that anxiety can be a significant factor that can lead to poor language learning in some individuals. Language anxiety often limits learners' ability to engage fully with the language, leaving them less confident and less willing to take charge of their learning (Horwitz, et al., 1986). In the same line of thought, Zhang (2004) found that anxious learners tend to avoid autonomous learning strategies, preferring instead to rely on the instructions provided by the teacher inside the classroom. Similarly, Boud (1985) highlights out that anxiety and low self-confidence can prevent learners from making important decisions during their learning process.

1.3.3.2. Motivation

Motivation is an influential factor that enhances the student's autonomy. According to Dickinson (1995), autonomous learners who are motivated tend to take an active role in planning, monitoring, and assessing their learning progress. This type of independent learning is crucial for autonomy, as Benson (2001) explains, because motivation provides learners the energy and confidence to make effective choices, set goals, and take responsibility for their learning process.

Motivation is not always a positive factor. Ushioda (2011) believes that it can either foster or hinder autonomy based on the learner's interest or the impact of external

influences. Deci and Ryan (1985) further highlight that intrinsically motivated students are more likely to take charge and remain engaged during their educational journey because they find it interesting or personally rewarding. On the other hand, extrinsic motivation, such as grades or compliments can sometimes lead students to depend too much on approval from others, thus limiting their ability to act independently. Research conducted by Oxford and Shearin (1994) also shows that motivation directly affects how often students apply strategies like setting goals or evaluating themselves, which are crucial for developing autonomy.

1.3.3.3. Self-Efficacy

Self-efficacy refers to the learner's belief in their ability to achieve positive learning outcomes, and it plays an important role in encouraging autonomy. When students believe in their capacities, they are more likely to take control of their learning process by facing challenges independently and keeping engaged even when they are not motivated. As Bandura (1997) puts it, confidence drives action. Learners who trust their capabilities are more willing to engage in challenging tasks and evaluate their learning progress. In a similar vein, Little (2002) emphasises that self-efficacy is a key element in becoming autonomous in learning any language, as learners need to trust their competence to set goals and make decisions. Additionally, Zimmerman (2000) notes that students who have high self-efficacy set higher goals, use efficient learning strategies, and show greater perseverance in situations involving independent learning.

1.3.3.4. Metacognitive Strategies

Metacognitive strategies are essential tools that help students to manage their learning by planning, monitoring, and evaluating their progress. These strategies act like cognitive frameworks that help learners think about their thinking while managing their own learning. According to Benson (2001), such techniques are key to autonomy because they transfer authority to the learners, making them responsible for setting their goals, monitoring their understanding, and modifying their approaches as necessary. Flavell (1976), who introduced the concept of metacognition, describes it as being aware of how one's own cognitive function and understanding how learning happens. O'Malley and Chamot (2001) define metacognitive strategies as thinking and planning

for the learning process, followed by self-evaluation after the activity is completed. Anderson (2002) further notes that when learners reflect on their learning methods, they gain the confidence to make the best decisions and to manage their learning effectively. In addition to the factors that influence learning, students also face many difficulties when learning independently. Some of these challenges are discussed below.

1.3.4. Challenges Faced while Learning Autonomously

While independent learning offers significant benefits for the development of language skills, it also represents certain challenges that learners must address. Murray (2014) observes that self-management can become especially challenging in environments that lack support and guidance, leading students to depend entirely on their actions. This perspective aligns with Trebbi (2011), who notes that, autonomy takes time and energy to develop, since learners need experience and reflection to adapt to new roles and take responsibility for their learning. Holec (1981) mentions that the term autonomy is not simply a matter of taking responsibility; it involves addressing challenges related to motivation, self-regulation, and access to resources. Learner autonomy is a challenging goal, and students often face obstacles such as lack of motivation, digital literacy, and difficulty accessing resources.

1.3.4.1. Lack of Motivation

One of the most significant variables negatively influencing autonomous learning is the lack of motivation. Even the most outstanding independent student can struggle to engage in self-directed tasks, persist through challenges, or take responsibility for his/her learning. According to Benson (2001), students lacking strong personal motivation often become passive and wait for instructions rather than take initiative. This phenomenon often creates a significant barrier for learners because autonomous learning practices such as setting goal, picking materials, or checking and evaluating progress require sustained engagement that unmotivated learners often fail to maintain (Spratt et al., 2002).

Empirical studies highlight two key consequences of low motivation in autonomous learning. First, unmotivated learners rarely develop the self-regulation needed for autonomy; instead, they increasingly rely on teachers' directions to guide

them, contradicting the core principles of learner autonomy (Ushioda, 2011). Second, the type of motivation significantly influences outcomes. Students who study because they're genuinely interested, work harder and enjoy learning more, mainly achieve better results compared to those motivated only by external rewards or avoidance of failure (Howard et al., 2021).

1.3.4.2. Digital Literacy

Digital literacy has become a major barrier to learners seeking autonomous education. According to the ICT (Information and Communication Technology) Literacy Panel (2002), the traditional concept of literacy often refers to reading and writing, and in today's world of technology, it has expanded to include essential competencies to search, evaluate, and collect information using digital tools successfully. Despite its effectiveness, students lacking strong digital skills may feel lost in modern education technology systems. Reinders and White (2011) highlight that inequality in access to digital tools and resources is a significant obstacle to enhancing autonomy, as students cannot fully participate in independent learning activities in limited-resourced environments. Many learners face difficulties in developing these skills, making it harder for them to take charge of their independent learning.

Current research indicates that digital technologies have fundamentally changed how students think, communicate, and learn information (Gu et al., 2013). However, limited studies have examined how digital literacy affects autonomous learning, leaving a critical gap in pedagogical understanding. Limniou et al. (2021) advocate that learners with strong digital competencies are often better at managing their learning. On the other hand, students who lack these abilities face further challenges, particularly in settings where online education is crucial (Sualehi, 2023). Sun and Tang's (2020) findings showed that combining digital skill development with language education can improve students' technical and autonomous learning abilities. The Cambridge University Press (2022) further emphasises that the ongoing digital revolution of education highlights how urgent it is to overcome these skill gaps. These digital gaps will limit the students' capacity to study independently in the absence of professional supervision and guidance.

1.3.4.3. Access to Resources

Insufficient educational resources massively limit the process of learning autonomously. According to Benson (2011), without adequate tools such as textbooks, technology, and suitable study environments, learners cannot effectively manage their own educational learning. Holec (1981) notes that the lack of materials often forces students to rely heavily on their teachers rather than engaging in independent study. In fact, Smith (2008) discovered that numerous schools, particularly in rural regions, lack the essential resources that help students to engage effectively in their education path.

The consequences of a lack of resources significantly change students' approach to learning any language. Borg and Al-Busaidi (2012) observed that students who lack adequate resources tend to be less active and rely more on teachers for direction and guidance. Recent research conducted by Marzuki et al. (2023) indicates that this phenomenon is pronounced particularly in contexts where cultural and financial barriers hinder access to educational materials. Consequently, addressing these fundamental resource challenges is essential; otherwise, the autonomous students who attempt to improve their learning will fail, especially in areas where educational tools are difficult to obtain.

In summary, autonomy encourages students to take responsibility for their education. With the rise of technology in education, new instruments such as artificial intelligence tools have emerged to support this process. The following section provides a deeper understanding of AI as a concept.

1.4. Artificial Intelligence

The concept of artificial intelligence traces its origins to a famous workshop held in 1956 at Dartmouth College (Cope et al., 2022). John McCarthy, one of the founders of artificial intelligence, characterised it as making machines behave smartly as humans (McCarthy et al., 1955). This idea today has evolved into what Rai (2019) defines as AI, a form of technology that learns and adapts, getting better and faster at performing various tasks over time. In a similar line of thought, Shawabak (2017) expresses this idea in another way: giving computers abilities that make them behave intelligently,

almost like humans. However, Fei-Fei Li (2023) believes that artificial intelligence is not here to replace human thinking; AI is here to enhance human capabilities.

Today's view of artificial intelligence includes its technological functions and how it is applied in real life. According to the Defense Science Board (2016), artificial intelligence performs tasks that typically require human intelligence. McCarthy (2007) defined it as a field of study and a practical application, creating intelligent software. Matt Miller (2023) highlights that the real value of AI lies in its capability to clarify information in a way tailored to the individual's needs. This innovative technology, which makes transformations in various aspects of life, has a significant impact on education, especially in English language learning.

1.4.1. Artificial Intelligence in EFL Classrooms

Artificial intelligence facilitates the way learners acquire the English language; however, it should not be viewed as the only way. Studies indicate that tools such as language applications and virtual tutors offer students 24/7 opportunities to learn and practice at any time (Zhang Zhou, 2020). However, researchers warn that these tools work best as support systems rather than replacements for teachers (Fatria, 2021). In fact, even though AI can personalise lessons and identify areas of improvement (Fahimirad & Kotamjani, 2018), it still misses the personal human touch that makes language learning meaningful, like cultural context or emotional support.

In real classroom settings, students encounter both artificial intelligence's positive and negative aspects. As noted by Nining et al. (2023), tools like speech recognition and chatbots engage students more effectively. However, as Gawate mentioned (cited in Fitria, 2021), AI's primary role is an additional support system to help educators perform their jobs. Babitha et, al. (2022) note that the most effective applications of AI succeed only when the technology is tailored to meet the diverse needs of learners while keeping the teacher's irreplaceable role in guiding learners' educational process. This critical combination of these technological instruments and teachers' guidance is even more important in supporting autonomous learners. Artificial Intelligence is not just a modern trend but a source of useful applications that support learner autonomy, which the following section highlights.

1.4.2. Artificial Intelligence Applications for Autonomous Learning

AI is giving students powerful new ways to take charge of their learning. As Shah (2023) explains, AI acts like a smart guide to analyse individual progress and then suggests personalised tools to help students improve in their learning. This aligns with UNESCO's (2021) vision that AI technologies will finally make truly personalised learning possible by providing specific lessons and teaching methods to fit each student's speed and needs. However, while AI can customize lessons perfectly, in classroom application, these instruments often fail to capture the full complexity of human learning styles and motivations.

The positive aspect of AI lies in its capacity to help independent learners at any time and from any place. Twemlow (2024) explains that AI systems can remember every student's interaction, level, strength, and weakness, and based on the learner profile, AI can create dynamic learning experiences that traditional classrooms cannot replicate. Similarly, Szabó and Szoke (2024) add that these tools help teachers support autonomous learning while giving personal guidance where needed. However, Luckin (2018) declares that AI systems rely heavily on high-quality data and thoughtful integration. Although these instruments can identify learning gaps, human educators bring the understanding and motivation that keep students engaged. These AI tools come in different types, including smart chatbots, writing assistance, and adaptive learning systems, each offering unique ways to support autonomous learning.

1.4.2.1. Artificial Intelligence Chatbots & Tutors (ChatGPT, Gemini)

AI chatbots and virtual tutors are rapidly becoming the preferred companions for independent students in their educational journeys, due to their accessible assistance that meets individual learning needs. Educators are facing a critical decision; they must choose between overlooking these technological tools or accepting to use them in classrooms to enhance the learning experience (Mollick, 2023). These AI assistants function like individual trainers, making studying more dynamic and enjoyable (Yakin et al., 2023). Currently, ChatGPT stands out as the frontrunner, and it has been widely used, including in educational settings (Chadwick, 2023).

When considering AI tools, ChatGPT is the first one that comes to mind due to its popularity and widespread usage, appreciated for offering free access and a wide range of features. This application was created by OpenAI in 2018. This Generative Pretrained Transformer uses deep learning technologies to generate responses that closely mimic human interaction (Cahan, 2023). According to Sam Altman, the CEO (Chief Executive Officer) of OpenAI (2024), this platform now serves over 300 million active users weekly. Both students and teachers like how this instrument can give different supportive tasks such as generating study schedules, simplifying complex concepts, or even suggesting research topics (Watkins, 2023). Studies indicate that ChatGPT offers many advantages for language learning because it performs different educational functions (Huang et al., 2022).

Google's Gemini presents a unique method that integrates textual content and images. Educators are discovering that it significantly enhances student engagement while providing personalised challenges suitable for each individual (Rane, 2024). Learners utilising Gemini are not only improving academically, but are also showing a heightened excitement for their education (Gond et al., 2024). However, it's important to note that these instruments are not replacements for teachers. Instead, they are just a practice partner for daily study (Fryer et al., 2017). If these AI tools are well integrated in educational settings, they can enhance both learning experiences and student-teacher interactions (Dwivedi et al., 2023).

1.4.2.2. Artificial Intelligence Writing Assistants (Grammarly)

AI writing assistance programs like Grammarly have become important tools for students developing autonomous writing skills. In fact, these programs are not just about correcting grammatical mistakes; they verify plagiarism, improve writing style, highlight areas of improvement and provide immediate feedback to learners to help them progress (Nazari et al., 2021). What makes AI technologies preferred by students is the ability of these tools to help students take the leadership of their learning. This allows learners to review their own work, identify areas of improvement, and evaluate their progress over time, all of which fosters essential skills for self-regulated learning (Jin et al., 2023).

Grammarly offers personal correction that helps learners improve their writing skills independently and build confidence over time (Nakano, 2022). According to Lookadoo et al. (2025), students using these instruments not only make mistakes, but also develop a better understanding of how to assess these mistakes, giving teachers the freedom to focus on more advanced writing strategies. However, Farrokhnia et al. (2024) warn that these techniques should not replace all human feedback; However, the best results come when technology integrates with traditional teaching. Additionally, Escalante, Pack, and Barrett (2023) found that the best results come from mixing the feedback generated by AI with human guidance, creating a powerful combination that improves the writing process, and this "balanced approach," as they call it, helps students become stronger and more independent writers.

1.4.2.3. Adaptive Learning Systems (Duolingo, Coursera, or ELSA)

Adaptive Learning Systems (ALSs) driven by artificial intelligence are revolutionizing the way students engage in autonomous education by offering tailored lessons that cater to individual learning requirements (Gligorea et al., 2023). These intelligent platforms address a significant challenge present in traditional classrooms by providing personalized assistance to every learner, even amidst large groups (Kim & Smith, 2021). This technology operates by modifying the content and difficulty of lessons depending on the learner's progress (Pliakos et al., 2019). ALSs function similarly to having an accessible private tutor, which enhances the availability of quality education (Dong et al., 2022). While these systems all share an adaptive approach, they differ in focus; for instance, Duolingo targets language training, Coursera offers academic courses, and ELSA specialises in speech practice.

Duolingo illustrates how AI can personalise language learning. The program modifies the learning material dynamically, tailoring it to the individual user's abilities and challenges and concentrating on areas that require improvement (Wang, 2024). Duolingo uses an approach known as "spaced repetition", which effectively repeats vocabulary and grammatical rules in carefully defined time periods to increase long-term memory (Polachowska, 2019). The combination provided by the platform of free use, game-like learning, and personalised approach plays an important role in its

widespread use. Research indicates that 34 hours of use is equivalent to a full semester of university education (ibid). However, researchers point to the limitations in developing fluency in conversation because the application cannot fully simulate the use of language in the real world.

Coursera is the adaptive model for MOOCs (Massive Open Online Courses), offering organised courses along with optional pathways guided by AI. With more than 107 million users worldwide, its strength lies in courses offered by well-known universities that enable learners to shape their educational learning (Coursera, 2022). Nguyen (2022) points out that the reduced interaction with teachers promotes increased autonomy, as it necessitates that students take charge of their own learning. This independent structure is also encouraged by providing a certificate to learners once the course is completed, which is valuable for them in the future job market (Gameel, 2017). However, the platform's adaptive functions are essentially limited to recommending training courses and lack improved detailed skills present in systems focused on language learning.

Specialised applications, such as ELSA (English Language Speech Assistant) Speak, highlight the effectiveness of adaptive technologies in facilitating the development of targeted skills. The AI speech recognition system evaluates learners' pronunciation and provides immediate feedback, which is often lacking even in effective traditional classrooms (Chuhla et al., 2025). According to Nguyen and Tuyen (2024), these specialised tools make practising more fun and help students improve both competence and motivation in specific language domains. ELSA is particularly effective for mastering autonomous pronunciation practice (Haryadi & Aprianoto, 2020). Although this system is highly effective in training speaking skills, it must still be integrated with multiple learning contexts to achieve mastery. In order to understand the role of artificial intelligence in the learner's autonomy, it is necessary to explore the positive and negative effects of these tools, as well as the ethical considerations they raise.

1.4.3. Impact of Artificial Intelligence on Autonomous Learning

The integration of artificial intelligence into educational environments has sparked debates about its impact on students' autonomy. On one hand, these tools reinforce traditional teaching methods by providing personal learning opportunities (Aristanto et al., 2023). According to Schmidt and Cohen (2016), these technologies can recognize trends and adapt themselves to the requirements of learners, helping to address educational challenges. Many teachers find that technology gives students more control over their education, making them more independent (Peterson, 2017). On the other hand, some researchers warn that using these tools requires appropriate teacher guidance because they may be wrongly applied or lead to ethical concerns (Kidd & Birhane, 2023). This discussion highlights the importance of studying the positive and negative aspects of AI in independent learning.

1.4.3.1. Positive Impact

AI tools are making independent learning more effective and enjoyable in several important ways. According to Chiu et al. (2023), AI tools transform independent learning by creating dynamic, student-centred environments that adapt to individual needs. These innovative systems do not just follow set lesson plans; instead, they customise everything from practice exercises to feedback based on the performance of each student (Walter, 2024). One of the most significant benefits is a flexible learning journey. According to their preferences, learners can study at times and places that suit them best, whether in the early morning, late at night, or while at home (Goldentha et al., 2021). Language learning apps, for instance, enable students to select their learning topics and materials, get instant feedback on mistakes, and progress at their own pace (Fatmawati & Wirza, 2022).

Importantly, AI does not just enhance academic outcomes; in fact, tools like AI chatbots and tutors enhance the learning experience, providing emotional support and making it more engaging, which helps learners stay interested and confident (Henze et al., 2024). Ma et al. (2024) indicate that when students receive this kind of personalised assistance and instant feedback from AI, they feel less stressed and think more creatively, promoting positive emotions and innovative behaviour.

1.4.3.2. Negative Impact

Although AI technologies can enhance autonomous learning, researchers have identified several concerning drawbacks. One significant concern is that overreliance on these tools can weaken students' capacity to think independently. According to Holmes et al. (2019), when students depend heavily on AI for answers, they are likely to practice less independent problem-solving and critical thinking. This happens because AI tools, despite being helpful, are still limited machines that cannot match human reasoning and analysis (Livberber & Ayvaz, 2023). There are also serious concerns regarding the quality of information; AI systems sometimes provide incorrect data or show bias due to their training datasets (Bettayeb et al., 2024).

AI-generated content can limit students' originality in creative contexts, especially when students start accepting automated suggestions without questioning or reviewing them (Selwyn, 2019). Khan et al. (2023) emphasise that teachers must receive appropriate training regarding these restrictions to guide their students effectively. Furthermore, privacy risks arise as these tools collect vast amounts of users' data (Han et al., 2023). Without this awareness, learners of AI tools may be overconfident, which may negatively affect their development as independent thinkers.

1.4.3.3. Ethical Concerns

AI learning tools raise serious ethical concerns that every independent learner must know. These systems collect increasing amounts of data about students, including the knowledge they learn, their learning strategies, school schedules, and even personal information (Fastiggi, 2024). The problem is that this continuous tracking often occurs without students' full knowledge or consent (Williamson & Eynon, 2020). Guleria et al. (2023) explain that when learners use tools like ChatGPT, their inputs become part of the system's training dataset, which means any questions, mistakes, and personal writing styles might be used to improve the AI system without even asking students' permission. According to Watal (2024), learner data effectively serves as a resource for the AI's future answers for other users. Teachers also must guide students in using AI safely, addressing these privacy dangers and the risks of receiving biased or incorrect answers (Bettayeb et al., 2024). Before reaching to the conclusion, the following section reviews

past studies that have explored the link between autonomous learning and AI in EFL classrooms.

1.5. Review of Previous Studies on Autonomous Learning and Artificial Intelligence in EFL Contexts

Recent research has increasingly examined how artificial intelligence tools influence autonomous learning behaviours EFL learners. A study by Wang and Li (2024) titled "The Impact of AI Usage on University Students' Willingness for Autonomous Learning" gives valuable insights into this relationship. By surveying 721 university students in China, the researchers discovered that having a positive experience while using AI and feeling confident with these tools played a more significant role in encouraging students to learn independently than simply perceiving the tools as beneficial. Students who felt at ease and satisfied when utilizing AI were more inclined to continue using it and take responsibility for their education. However, those with low confidence did not find AI very effective. The study concludes that improving emotional engagement and digital confidence is essential for supporting autonomous learning through AI tools, especially in EFL settings.

"The Role of Artificial Intelligence (AI) in Promoting Autonomous Learning in Language Education" is another study by Sasmayunita and Assiddiq (2025), which explored how AI can support learner autonomy in EFL contexts. They conducted a case study involving Indonesian university students who used AI-based tools such as Duolingo and Grammarly over the course of a semester. The findings found that these tools gave students feedback, flexible learning schedules, and chances to study at their own pace. However, it also noted challenges, such as overreliance on technology and reduced face-to-face interaction. This research provides useful insights into the benefits and limitations of using AI to foster learner independence in language education.

Additionally, a study by Huynh Que Quan (2024) at Van Lang University, Vietnam explored how EFL students use AI-based tools while learning English and how these tools affect their autonomy. The findings revealed that AI tools can help improve students' language skills and make them more independent through managing both the content and process of learning. However, it also warned that in the absence of teacher

guidance, students might become too dependent on these tools. This study provides useful information about how AI technologies can support autonomous learning and also highlights the importance of a balanced approach in the EFL classrooms.

Overall, the three studies highlight that AI tools support learner autonomy in EFL classrooms by helping students become more confident and manage their learning. However, they also point out the risk of over-reliance without teacher guidance. Therefore, combining AI with proper supervision can effectively support building real autonomy.

1.6. Conclusion

The theoretical section of this study examines autonomous learning and the role of artificial intelligence in enhancing learning, highlighting its advantages and potential drawbacks. In a world marked by rapid change, independent language learning has become a necessity; however, many students face challenges such as anxiety, a lack of motivation, or insufficient access to technological resources when learning at their own. AI applications such as Duolingo and ChatGPT provide valuable personalized assistance, helping to reduce stress and boost self-esteem. Nevertheless, research indicates that such technologies could lead to excessive dependence on them without adequate precautions or endanger users' privacy. As noted by Wang and Li (2024), the most effective strategy is to achieve a balanced partnership, where students, teachers and artificial intelligence collaborate to enhance the quality of education rather than eliminate the human personal touch. Achieving this balance is critical to support both language and lifelong learners.

Chapter Two: Research Methodology, Data Analysis and Interpretation

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2.1. Introduction

This chapter emphasises the practical part of the study. It examines the role of AI tools in promoting autonomous learning among EFL students. The main objective is to respond to the research questions and assess the validity of the suggested hypotheses introduced at the beginning of the investigation. At first, it presents a general description of the teaching and learning process. It further develops the research design and the selection of the sample population involved in the study. Next, the chapter describes the tools for gathering data, including questionnaires and interviews, which provided both quantitative and qualitative insights. The chapter then proceeds to analyse and interpret the collected data to evaluate the impact of AI tools on students' autonomous abilities. In conclusion, the chapter summarises the key findings and offers suggestions and recommendations for future research.

2.2. Description of the Teaching/Learning Situation

The Algerian educational system has undergone important changes, including the implementation of the Competency-Based Approach (CBA) in 2003 (Mirza et al., 2023) aimed at improving the quality of teaching and learning. This reform represents an essential shift from traditional teacher-centred methodology to a learner-centred approach where students are more autonomous in their learning. In the Department of English at the University of Tlemcen, EFL students are encouraged to participate in preparing their lessons, project groups, oral presentations, and discussions. These class practices aim to strengthen the language skills of English learners and gradually foster responsibility and independence.

Many modules at the L3 level, such as oral expression, ESP (English for Specific Purposes), CWP (Comprehension and Writing Production), literature, and didactics, help students to be more autonomous in their learning. These modules focus primarily on developing the four macro skills independently inside and outside the classroom. Oral expression encourages learners to practise speaking and listening through presentations, discussions, and group work. ESP helps students identify their needs, objectives, and areas for improvement, making learning more tailored and supportive for autonomy. Writing production helps them practice and improve their writing.

Literature supports reading and critical thinking, while didactics develops students to reflect on teaching and learning strategies on their own.

EFL teachers guide their students to take charge of their learning by engaging them in tasks-requiring planning, critical thinking, and independence. Toward the end of their academic journey, students are expected to write a research paper to solve practical real-life problems. This important task helps them build academic maturity and independence. The present study aimed at helping students build their confidence and preparing them to face professional challenges, both in their studies and in their future careers. In this way, the educational process supports the development of important areas such as language proficiency, critical thinking, problem-solving, and even creativity.

2.3. Research Design

A research design acts as a structured plan for any investigation. It helps researchers organize their steps to address specific research questions. As stated by Thomas (2022), a good research design not only represents a roadmap that guides the study but also ensures that the data collected is valid, relevant, and meaningful. A mixed-methods approach was chosen for this research, combining both quantitative and qualitative data. This approach helps link the gathered information more effectively to the research questions posed at the beginning of the study and responds to the suggested research hypotheses. This process of data collection and interpretation supports the researcher in comparing findings and getting a deeper view of the topic.

The research follows an exploratory method, which is appropriate when the research problem is new or lacks extensive previous investigation. According to Kumar (2011), exploratory research is often used when researchers aim to explore unfamiliar topics or assess the possibilities for a specific research study. This type fits into the current study well, as the integration of AI tools to promote autonomy in Algerian universities remains a modern and sophisticated topic. The case study method allows a closer examination of the practices of students and teachers in the English Department of the University of Tlemcen because it offers rich insights in a context where such tools are not officially supported in the classroom. Grinnell (1981) describes the case study

as a way of allowing flexibility and openness in both data collection and interpretation. This makes the exploratory case study the one of the most effective types of research capable of providing meaningful insights into the evolving relationship between artificial intelligence, learner autonomy and current educational practices.

Two main research instruments were used to collect the needed data. First, a questionnaire was distributed via Google Forms to a group of third-year EFL students to gather the necessary quantitative data. Second, structured interviews were conducted face-to-face with EFL teachers to collect deeper and more focused qualitative information about the teachers' beliefs and classroom experiences. These tools, when combined, help build a more complete understanding of how students' autonomy is being shaped in relation to AI tools and what challenges exist in their classroom use. Figure 2.1 below sums up the research methodology framework and design selection.

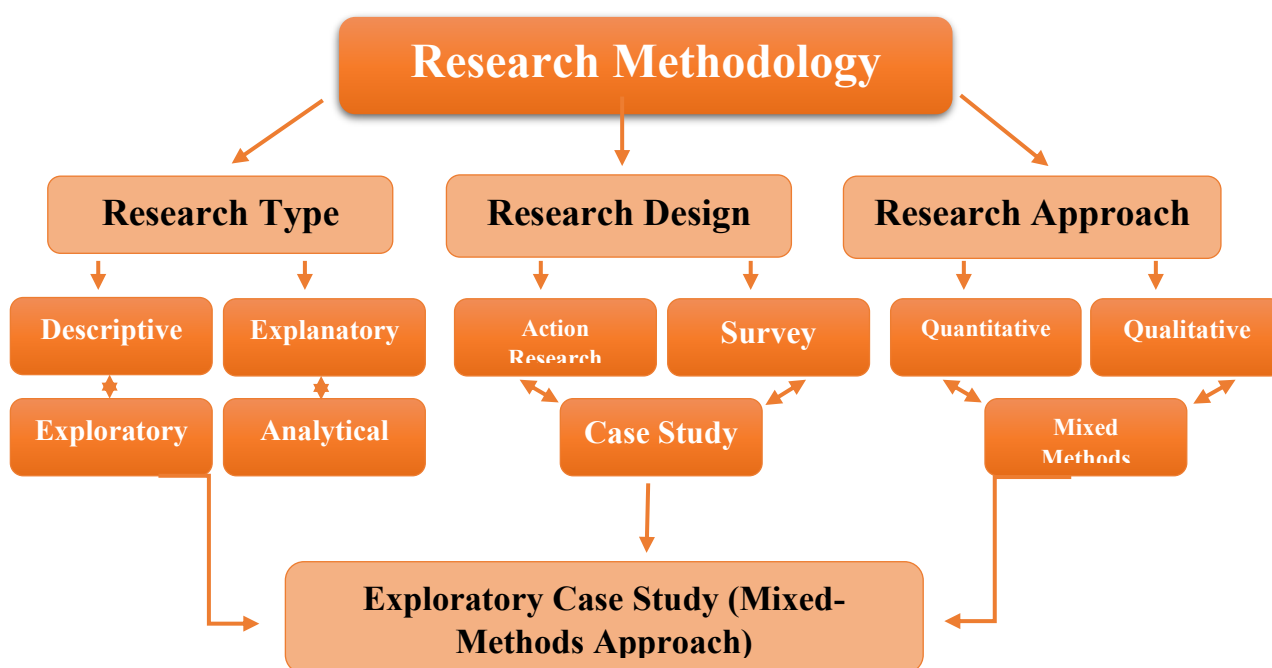


Figure 2.1: Research Methodology Framework and Design Selection

Once the research design was determined, the next step was the selection of the appropriate sample population for this study.

2.4. Sample of Population

The term sample population in a research study refers to a group of individuals selected from a larger population to be represented in a study. According to Fraenkel et

al. (2012), selecting a specific sample to study rather than an entire population facilitates the collection of meaningful data quickly and in a practical and manageable way. The right sample is still able to reverse the larger group, making the results more relevant and providing valuable insights. This study used a probability simple random sampling that gives students an equal chance of being chosen. As Bryman (2016) notes, this method helps to ensure fairness, reduce bias, and allows researchers to generalize around the population more widely based on sample responses.

The sample included 42 EFL students from Tlemcen University's third level who answered the questionnaire via Google Forms. Since the questionnaire was shared online, students from various profiles could participate, regardless of age or gender, allowing for fair representation, including 6 males and 36 females aged 19 to 25. Alongside the student responses, 10 EFL teachers from the same university were randomly selected to participate in a structured interview. These teachers were from different teaching specializations, including linguistics, literature, and didactics. This helped ensure that the responses provided by the educators captured diversity of insights and enhanced reliability.

By including both students' and teachers' views in the sample, the researcher can gather different insights into how AI tools could support autonomy in the teaching and learning of English in Algeria. The probability sampling design with a simple random sampling method was used in this study, which means that every individual in the population was chosen by chance. It was employed because it helps reduce selection bias and ensures generalizable results. The following figure (2.2) summarizes the sampling process in research study.

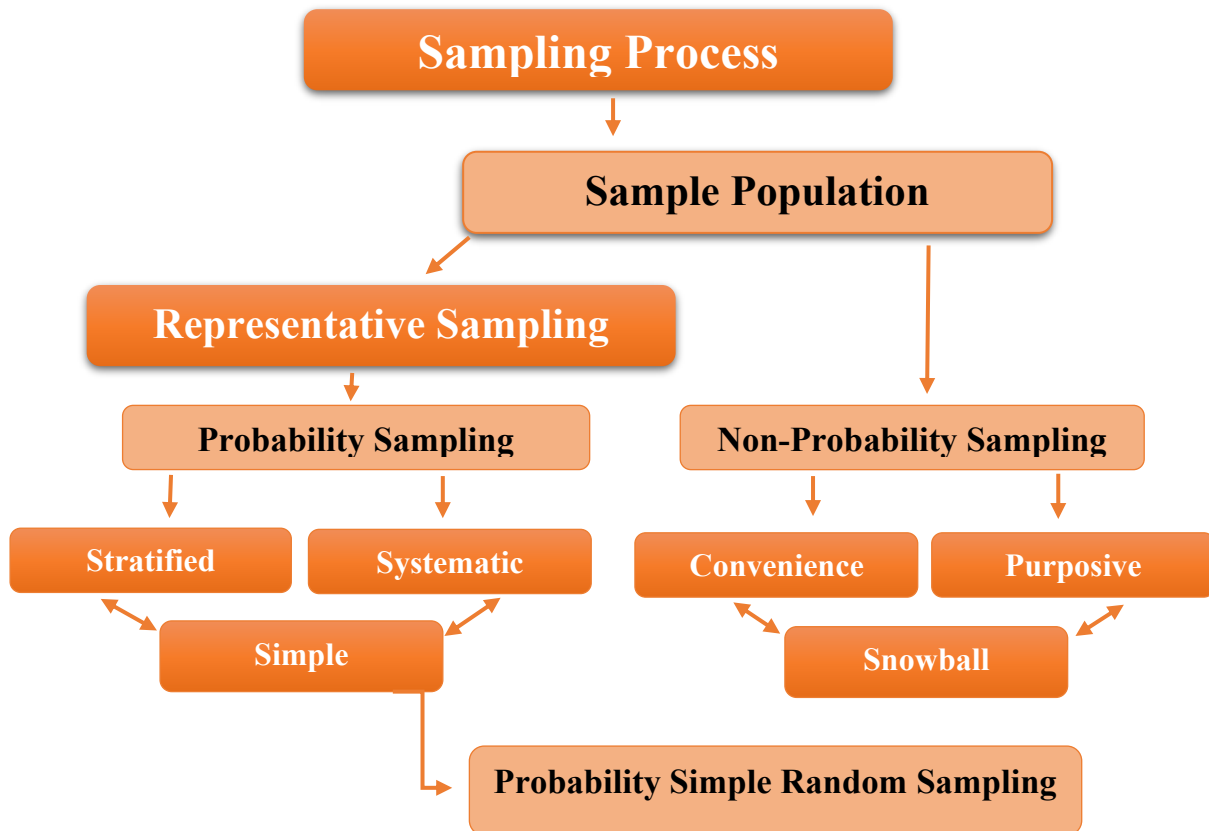


Figure 2.2: Overview of the Sampling Process in Research

Once the sample population was selected, the next step involved choosing appropriate tools for collecting relevant data.

2.5. Data Collection Instruments

Data collection is a critical step in the research process that involves gathering useful and clear data that helps answer the main research questions. As Cohen et al. (2017) explain, collecting data in an organised way makes it easier for the researcher to analyse the topic and draw meaningful conclusions. In the present study, two research instruments were used: students' questionnaire and teachers' interview to collect the necessary data for this investigation. Figure 2.3 below represents an overview of the data collection instruments used in this research.

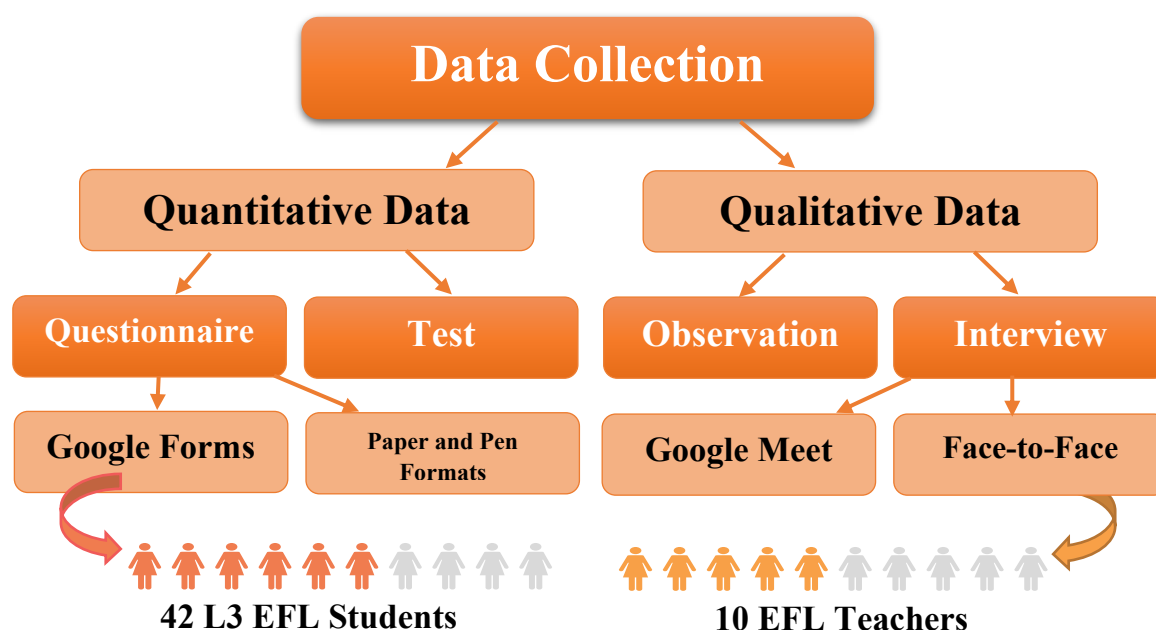


Figure 2.3: Classification of Data Collection Tools

As part of the data collection process, two research tools will be explained in the following section, starting with the students' questionnaire.

2.5.1. Students' Questionnaire

A questionnaire is one of the most common tools used in research to collect data from a large group of learners at once. It is useful when the aim is to understand what students think, feel, or experience in a structured way. Dörnyei (2007) highlights that a questionnaire is a quick and practical instrument for gathering information, especially when dealing with attitudes, beliefs, or behaviours in language learning. In this study, the questionnaire was administered online to 42 third-year EFL students at Abou Bekr Belkaid University of Tlemcen via Google Forms to encourage them to participate and allow them to share their honest views on using AI tools in their English classrooms. It was posted in one WhatsApp group and two Facebook groups of third-year EFL students. This instrument included different questions, such as multiple-choice, Likert scale, ranking scale, closed-ended and open-ended questions, to obtain qualitative and quantitative data.

The questionnaire was divided into four main sections. The first section included students' personal information, such as age and gender. The second section was about

students' difficulties with learning autonomy and determining which effective methods they use when studying on their own. The third section is designed to gather different insights regarding the use of AI tools in learning autonomy and the effectiveness of the feedback generated by AI compared to the feedback given by the teacher in the classroom. The fourth and last section focuses on the impact of these instruments on students' learning autonomy and whether they improve or hinder their critical thinking and problem-solving skills (See Appendix A).

In the first two questions of section 01 of the students' questionnaire, the researcher aimed to gather personal information from the participants regarding their age and gender to give a detailed description of the characteristics of the selected sample. In Section 02, the questions were designed to explore the difficulties faced by students while learning independently. Questions 2, 3, and 4 addressed the main challenges the researcher wanted to focus on, such as identifying the macro skills and setting their personal goals. In the same section, questions 5 and 6 explored students' ability to monitor their progress and how important they felt teacher guidance was in supporting their autonomy.

Section 03 focused on students' attitudes toward using AI tools while learning independently. Questions 7 to 10 explored how frequently students used these tools and for what tasks. Then, questions 11 to 14 examined how AI affected their autonomy, how much they found AI's feedback useful, and whether they would prefer receiving feedback from teachers or AI. Questions 15 to 18 from the same section investigated students' interest in combining feedback from teachers and AI, as well as their opinions on having a training module to learn how to use AI tools effectively. Finally, Section 04 focused on how AI tools influenced students' learning autonomy. Question 19 addressed the difficulties students encountered when they learned independently without AI. Questions 20 to 22 inquired about the possible negative effects of relying too much on AI, such as reduced motivation, weaker critical thinking, and inability to solve problems independently without teachers' guidance. In addition to the questionnaire, interviews were conducted to obtain qualitative data from EFL teachers.

2.5.2. Teachers' Interview

An interview is a widely used data collection method that helps the researcher understand deep concepts, experiences, or even opinions of the participants through direct conversation. According to Cohen et al. (2011), interviews are a powerful tool for exploring the participants' understandings and allow the researcher to obtain richer and more detailed information than a questionnaire can give. The three main types of interviews are structured, semi-structured, and unstructured. In the structured interview, the researcher prepares a list of pre-planned or structured questions, and these questions are asked in the same order to all participants to ensure regularity and comparability of answers later. Bryman (2016) notes that structured interviews are a planned format that helps the researcher keep the data organized, reduce interviewer bias, and ensure that each respondent is presented with the same questions and conditions.

In the present research, the interview conducted with EFL teachers followed a structured format, meaning all teachers were asked the same set of questions. The interviews were held onsite and took place at Abou Bekr Belkaid University-Tlemcen in the Department of English, Faculty of Letters and Languages, and lasted for about 20 to 25 minutes with 10 EFL teachers. The interview included seven questions focused on how AI tools could be used in traditional classrooms to teach English and the impact of these instruments on the autonomy of third-year EFL students. Before starting the interview, the teachers were informed about the study's purpose, and the researcher asked for permission to record the conversation. Additionally, their personal information was kept confidential, without any reference to their names during the entire study phase. Each participant specialised in different modules and had many years of teaching experience, offering a variety of insights into the opportunities and challenges of using these technologies to help students take more control of their learning. (See Appendix B).

The first five sub-questions of the teachers' interview aimed to gather personal information from the participants regarding their positions at university, area of specialty, different modules and levels they taught and finally their years of teaching experience. Initially, the interview started with the question of the problems EFL

students faced while trying to learn independently. The second question explored teachers' different strategies to encourage their students to be more autonomous. Additionally, the participants were asked in questions three and four about the potential of AI tools in developing learning autonomy among students, aiming to know whether teachers use such tools inside the classroom and the modifications they would make if AI tools were integrated into EFL classrooms. The fifth question shifted to the balance between AI-generated feedback and teacher guidance, and then the impacts of AI dependence on critical thinking and independent learning were posed in question number six. Finally, the last question concluded with asking for advice from teachers regarding the integration of AI tools in EFL classrooms to promote autonomous learning. After gathering the necessary data from both students and teachers, the upcoming section presents the data analysis and interpretations.

2.6. Data Analysis and Interpretations

Following data collection, data analysis for the two research instruments, using both qualitative and quantitative data, starting with the students' questionnaire, follows.

2.6.1. Students' Questionnaire Analysis

The following section presents students' responses to the online questionnaire. Their answers highlighted key ideas and perspectives regarding integrating AI tools in traditional EFL classrooms and their impact on learner autonomy.

Section 01: Students' Personal Information

❖ Gender

The table below represents the gender distribution of the sample, which consisted of 6 males (14.3%) and 36 females (85.7%). The sample population consisted of substantially more females than males, as shown in Table 2.1.

Table 2.1. Students' Gender

Options	Participants	Percentage %
Males	6	14.3%
Females	36	85.7%
Total	42	100%

❖ Age

Based on the statistics represented in the table, one could infer that the ages of the informants were very diverse. The majority of the sample consisted of participants aged 20, representing a quarter of the total informants (26.2%). The remaining participants aged 22 and 23 each reported for a significant minority of 21.4%. This was followed by those aged 21, including (19%) of the sample, while those aged 24 and 25 stood for smaller portions of the sample, each comprising (4.8%). Lastly, the smallest group was 19-year-old informants, making up only 2.4% of the sample. The following Table 2.2 demonstrates the main results:

Table 2.2. Students' Age

Age	Participants	Percentage %
19	1	2.4%
20	11	26.2%
21	8	19%
22	9	21.4%
23	9	21.4%
24	2	4.8%
25	2	4.8%
Total	42	100%

Section 02: Students' Difficulties with Learning Autonomy

Q1: Methods Used by Students when Studying Autonomously.

The results presented in Figure 2.4 indicated that the majority of students employed note-taking as their primary study technique, with 81% of participants reporting it. Re-reading material was the second most prevalent approach, used by 45.2% of respondents. A smaller percentage of respondents (14.3%) preferred to exercise independently, whereas only 7.1% reported adopting other learning methods. This indicated that the majority of students relied on written notes and repetition for their learning rather than actively participating in activities or trying different approaches, as shown in Figure 2.4 below:

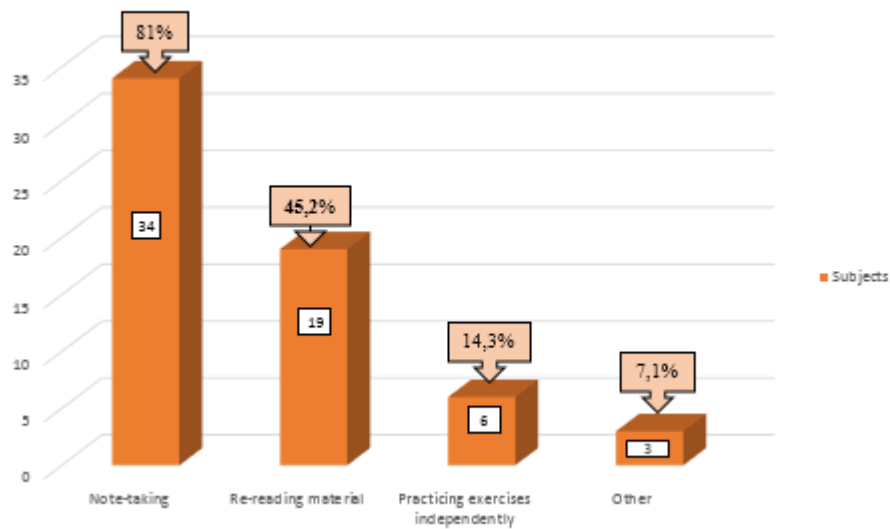


Figure 2.4. Common Methods Used by Students when Studying Autonomously

Q2: Students' Perceptions of Autonomous Learning as a Difficult Task.

The data showed that the majority of students (64.3%) did not find autonomous learning challenging, although a significant minority (35.7%) did. Figure 2.5 summed up the main results of this question:

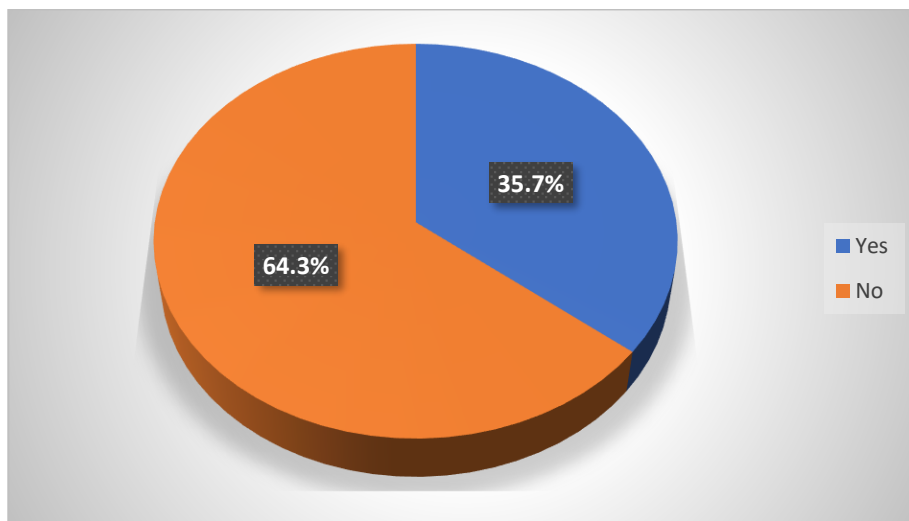


Figure 2.5. Students' Perceptions of Autonomous Learning as a Difficult Task

When asked to justify their answers, the informants reported that autonomous learning was easy because it allowed them to manage their learning process away from the boring educational system and intensive program. They explained that studying

independently helped them build confidence and develop essential skills like time management and self-discipline. In addition, they felt that learning alone helped them stay focused without external distractions, especially with the support of online resources and AI tools, which made accessing information more convenient and efficient.

Conversely, participants who stated that autonomous learning was difficult argued that learning certain subjects without a teacher's explanation was too tricky. They expressed concerns about staying disciplined in the absence of the supervision of their teachers. Furthermore, they struggled to find reliable sources and organise their learning path, which often left them feeling confused. Many students also said they felt less motivated when they could not work collaboratively with their classmates, as this interaction helped them stay focused and engaged during the lessons. Meanwhile, other participants had mixed opinions. They said learning independently could be easier if certain factors could be met, like time management, staying motivated, and having the appropriate learning materials. They also emphasised that the importance of balancing autonomous learning with teacher guidance made learning more effective and less stressful.

Q3: The Most Macro Skill Students Found Difficult when Learning Autonomously

The information presented in Figure 2.6 below revealed that the majority of participants (38.1%) stated that writing was the most difficult skill to master independently. This might be linked to the difficulty of the academic style of writing, structuring sentences and applying grammatical rules. Speaking was the second most challenging skill, with 31% of students struggling, due to a lack of real conversations and practice in class. Listening (21.4%) and reading (9.5%) were seen as less challenging since these receptive skills may be developed independently using easily accessible instruments such as audiobooks or textbooks, as demonstrated below:

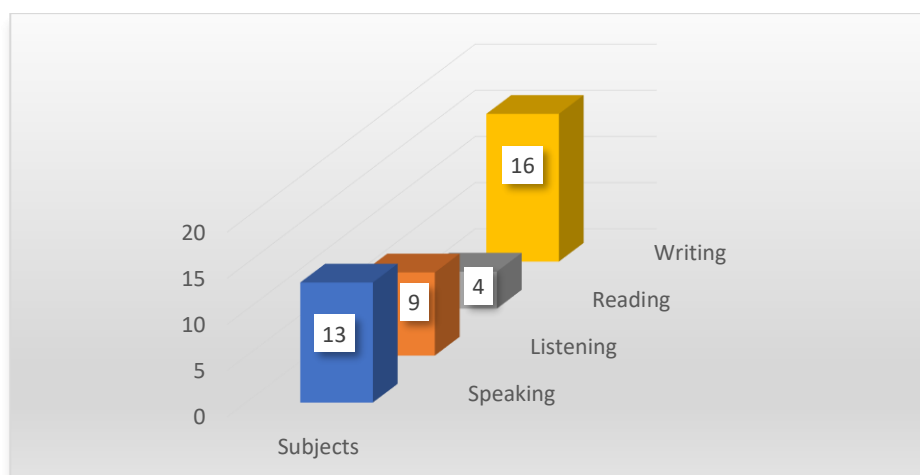


Figure 2.6. The Most Macro Skill Students Found Difficult when Learning Autonomously

Q4: Distribution of Students' Difficulties in Setting Independent Learning Goals

The findings showed that most participants (71.4%) believed they did not struggle with establishing their learning goals on their own. These results revealed that many students were confident in managing their learning process due to their excellent skills in setting goals. On the other hand, (28.6%) of those surveyed admitted facing challenges because of the lack of guidance or the required capacities needed. Figure 2.7 summarises students' answers to this question:

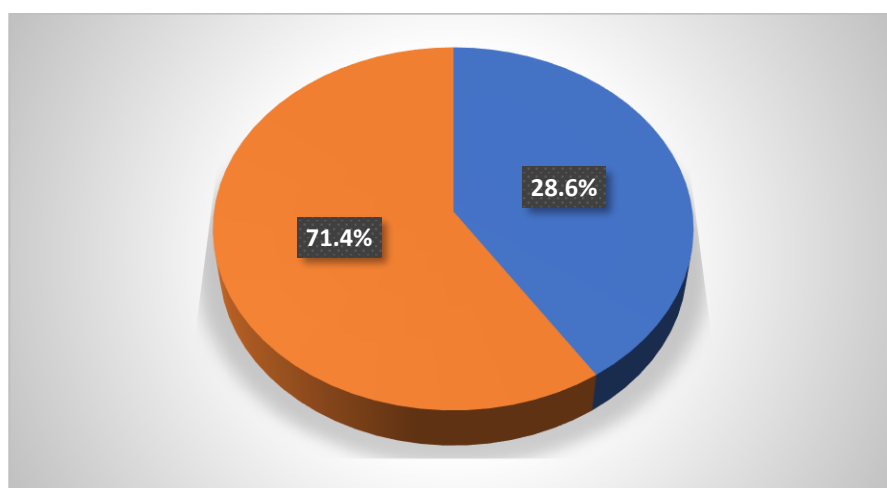


Figure 2.7. Distribution of Students' Difficulties in Setting Independent Learning Goals

Q5: Distribution of Students' Difficulties in Tracking Independent Learning Progress

According to Table 2.3, nearly all the respondents (76.2%) reported not struggling to evaluate their progress independently. However, only 23.8% of the participants admitted having difficulties observing their own progress. This showed that most students had the necessary skills and strategies to evaluate their achievements. The following table summarized the results:

Table 2.3. Distribution of Students' Difficulties in Tracking Independent Learning Progress

Options	Participants	Percentage
Yes	10	23.8%
No	32	76.2%
Total	42	100%

Q6: The Importance of Teacher Guidance in Learning Independently

A significant percentage of respondents (38.1%) thought that teacher guidance was important, while 26.2% considered it very important since it influenced their capacity to study autonomously. Conversely, 21.4% of those participants maintained a neutral viewpoint, believing that their requirement for teacher assistance might change based on the difficulty of the topic or module. A smaller segment of learners (11.9%) considered teacher guidance not very important, and only 2.4% perceived it as not important at all. The following horizontal bar Figure 2.8 demonstrates the main results:

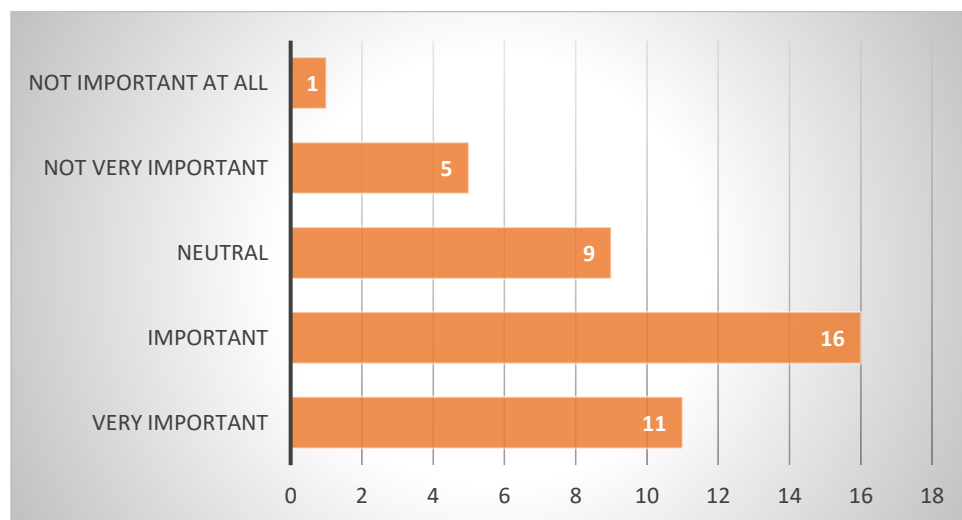


Figure 2.8. The Importance of Teacher Guidance in Learning Independently

Section 03: Students' Attitudes Towards the Use of AI Tools in Learning Autonomy

Q7: Students' Use of AI Tools when Studying

According to the findings, a large portion of respondents (95.2%) stated that they used AI tools while studying, whereas a minor portion (4.8%) mentioned that they did not.

Table 2.4. Students' Use of AI Tools when Studying

Options	Participants	Percentage
Yes	40	95.2%
No	2	4.8%
Total	42	100%

When asked about which tools they used, the respondents answered that ChatGPT was the most AI instrument used by 88.1% of them, highlighting ChatGPT's popularity among EFL students for giving quick information and immediate feedback. Gemini and Grammarly had significant usage rates of 42.9% and 38.1%, proving a strong interest in improving language skills and grammatical correction. QuillBot and Duolingo were used by (19%) of students each, primarily for paraphrasing texts and learning new languages through interactive games. Quizlet ranked as the least favoured, with only 7.1% of students relying on it for their academic requirements. In comparison, 21.4% of students mentioned using several other AI tools in their independent learning methods. Figure 2.9 summed up the results of this question:

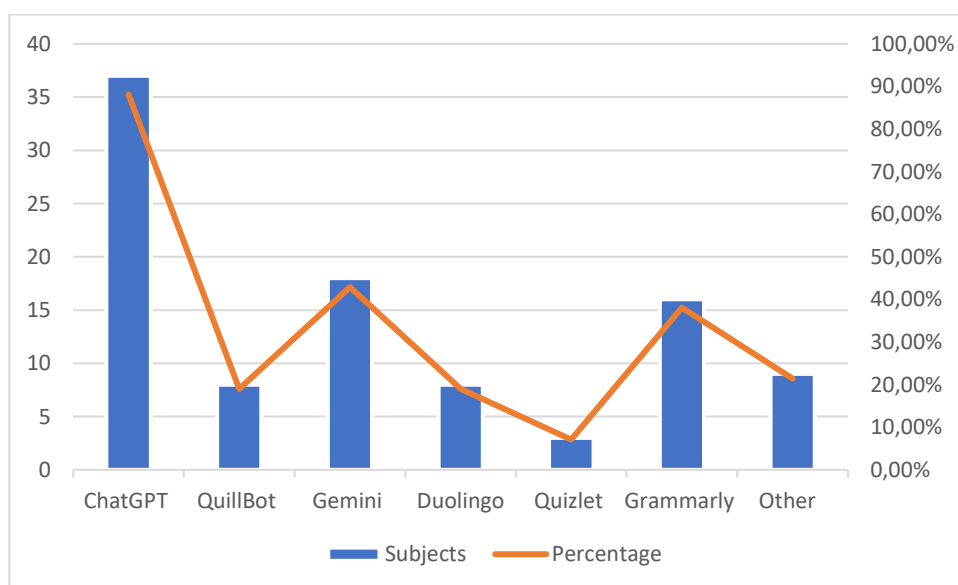


Figure 2.9. Types of AI Tools Used by Students in Studying

Q8: Students' Usage of AI Tools

The data showed that half of the respondents (50%) used AI tools daily for academic activities. Additionally, 33.3% of those surveyed used AI tools weekly, while 9.5% said they used them once a month. A smaller category of students (7.1%) stated that they rarely used these devices. Figure 2.10. demonstrates the main results:

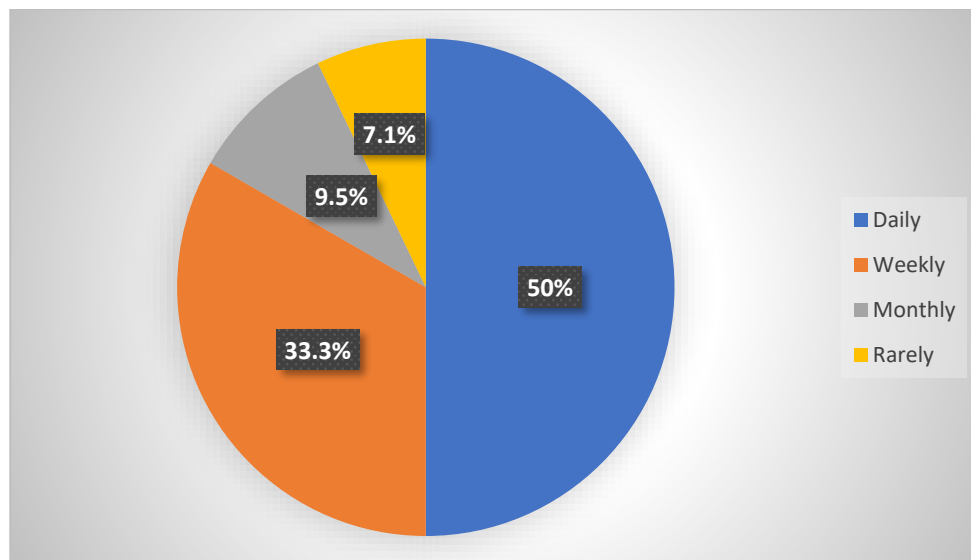


Figure 2.10: Students' Usage of AI Tools

Q9: Types of Tasks Supported by AI Tools

According to the statistics, a large number of students (83.3%) used AI tools for research and information gathering, mainly for collecting evidence from many resources quickly. In addition, half (50%) of those surveyed used AI for writing and brainstorming ideas, AI provided different insights about difficult topics and enhanced students' writing capacities. Another common use was for language correction or improvement, with (38.1%) of students implementing AI to correct grammar errors or acquire unfamiliar concepts to improve their language skills. Furthermore, (26.2%) of participants used AI for practice exercises and quizzes, while only (7.1%) stated they used it for other reasons. These findings emphasised the different ways students integrated AI tools into their autonomous learning practices. The main results are summarised in Figure 2.11.:

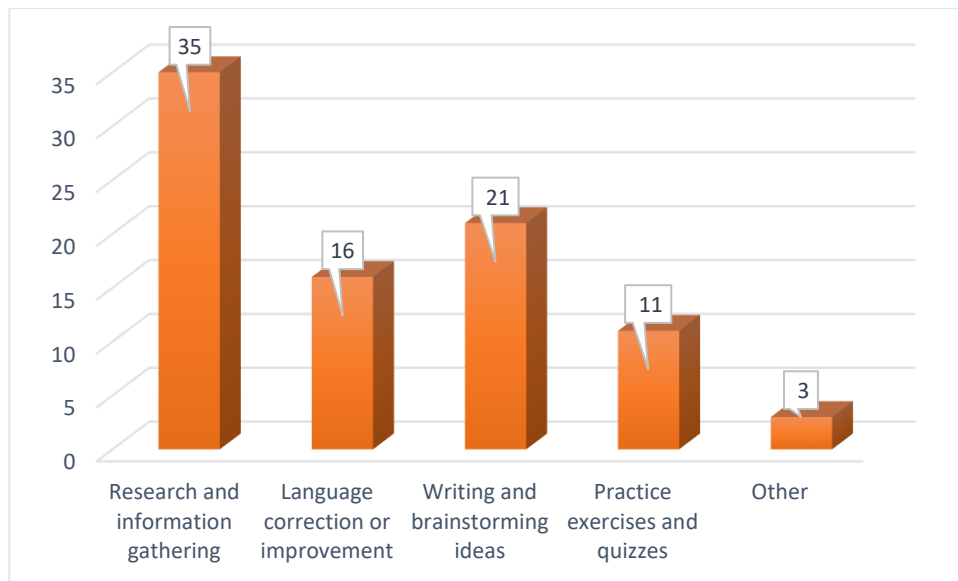


Figure 2.5. Types of Tasks Supported by AI Tools

Q10: Students' Perceptions of Learning Autonomy with AI Tools

When asked about learners' views on the usefulness of AI tools in facilitating autonomous learning, nearly all learners (76.2%) considered AI tools extremely useful for improving their learning independence. Furthermore, 23.8% of those respondents thought AI tools were only moderately useful. Even if these resources were beneficial, students might still require guidance from their teachers. Significantly, none of the participants thought AI instruments were not useful at all. The following Figure 2.12 represents students' answers to this question:

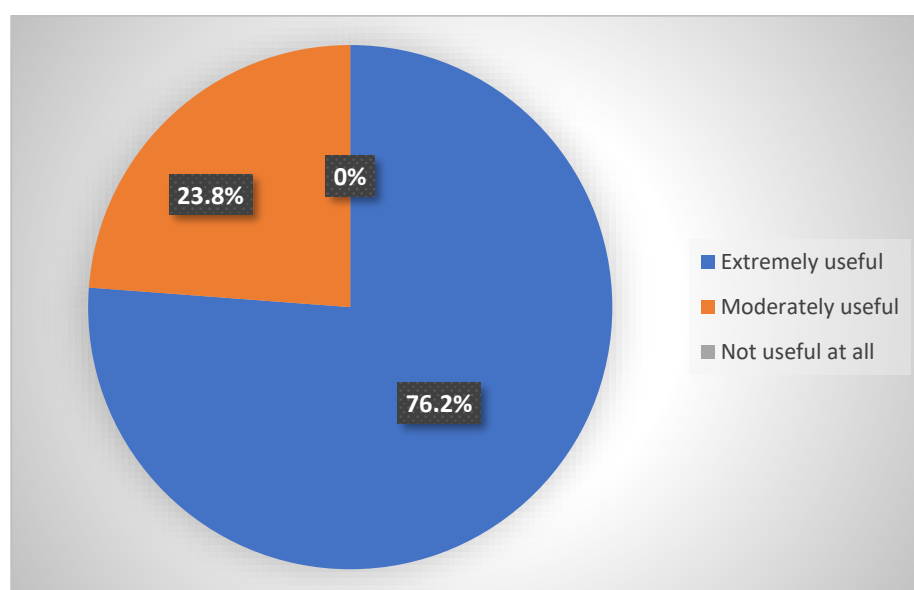


Figure 2.12. Students' Perceptions of Learning Autonomy with AI Tools

Q11: The Impact of AI Tools on Students' Autonomous Learning

A large number of the students (88.1%) agreed that AI tools had positively impacted their ability to study independently by offering assistance and personalized learning. However, the remaining 11.9% did not believe that AI tools helped them study independently.

- The Ways AI Tools Support Learning Autonomy

When asked about the ways AI tools supported autonomous learning, the majority of respondents (56.8%) believed that AI tools were very useful because they provided clear corrections and explanations that improve independent learning. Moreover, 21.6% of those participants mentioned that AI offered personalised learning activities that met their needs. A portion of the students (18.9%) viewed AI tools as effective by helping them set and follow their learning goals, while the rest of the group (2.7%) indicated that AI kept them motivated to study independently. The following Figure 2.13 summarises the results:

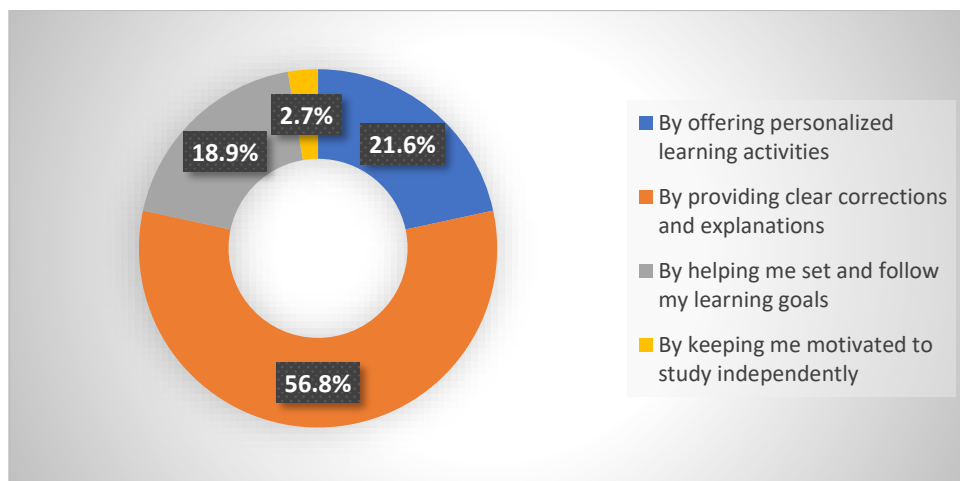


Figure 2.6. The Ways AI Tools Support Learning Autonomy

Indicate your level of agreement with the following statements:

These statements were Likert items that focused on a common objective to measure students' outlooks towards using AI tools in Learning Autonomy. After analysing the data obtained from the Likert items, the participants' responses to each statement were included.

Table 2.5. Students' Attitudes towards the Use of AI Tools in Learning Autonomy

Statements	Agree	Neutral	Disagree	Total
I prefer to learn autonomously with modern AI tools rather than traditional methods.	27(64.3%)	11(26.2%)	4(9.5%)	42(100%)
AI tools reduce my reliance on teachers	30(71.4%)	10(23.8%)	2(4.8%)	42(100%)
AI tools save me time compared to traditional methods.	33(78.6%)	8(19%)	1(2.4%)	42(100%)
I am comfortable using AI tools for learning.	29(69%)	11(26.2%)	2(4.8%)	42(100%)
I feel more confident studying independently with the help of AI tools.	27(64.3%)	9(21.4%)	6(14.3%)	42(100%)
AI tools help me learn more effectively.	30(71.4%)	10(23.8%)	2(4.8%)	42(100%)
AI tools enhance my comprehension of the course.	28(66.7%)	10(23.8%)	4(9.5%)	42(100%)
AI tools motivate me to take responsibility for my own learning progress	24(57.1%)	13(31%)	5(11.9%)	42(100%)
AI tools help me to personalize my learning to meet my specific needs.	27(64.3%)	12(28.6%)	3(7.1%)	42(100%)
AI tools help me in determining my strengths and weaknesses in learning autonomy.	17(40.5%)	17(40.5%)	8(19%)	42(100%)

❖ I prefer to learn autonomously with modern AI tools rather than traditional methods.

The information presented in the table showed that 64.3% of participants preferred to learn autonomously with modern AI tools, while the remaining proportion (26.2%) did not express a clear stance; they neither agree nor disagree with the statement. i.e., they remained neutral. A small category of respondents (9.5%) reported that they like to use traditional methods in learning independently rather than AI resources.

❖ AI tools reduce my reliance on teachers.

71.4% of the total responses, neutral stances made up 23.8%, and dissenting answers represented only a very small percentage, which was 4.8%. Hence, it was

concluded that more than half of the students who participated in this investigation thought using AI instruments reduced their need for teachers' guidance. However, most of the remaining participants preferred to adopt a neutral stance.

❖ AI tools save me time compared to traditional methods.

78.6% of participants thought using AI tools saved them time compared to traditional methods. In comparison, the remaining respondents (19%) did not express a definite opinion and remained neutral. Finally, only one respondent (2.4%) disagreed with the statement. Based on these findings, it appeared that the majority of students agreed that studying via traditional methods wasted their time as compared to using AI instruments, with one exception and a few being neutral.

❖ I am comfortable using AI tools for learning.

69% of participants were comfortable with the use of AI tools, 26.2% of the proportion chose to undecided, which meant they remained neutral, and finally only two participants (4.8%) disagreed with the statement. Overall, the majority of students had no issues concerning the use of AI tools; with two disagreements and some neutrals.

❖ I feel more confident studying independently with the help of AI tools.

The data in the table revealed that the agree responses comprised 64.3% of all answers, neutral responses were 21.4%, and disagreeing answers comprised 14.3%. Therefore, it was concluded that over 50% of the respondents involved in this study felt more confident about studying independently with the assistance of AI tools. However, the other participants remained neutral or expressed concerns about using AI tools mainly due to ethical considerations.

❖ AI tools help me learn more effectively.

71.4% of the sample population supported the statement AI tools help me learn more effectively, while 23.8% remained neutral, and 4.8% disagreed. Overall, a significant number of participants believed that learning autonomously with AI tools could be more beneficial and efficient, while the remaining percentage showed more neutrality than disagreement.

❖ AI tools enhance my comprehension of the course.

66.7% of participants preferred using AI tools to enhance their comprehension of the course. Meanwhile, a remaining portion (23.8%) expressed neutrality on the matter. A small group of the respondents (9.5%) reported they could understand the course content without relying on AI assistance.

❖ AI tools motivate me to take responsibility for my own learning progress.

57.1% of the surveyed group agreed with the statement, 31% held a neutral stance, and 11.9% did not agree. In summary, around half of those participants thought that AI tools motivated the students to take responsibility for their own learning progress, whereas the rest were more neutral or against this idea.

❖ AI tools help me to personalize my learning to meet my specific needs.

64.3% of the sample population endorsed the statement, 28.6% remained neutral, and 7.1% disagreed with it. Overall, a significant percentage of participants believed that AI tools helped the students personalise their learning to meet their specific needs, primarily because these instruments provided customised content. While the residual percentage showed more neutrality than disagreement.

❖ AI tools help me determine my strengths and weaknesses in learning autonomy.

An identical share of respondents (40.5%) expressed agreement and neutrality, while a smaller percentage (19%) disagreed. In summary, a considerable proportion of students recognized the importance of AI tools in determining their strengths and weaknesses in learning autonomy, yet almost the same amount was uncertain, and a smaller group thought these instruments were not helpful for this purpose.

Q12: Students' Use of AI Tools for Feedback Generation

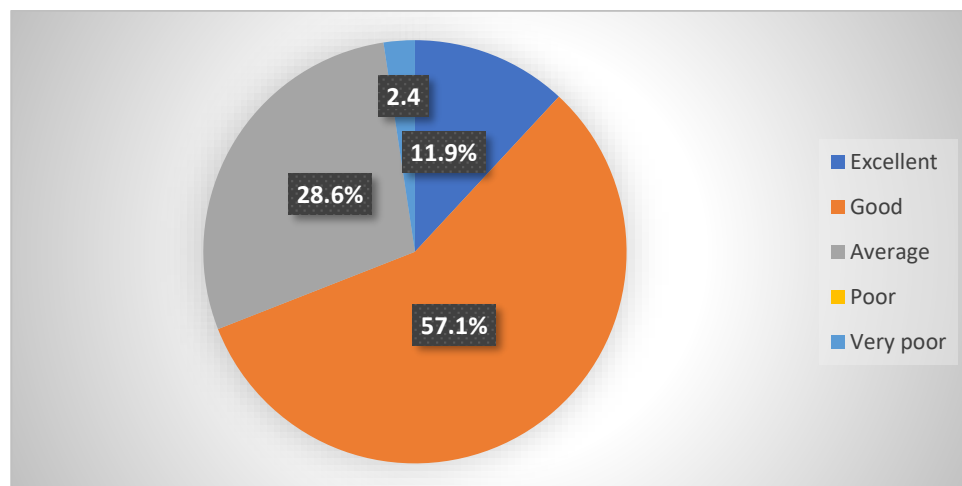
This “yes” or “no” question asked students about their attitudes toward using AI tools to generate feedback on their work. Table 2.6 shows that most of the students (61.9%) maintained that they rely on AI-generated feedback to evaluate their work, while only 38.1% stated they did not use it. Yet these learners still preferred traditional feedback methods.

Table 2.6. Students' Use of AI Tools for Feedback Generation

Options	Participants	Percentage
Yes	26	61.9%
No	16	38.1%
Total	42	100%

- Students' Perspectives on AI tools Feedback

Figure 2.14 presents students' perspectives on the effectiveness of the feedback provided by AI tools. Half of the participants (57.1%) rated AI feedback as good, while 28.6% found it average. Additionally, 11.9% considered it excellent, which implies that while AI feedback was often seen as good, it may not always meet the specific needs of learners. However, only one student (2.4%) classified it as very poor and none rated it as poor. These findings reflected the general level of student satisfaction with AI feedback. Figure 2.14 illustrates the main results:

**Figure 2.7. Students' Perspectives on AI tools Feedback**

Q13: Frequency of AI Generated Feedback in Improving Learning

The presented question above showed how often students found the feedback generated by AI tools helpful in improving their learning. The largest percentage (33.3%) mentioned that they often used AI feedback to support their learning, while 35.7% found it helpful sometimes. Additionally, 21.4% of the sample used the feedback generated by AI in order to enhance their autonomous learning. On the other hand, only a small group (4.8%) of the total sample never used AI feedback or rarely benefited from it. The following Figure 2.15 describes the main results:

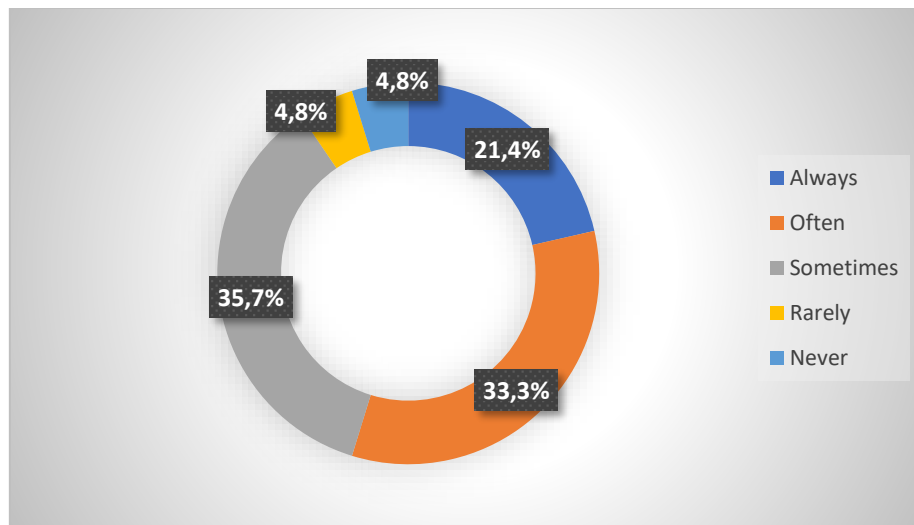


Figure 2.15. Frequency of AI Generated Feedback in Improving Learning

Q14: Students' Preference for AI Feedback or Teacher Feedback

When asked about the type of feedback students preferred, half of the respondents (50%) said they liked getting feedback from AI tools, while the other half (50%) preferred feedback from their teacher, as shown in Table 2.6:

Table 2.7. Students' Preference for AI Feedback or Teacher Feedback

Options	Participants	Percentage
The feedback provided by AI tools	21	50%
The feedback given by the teacher	21	50%
Total	42	100%

• Students' Perspectives on AI Tools Replacing Teachers in Learning Autonomy

The findings revealed that most of the students (76.2%) still saw the teacher's role as essential for support and guidance in learning independently, whereas only a small number (23.8%) disagreed, believing that AI could fulfil this function. Figure 2.16 illustrates the main results:

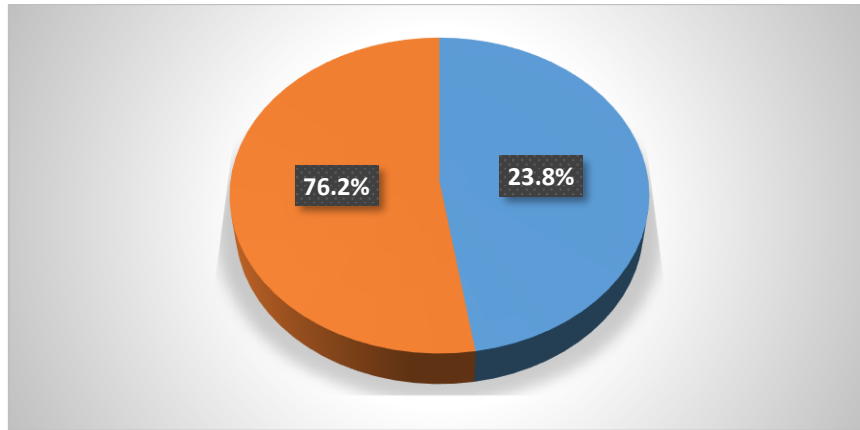


Figure 2.16. Students' Perspectives on AI Tools Replacing Teachers in Learning Autonomy

When asked to justify their answers, the informants reported that AI tools could not replace the role of teachers for several reasons. They said that teachers offered helpful advice and guidance based on their educational experiences. Additionally, some students mentioned that the data given by AI could be incorrect or miss important details. Moreover, they believed that AI could not give students emotional support or motivation. Teachers also helped students to think critically and guided them through the learning process. Students further added that the connection between the teacher and his learners is crucial for effective teaching and learning processes.

However, some participants believed that AI tools could replace teachers in some areas. They explained that AI helped students understand their strengths and weaknesses and gave immediate feedback. Furthermore, these tools were available anytime and anywhere, which made learning more flexible. In addition, AI feedback was personalized and focused on the student's needs. Some also felt that AI was more objective, while teachers took more time to explain lessons or check students' progress.

- **Areas of Learning Autonomy AI Cannot Support**

The findings presented the areas of learning autonomy that AI tools could not support compared to teacher guidance. Half of the students (50%) believed AI did not offer emotional support. 45.2% thought it struggled with explaining complex ideas or concepts. On the other hand, 31% found that the feedback provided by AI instruments was less detailed than the feedback given by the teacher. Furthermore, 26.2% of the

participants mentioned that teacher feedback adapted well to each individual's unique learning pace and style, while 23.8% noted that these resources failed to address cultural and social aspects. A small percentage (14.3%) mentioned other limitations. Figure 2.17 shows the main results.

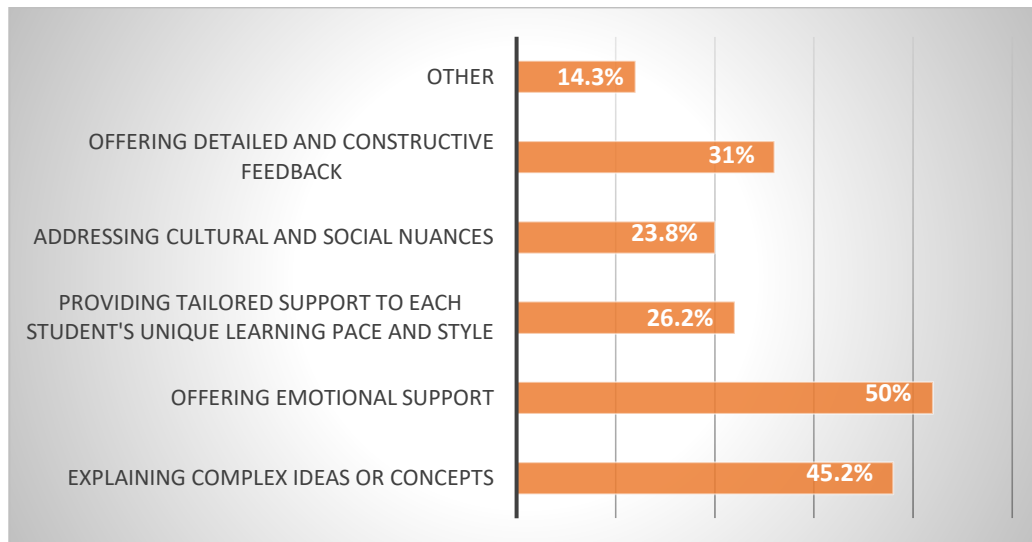


Figure 2.17. Areas of Learning Autonomy AI Cannot Support

Q15: Teachers' Use of AI Tools in the Classroom

The findings revealed that most of the students (69%) indicated that their teachers still preferred teaching with traditional methods rather than using AI tools. Meanwhile, 31% of students reported that their teachers integrated these modern resources into the classroom. The main results were summarized in the following graph:

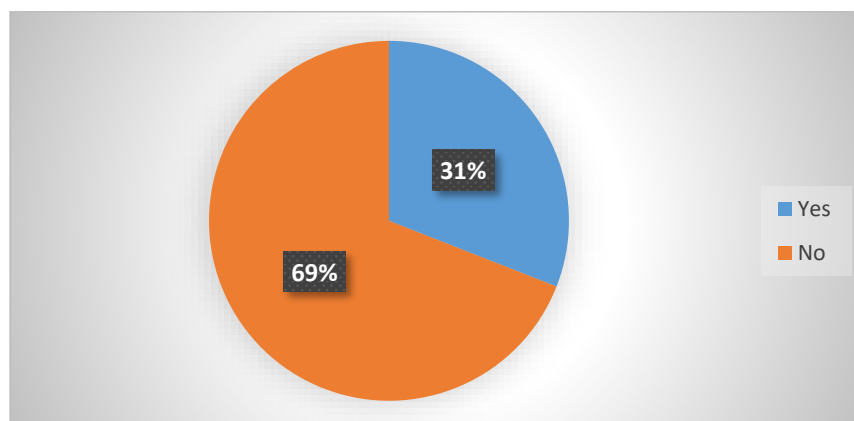


Figure 2.18. Teachers' Use of AI Tools in the Classroom

Q16: Students' Perspectives on Teacher Feedback Combined with AI Generated Feedback

Figure 2.19 below presents students' point of view regarding the combination of the teacher feedback with the feedback provided by AI tools inside the class. Most students (71.4%) liked this idea, suggesting that the AI-generated feedback was effective alongside the traditional teaching methods. Therefore, only 28.6% of the target sample disagreed, expressing support for the teacher feedback only. The figure summed up the results of this question:

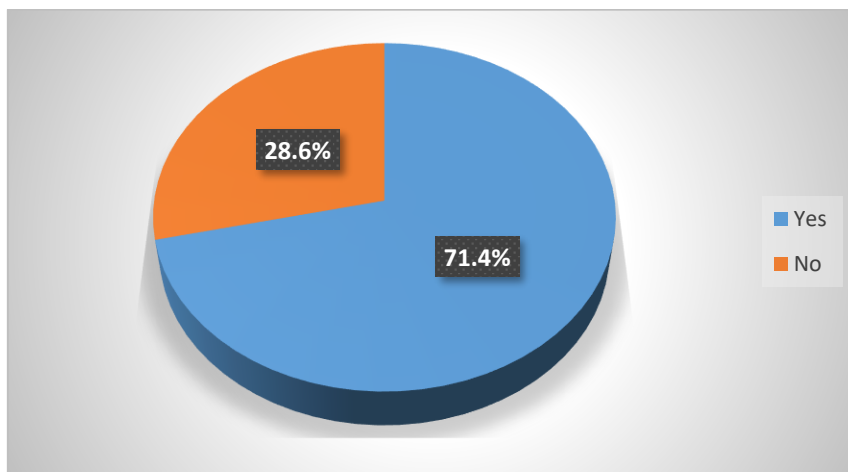


Figure 2.19. Students' Perspectives on Teacher Feedback Combined with AI Generated Feedback

Q17: Students' Perceptions on AI and Teacher Feedback Combination for Independent Learning

Figure 2.20 indicates that the majority of students, approximately 88.1%, responded with a positive "yes", expressing their agreement with the combination of the teachers and AI-generated feedback that would help them learn more independently. In comparison, only 11.9% of students responded with "no". The main results were summarised in Figure 2.20:

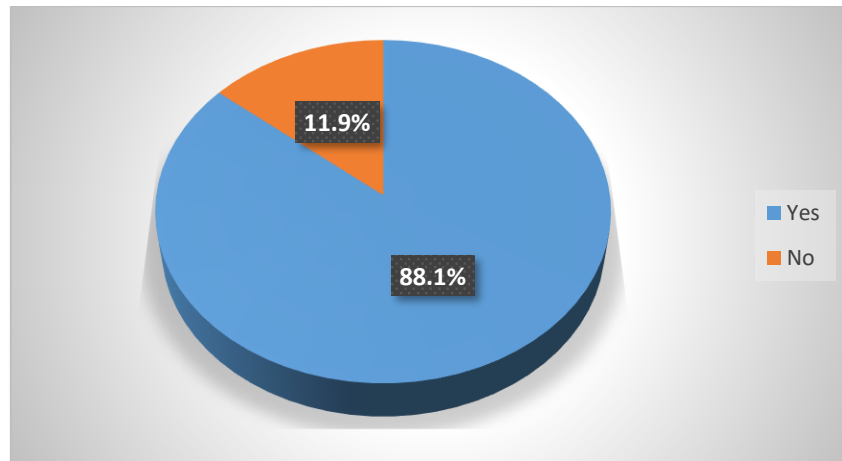


Figure 2.20. Students' Perceptions on AI and Teacher Feedback Combination for Independent Learning

When asked to justify their answers, the respondents reported that the combination between teacher feedback and AI feedback definitely supported their independent learning. Firstly, they explained that this mix made the learning environment more interesting and engaging. Moreover, they believed that AI could help with personalizing the learning experience, while the teachers could assist with creativity, motivation, and critical thinking. In addition, AI saved time by summarizing information, but teachers ensured that the content was accurate and well-understood. Some added that combining these two methods allowed learners to take advantage of AI's speed alongside the experience of the teacher.

However, other participants disagreed and reported that this combination did not help them become more independent learners. They argued that AI tools lacked human emotions that supported them to be motivated. Furthermore, they mentioned that AI feedback could produce wrong information or misunderstandings when they use it. Additionally, some students believed that relying on AI might lead to laziness and dependency. Finally, they stated that AI feedback was not valid, and they trusted teacher feedback more because it was based on years of teaching experience and professional judgement.

Q18: Students' Interest Regarding the Creation of a Specific Module on How to Use AI Tools to Improve Learning Autonomy

When students were asked if they would be interested in a module to learn how to use AI tools to improve their learning autonomy, most showed interest. They said the module would help them better understand how to use AI for their learning. Some students mentioned that it could be beneficial and enjoyable, since the teaching system was a bit poor and not innovative. Others added that it would help students know and use the basics of AI more effectively. In general, their answers showed they were willing to learn and saw the module as a decisive step to becoming more independent learners.

Section 04: The Impact of AI Tools on Students' Learning Autonomy

Q19: Distribution of Students' Challenges in Independent Learning Without AI Tools

The findings showed that most participants (61.9%) admitted that they struggled with learning independently without using these instruments. On the other hand, (38.1%) of those surveyed stated that they did not face challenges. This indicated that many learners depended on AI tools to support their autonomous learning, whether for collecting valid data or receiving quick feedback. Figure 2.21 summarises students' answers to this question:

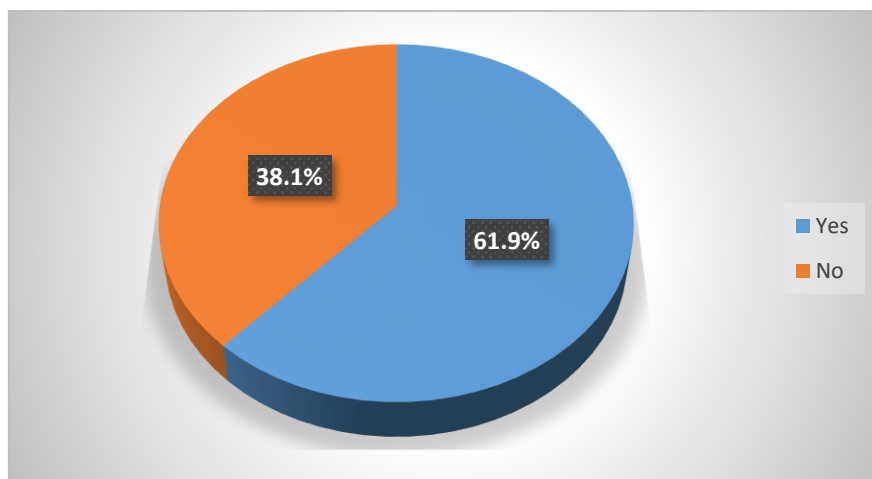


Figure 2.8 Students' Perceptions on AI and Teacher Feedback Combination for Independent Learning

Q20: Students' Perspectives on AI Tools and Their Impact on Passive Learning

From Figure 2.22, it can be noticed that most of the students (76.2%) maintained that overdependence on these tools could decrease their engagement in active learning. However, the remaining respondents (23.8%) did not see AI reliance as a negative factor that would lead them to be lazy learners. The following figure demonstrates the main results:

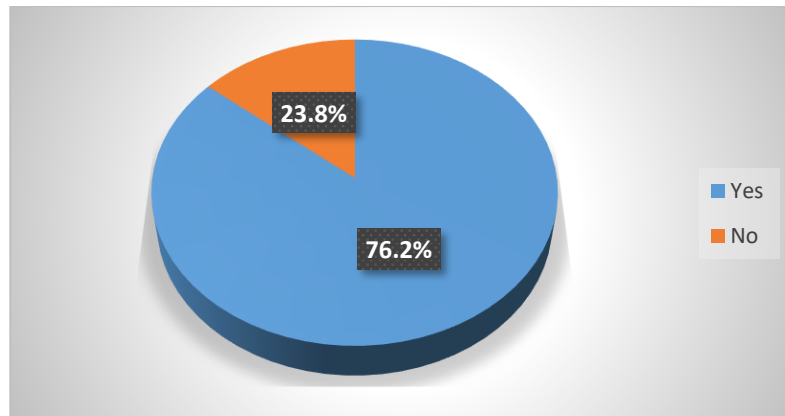


Figure 2.22. Students' Perspectives on AI Tools and Their Impact on Passive Learning

Q21: Students' Perspectives on AI Tools and Their Impact on Critical Thinking

When exploring students' perspectives on whether exaggerated dependence on AI tools could impact their critical thinking, the results showed that approximately 81.4% of students believed that relying too heavily on these resources could negatively affect their thinking ability. On the other hand, 18.6% of the participants disagreed, as summarised in Figure 2.23:

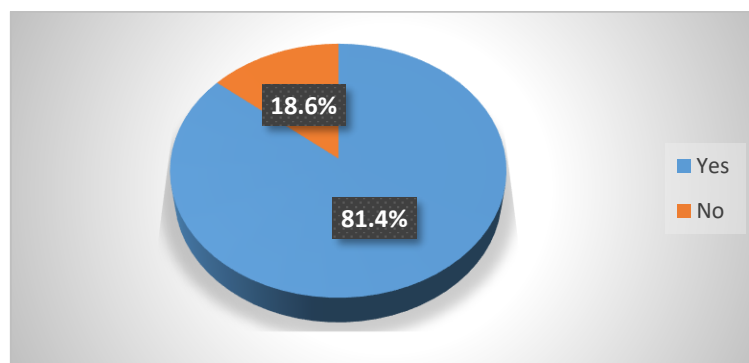


Figure 2.23. Students' Perspectives on AI Tools and Their Impact on Critical Thinking

Q22: Students' Perspectives on AI Tools and Their Impact on Problem-Solving

Regarding students' opinions on whether excessive dependence on AI instruments could impact their ability to solve problems independently, almost all the participants (86%) stated that over-reliance on these tools could reduce their problem-solving skills. In contrast, only 14% did not believe that relying too much on AI resources would hinder their capacity to fix problems autonomously. These results were summarised in Figure 2.24:

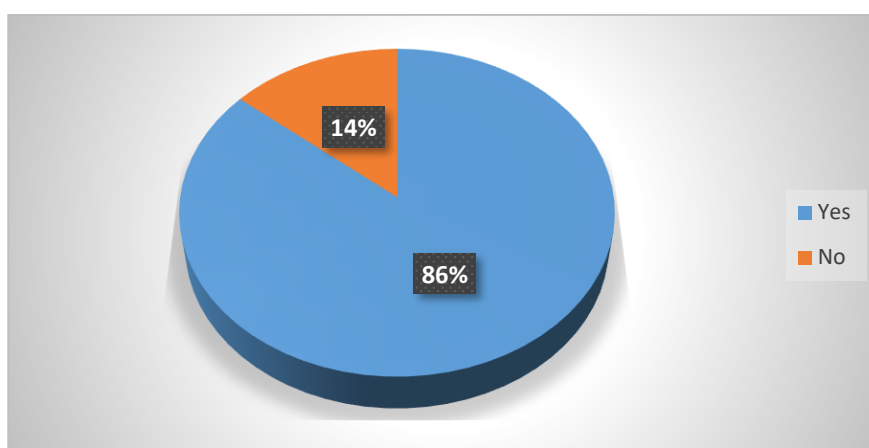


Figure 2.24. Students' Perspectives on AI Tools and Their Impact on Problem-Solving

2.6.2. Teachers' Interview Analysis

The teachers were categorised into participants 1, 2, and so on to make the interview analysis process easier. The results of their answers are indicated below. The findings presented the personal information of EFL teachers regarding their teaching careers. The five main questions were asked to determine the teachers' positions at the university, area of speciality, different modules and levels they taught, and years of teaching experience. The distinct answers highlighted the differences between the levels of the educators. Four of ten EFL teachers were ranked as professors with more than 15 years of teaching experience. The least experienced had taught for one year, the most experienced had over 32 years of teaching experience at university, while the others ranged from 8 to 28 years. This difference indicated that the teachers' answers would vary between the new generation of novice teachers and the older generation of

professors. These disparities in their opinions would make the findings of these interviews rich with different insights and many new ideas.

Those educators were specialised in different fields of research, mainly Applied Linguistics with either TEFL (Teaching English as a Foreign Language) or Didactics. Two different participants (6) and (10) specialised in different areas of study, Teacher Education Development (TED) and ESP, respectively. Combining all the participants' answers in this interview meant that all modules had been taught at all levels. Primarily because the theme of the research was not directed to a specific skill or module, and that was one of the main reasons why the researcher chose ten EFL teachers specialised in different areas of study to collect different insights and perspectives regarding L3 students, the main focus of the case study.

Q 01: The Problems EFL Students Face While Trying to Learn Independently.

The purpose of asking teachers this question was to understand the problems students encountered when studying alone without the direct guidance of their teachers. The first participant believed that the real problem was in the concept itself. Independent learning or autonomous learning was more appropriate in the Western world. The Algerian learner, from his/her childhood, had not been brought up to be autonomous. In society, he relied on his parents; at primary school, he was taught to depend on his/her teacher. Autonomy was a whole process that should have been undertaken from the beginning of the pupils' educational journey, and not only at the university level.

Participants (02), (03), (05), and (6) observed that there were two different categories of university students. The large group of learners came to university with the high school mindset expecting to be spoon fed by their teachers, while the rest of the students, mainly the intelligent ones, who actively sought independent learning through attending classes regularly, asking for help and clarification when needed, working hard to improve their macro skills outside the classroom, representing small percentage of the students. Participant (05) mentioned that university teachers should train EFL learners to be independent since their first year at university by asking them to prepare lessons, summarise, and diagrams to enhance their ability to work alone.

Participants (03) and (06) saw the learner's personality as a key factor in their independent learning. Both participants highlighted the fact that nowadays, students have all the digital and technological tools, as participant (06) called them 'the required content', which is accessible and free in order to be effective self-learners inside or outside the classroom. However, some students did not want to take responsibility for their learning; they relied only on what teachers gave them inside the classroom, waiting for exams to report the teacher's lecture on paper and calling themselves examiners of knowledge. Participant (06) called this category of learners 'pupils at the level of university' who were still not aware of their role and that they were no longer simple students but rather future researchers.

Regarding this point, participant (08) emphasised that recently students were more conscious about their importance in classes that shifted from teacher-centred to student-centred. Participants (02) and (03) agreed on the importance of guidance. Students simply had a target, but they did not know how to achieve it. Participant (02) stated that "The main question students ask is when they will improve, instead of asking how and what beneficial strategies we should adapt to improve."

Participants (03) further added that another problem they might face was when searching for a specific phenomenon, and they found plenty of information, so they asked for the teachers' direction to find a particular answer to a specific question. Participants (04) and (10) elaborated the idea of resources. They thought students' biggest problem was finding accurate sources, especially on the internet. When they tried to Google any question, many links showed up, and they did not know how to filter them or which sources they should trust when working independently. Participant (08) also mentioned that generating or reading much information might lead students to learn randomly; the best way to enhance their independent learning is through a structured framework.

Participants (07) and (09) claimed that the main problem was that students might face challenges because they were either lazy or eager to learn only what they liked or were interested in. Participant (09) also noted that independent learning required high self-motivation. If students were less ambitious, it could be difficult for them to stay

focused or even improve themselves when learning independently. In general, learning independently was a whole process that many students failed to achieve, and this was one of the main reasons, besides laziness, less motivation and many other problems, that could hinder students' learning autonomy.

Q 02: Strategies Used by Teachers to Encourage Autonomous Students

This question aimed to collect the different teaching techniques and strategies used to promote students' autonomy effectively. Participants (02), (06), and (10) emphasised the practice at home, complaining that one hour and half per week was not enough for teachers to present and explain the lesson and do the activities, so they provided them with different assignments to do at home in order to improve their abilities to learn at their own. Participant (06) used a specific strategy called 'interactive approach' that involved an active engagement from both teacher and students in his learning process. On one hand, participants (01) and (03) recommended their students to look on the internet for some websites or applications and accurate sources that would help students rely more on themselves rather than the teachers only in the classroom.

Participant (04) suggested to his students to learn schematically. He believed searching on Google or YouTube for any information would waste students' time and their learning would be random, particularly EFL learners who had to master the language proficiency and the four language skills, ideally through listening to music and watching movies. Participant (10) also mentioned using e-books and applications for learning languages through games like Duolingo. Those types of learning created a fun atmosphere for learners to improve their autonomy. Participant (07) thought communication was the key to understanding the students' needs, lacks and wants and how to develop them independently. Participant (09) believed that group collaborative work raised students' autonomy by engaging them in different assignments and praising intelligent and hard-working students.

Participant (08) had a different and specific strategy. She said, "Simply speaking, my strategy is I do the pre-learning, then the teaching, then the learning happens". The teacher first gave them a question to look for, and all the answers would look similar based on general knowledge. She brought a material text during the lesson to motivate

their curiosity to learn. Based on students' answers, the teacher could recognise the different learning styles (auditory, imaginative, creative or mathematical), which would help her choose her reading materials based on their needs. In the post learning, the teacher asked them to combine their research findings with her reading materials. This strategy encouraged students to stay active in their learning while she guided them with specific frameworks or models to follow.

Overall, based on the responses given by the teachers, it seemed that they used several strategies and teaching methods. Most teachers tended to provide learners with different assignments at home to practice their learning due to the limited time of sessions at university. Whereas, the rest of teachers preferred to use their own strategies because they believed that these techniques helped their students to develop their progress and promote their autonomy.

Q 03: Teachers' View on the Impact of AI Tools on Students' Autonomous Learning

This question was asked to know the teachers' views on the role of AI tools in developing the autonomy of EFL learners and in what ways. Based on the interview findings, nearly all the participants (1, 2,5,6,7,9,10) 70% agreed that AI tools could enhance their independent learning when used wisely. However, two teachers (participants 04 & 08), 20%, disagreed, stating that AI technologies would ruin the learner's progress; instead of helping learners to be more autonomous, it would turn them into lazy students, depending so much on these devices. One teacher's opinion (participant 03) 10% remained neutral, she thought that AI played two leading roles in either increasing or decreasing students' autonomy, and its impact depended on the way students used it, as shown in Figure 2.25:

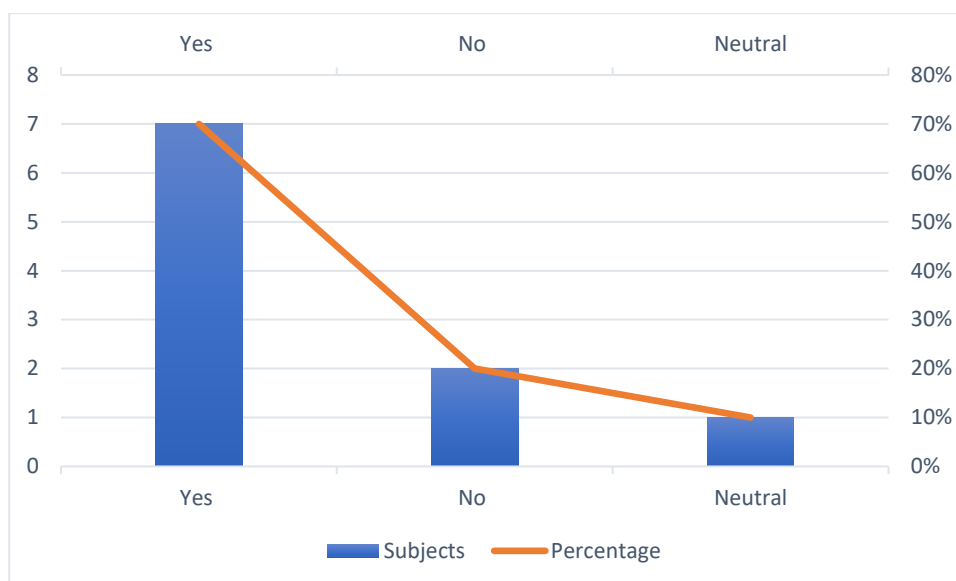


Figure 2.25. Teachers' View on the Impact of AI Tools on Students' Autonomous Learning

When interrogated about the way AI tools could help EFL students to be more autonomous, Participant (01) believed that if AI tools were used to monitor students' products, written or oral products, instead of using them as a source of knowledge, in this case, AI would help students improve independently. According to participant (02), AI could help in many ways, among the best ways was to generate the ideas, set an outline, and it could give the learners the whole work by just one click, and that could present one of the negative points about ChatGPT or any other tool.

Participant (05) admitted that AI was a powerful tool to encourage the students, but under one condition: using it wisely; otherwise, they would face an ethical issue and many other dangers. Participant (06) emphasised that it was about the questions' usage and formulation. If students knew very well 'when' to use it and 'how', then developing their knowledge and autonomous skills would be very effective. Participant (07) confirmed the necessity of using these tools as they could help both teachers and learners in their educational process. Participants (09) shared the same perspective with participant (05) that AI should not be used intensively as it would develop learners' dependency negatively instead of independent learning. Participant (04) thought that AI tools were quite the opposite; instead of developing students' learning autonomy, these instruments hindered their critical thinking abilities and turned them into passive learners.

Participant (08) believed that AI supported personalised learning instead of independent learning. Most learners, if not all, tended to copy past answers from ChatGPT instead of using their minds. Indeed, participant (08) mentioned that AI might develop autonomy. However, only if students followed a specific process of idea development, doing their research, taking notes, then generating ideas from AI, otherwise she encouraged her students to read books because even if AI provided quick information, that information would not be firm in the brain of learners she stated “quick information, quickly coming, quickly leaving”. Participant (03) indicated that AI tools facilitated the task for students because they found the information well-structured and organised. However, it did not allow them to consume it as it was and give it back to the teacher, because it would make them lazy instead of autonomous learners.

Q 04: Teachers' Use of AI Tools in the Classroom

This question was asked to determine whether teachers were open to using AI as a teaching practice inside the classroom. The findings showed that half (50%) of the teachers (participants 1,4,5,7,8) employed AI in their classrooms, whereas the other half (50%) did not (participants 2,3,6,9,10).

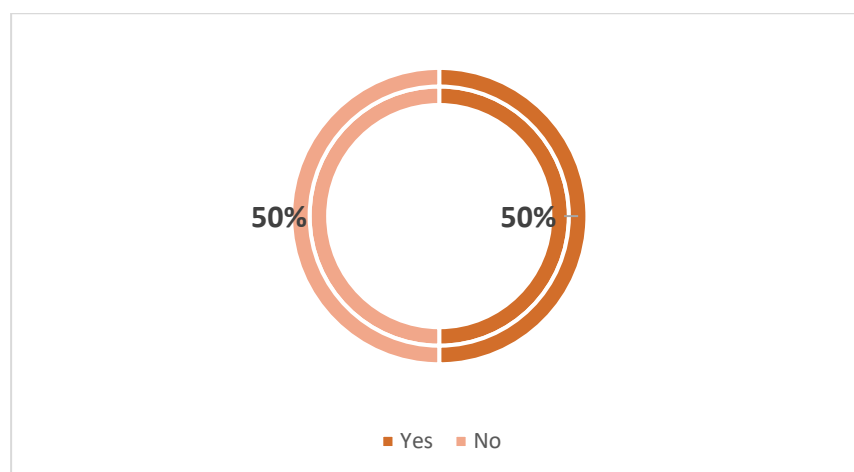


Figure 2.26. Teachers' Use of AI Tools in the Classroom

When asked about the specific AI tools they used, participant (01) mentioned an application named Zotero for the dissertation writing module. She said that it helped them order and structure their list of references, and she advised them to use Grammarly to correct grammatical mistakes in their writing. Participants (04) and (05) used ChatGPT and DeepSeek because those AI tools were accessible, free and gave

immediate feedback. Participant (04) also mentioned that when teaching literature, he used tools like Canva to generate passages from books into pictures or characters, stating that “pictures said a thousand words”. This strategy motivated his students and created an enjoyable atmosphere in the classroom. Participant (07) admitted that the AI answers like ChatGPT and Gemini were direct and more-driven answers that saved her time, instead of collecting information from many Google links or watching a long video on YouTube. Participant (08) used the Magic School AI website to help teachers prepare activities or lessons and make lesson plans.

When asked about the teachers’ opinions regarding AI tools, all the participants agreed that these tools were helpful not only for the teaching process but also for learning. These tools influenced the teachers to update their teaching strategies, which helped learners be more responsible about their learning and develop their abilities to become more autonomous and independent. When questioned, the participants who answered no, if they had ever thought of using them shortly to enhance their students’ autonomy, did not deny that they used AI for personal use away from classroom practices. Participants (2,3 and 9) 30% replied with yes, they thought of using AI as part of their teaching practices shortly to plan their lectures or made lesson plans because the answers given by these instruments were well organised in addition to the teacher critical thinking, human creativity and personal print, that combination would help students to be more interested to learn autonomously.

The remaining participants (6 and 10), 20%, said that they did not think of using AI tools and were not planning to. Participant (06) pointed out that he had a program to follow and AI was not part of the syllabus, in addition to the limited time of the sessions. Participant (10) stated that since AI was not part of the curriculum, she could not include it as her teaching method, especially that she kept warning her students about the dangers AI tools could raise if they relied on it too much, so it would be considered as contradiction if she used it herself.

In general, and combining the findings of the two questions, half of the participants who said yes, they used AI in the classroom, explained that these devices were helpful not only for teaching but also for learning because they encouraged

students to take more responsibility and become more independent in their learning. On the other hand, those who answered no were asked if they had thought about using AI in the future. Some said yes and explained that they wanted to use AI to help plan lessons, as it gave organised answers. While the rest of the participants stated that they were not planning to use AI because their teaching programs did not include it, and also, the class time was too limited.

The Modifications Teachers Would Anticipate in their Teaching Methods If AI Tools Were Integrated in EFL Classrooms.

Participant (02) believed that AI facilitated the teaching process by organising the lectures and providing immediate feedback for each student while she could focus on the content of the lessons. Participants (3,6, and 10) emphasised the importance of traditional teaching methods in the EFL classrooms. However, they did not deny that AI could help them personalise learning and access a large amount of information and resources with just one answer. Participant (09) might allow her students to use AI tools inside the classroom to refine their assignments, make the necessary corrections and collect detailed information about a particular topic, but without exaggerating to avoid plagiarism and ready-made assignments.

Q 05: Teachers' Perspectives Regarding the Balance between Feedback Generated by AI and Their Guidance for Enhancing Students' Learning Autonomy.

The main goal of asking teachers this question was to determine whether combining AI feedback with teacher guidance was an effective strategy to help learners become more confident and autonomous. Nearly all the participants, 90%, agreed that this blended learning approach was efficient for students to become more autonomous. Only one teacher, 10% (participant 04), believed that the more AI is used in classrooms, the less the need for teachers will be.

The rest of the participants saw this balance as crucial to supporting the autonomous learner. Participants (7, 9, 10) shared the same insight: AI tools' data was not always accurate. If most of the feedback was provided by AI, the remaining percentage of accuracy could be complemented by the teacher. Participant (02)

mentioned that AI could adjust the feedback according to the requirements of the student, and that would definitely help the teacher remember the profile of each learner.

Participant (03) said “We cannot ignore at certain limit the importance of such a tool but at the same time over relying on it is dangerous as well, so it would be wonderful to take the benefits of AI and combine it with the guidance of teacher that definitely will bring good results to the educational system”. Participant (05) claimed that these digital generation of students, frankly speaking, were not waiting for the feedback given by the teacher, instead they preferred to rely on AI without being aware of the negative impact these tools might represent and that was one of main raisons why the teacher’s guidance was crucial in such a case.

Participant (01) emphasised the area that AI assessed. In terms of knowledge information, these tools could be biased. For that reason, a good selection of the appropriate answers and the teacher's guidance would help students promote autonomy. According to participant (08), making a comparison between her Academic feedback and AI general feedback would effectively support the learners in their independent learning.

Participant (06) specifically noted that this combination would encourage students to be more autonomous because they would have a human teacher in class and an AI assistant at home. However, students should remember that AI cannot consider exceptions like environment, society, human culture, and behaviour. It was just a machine with no feelings that could not provide motivation, and that is why a human touch was needed in this case. In short, and according to teachers’ perspectives, they were not against students using AI tools. Instead, they were just concerned about the overuse and the risks these machines might cause. However, if students wanted to use them under close supervision, teachers would not mind, and they believed it was a great way to enhance student independence and autonomy.

Q 06: Teachers’ Opinions on Whether Dependence on AI Tools Could Affect Students’ Critical Thinking or Independent Learning.

The interview findings revealed that all the participants (100%) agreed that the overuse of AI tools would limit the students' critical thinking, problem solving and their

ability to learn independently. The human brain needed to be stimulated through thinking, observing, analysing and then concluding; if any step of this process were missing, the brain operation would malfunction, therefore the learners would not think critically and would rely on AI to do their work instead. Soon, the users of these machines would kill their brain's creativity by asking AI directly and accepting any answers without even questioning themselves about the validity of this information.

AI tools were increasing the level of laziness among students, and over time, learners would not lose their ability to think critically. Furthermore, dependence on AI tools would engender bad habits, and overreliance on these technologies would no longer enable students to become independent and critical thinkers. To sum up, it could be said that the teachers were worried that the future generation of students would struggle with mental and health issues sooner because they were all falling into the trap of over-reliance on AI tools without paying attention to the dangerous impact these instruments have on the psychological and cognitive skills of the learners.

Q 07: Teachers' Advice for Schools and Universities on Using AI Tools to Promote Autonomous Learning in EFL Classrooms.

Participants (3, 4, and 6) believed that the Algerian government was already moving toward AI-based schools and universities. Before taking this serious step, subject specialists should teach students how to use AI effectively, and not any English teacher could do it, to raise the students' awareness about the positive and negative effects these tools would present. Participants (1, 2, 7 and 10) thought there should be training for both teachers and learners on how to use AI tools effectively, wisely and in a balanced way without causing harm to the teaching or the learning process. Participant (08) emphasised that teachers and students should be guided by some ethical guidelines for the institutions and scientific communities on how to use AI technologies ideally and ethically. According to participant (09), these schools or universities should offer websites that provide writing assistance, such as Grammarly, paraphrasing, and plagiarism checkers, before considering implementing AI tools.

One specific participant (05) stated, "The advice I would give as a didactician who has been in the field for many years is that before implementing those tools, we

have first to make a social educational study. That is, we first need to know the students' social needs and the feasibility of the objectives before making such a decision. For now, students are trying to learn independently, but we will not ignore that some students are still struggling to own a PC. That is why there should be a whole study according to social and economic means before taking any random decision. If AI tools are integrated, teachers and learners need to be trained on how to use them wisely to avoid the dark side of these tools”.

To conclude, integrating AI tools into traditional EFL classrooms was a huge responsibility that teachers were worried about, especially because the negative aspects of AI seemed more impactful than the positive ones. Teachers needed either specialist in the field of AI to help them do a collaborative work besides traditional teaching method or being trained on how to use wisely these tools to promote students autonomous learning.

2.7. Discussion and Interpretation of the Main Findings

The present section explores the interpretation of the significant results gained from the two research tools, students' questionnaires and teachers' interviews. The main goal was to confirm the suggested hypotheses and answer the research questions introduced at the beginning of this study. The first hypothesis emphasised the important role of AI tools in fostering third-year EFL students' learning autonomy. The findings revealed through data collection and analysis confirmed that AI tools provided many benefits that enhanced independent learning among EFL students. The results highlighted that personalised learning, accessibility, immediate feedback and data-driven answers were essential features that helped students improve their autonomous learning skills.

The collected data from students' questionnaires indicated that students were already trying to learn independently through their strategies, such as taking notes from lectures, summarising them, and practising exercises at home, away from a strict educational system and intensive programs. Moreover, the emergence of artificial intelligence tools like ChatGPT, Gemini, Grammarly, and Duolingo encouraged this category of students to be more autonomous and active in their learning. Mainly because

AI acted as an assistant to those students by providing information from various sources with just one click. Also, AI helped these learners by generating ideas, correcting mistakes, and providing personalised feedback. This indicated that AI tools had gained popularity as good resources that helped learners in their academic learning practices. The majority of students felt comfortable and confident studying independently through the use of AI tools rather than attending long sessions at university.

Based on the findings gathered from teachers' interviews, the shift from a teacher-centred approach to a learner-centred approach has raised the students' sense of responsibility to take charge of their learning. Students were making independent efforts but were far from autonomous learners. That is why teachers were doing their best to help learners either prepare lessons before attending the session, provide them with assignments at home, or engage them to watch movies or listen to e-books to boost their learning. Indeed, nearly all teachers who participated in the interview believed that AI devices encouraged students to work alone and practice the language more often through interactive learning. In addition, AI facilitated the learning process by offering personalised learning, personal assistance and determining the strengths and weaknesses of each student. However, teachers were still worried about students regarding the application of these tools. They were concerned that if students do not use them wisely, it could hinder their progress more than benefit them.

In conclusion, the results validated the first hypothesis, which was that third-year EFL students thought that AI technologies could help them become more autonomous learners. If used wisely, AI tools are essential in encouraging students to be more independent by adapting to individual learning styles. In light of this data, it could be inferred that students' attitudes towards AI tools were almost positive because these instruments permitted students to access information anytime and anywhere, and they adapted to individual needs, providing customised content and instant feedback. Teachers believed that students would benefit from AI tools if there were close supervision on their practical application. This guidance ensured that students understood how these technologies worked and how to use them safely and responsibly. Teachers realized their guidance was as important as AI assistance in fostering a deeper sense of autonomy and independent learning skills. Thus, the second proposed

hypothesis was correct and confirmed, which confirmed that AI tools, combined with traditional teacher guidance, could enhance third-year EFL students' learning autonomy by offering personalised feedback and learning support.

When answering the questionnaire, students reported that the teachers' presence in the classroom was crucial because they provided advice and guidance based on the learners' educational experiences. Students believed that successful learning required the teacher's supervision in the class and AI assistance at home. This indicated that many students still recognised the important role of educators even when they were learning independently with these devices. On one hand, AI tools analysed students' work, identified areas for improvement and provided quick feedback based on each student's specific needs and style. On the other hand, unlike AI, teachers as human beings could build strong relationships with their learners, offer emotional encouragement and support, give students a sense of belonging and a safe place to make mistakes and learn from them. This combination of teacher guidance and AI tools would create an enjoyable atmosphere for learners to improve their abilities in learning autonomously.

Nearly all interview participants agreed that AI was the best assistant for students in their academic journey, but they had to be careful while using it, to avoid the dark side of such devices. When the following question was posed to teachers in the interview: Do you think that a balance between the feedback generated by AI and teachers' guidance could be beneficial for students' learning autonomy? The researcher observed comfortable expressions on the teachers' faces or in their tone of voice, indicating they felt relaxed when students used AI tools under their supervision. This combination would enable students to use these tools effectively, well, and, most importantly, safely. While all teachers believed that this blended approach could be the perfect solution to save students from using AI unethically, one participant disagreed, thinking that this mix was just a temporary solution till AI dominated the educational field. According to his perspective, if students kept relying on AI to do their work, even with the teacher guidance the situation would be still catastrophic. The future generation coming would be a combination of stupid and lazy students with zero sense of responsibility towards their learning process.

In general, the findings supported the second hypothesis that AI tools, combined with traditional teacher guidance, could enhance third-year EFL students' learning autonomy by offering personalised feedback and learning support. Combining these two methods allowed learners to use AI's speed alongside the teacher's experience. The effective role teachers played in supporting their students emotionally in the classroom, and AI tools played in providing learners the necessary information and the immediate feedback that enhanced their learning progress, this mix served perfectly to improve the capacities and abilities of autonomous learners.

The interview findings revealed that the older teachers seemed more open to using AI in teaching, while the novice teachers were against it mainly because the old generation of teachers might feel more confident and sure that these devices were just a helpful tool. In comparison, newer teachers might fear that AI tools have replaced their roles or that their students will judge them as less competent. Even if a small percentage disagreed, nearly all participants saw that AI tools, if used appropriately by students without an over-reliance and with teachers' guidance, could help learners become effective autonomous learners. Therefore, the third suggested hypothesis that over-reliance on AI tools might decrease third-year EFL students' critical thinking and lead to reduced self-driven learning efforts was confirmed.

Based on the findings collected from students' questionnaires, learners were afraid of the exaggerated use of AI tools; many believed that if they kept using them, it might be a habitual action, and over time, they would become passive and lazy learners. Over-reliance on these technologies represented a negative factor that might influence the students' abilities to think critically or diminish self-driven learning efforts. However, the rest of the students who disagreed believed that AI assistants were only tools that helped them improve their learning progress and could not exceed the limits of replacing their cognitive processes or ability to learn independently.

All the teachers who participated in the interview agreed that the overuse of AI tools would limit the students' critical thinking and problem-solving and reduce their ability to learn autonomously. Educators were already facing this problem, students copy and paste the information as AI tools generate it and give it back to the teacher

without even trying to read it or criticise it. Later, students would be addicted to such tools, using them constantly, no matter how simple the question was. The situation will worsen if the future generation keeps using AI tools without strict observation. Soon, universities would have robots with diplomas rather than students. Teachers were apprehensive that students would shortly lose their ability to think critically or even take charge of their learning.

Overall, the obtained results from both students' questionnaires and teachers' interviews matched the third hypothesis, which stated that the over-dependence on AI tools might decrease third-year EFL students' critical thinking and lead to reduced self-driven learning efforts. Indeed, AI tools encouraged students to be more autonomous and take charge of their own learning. However, they had to be careful that these instruments had their main role to generate ideas and the role of the student was to develop and elaborate them based on their understanding, thinking and analysis.

The human brain needs to be trained in thinking critically and solving problems. If those students decide to act as passive recipients of knowledge and let AI do their work instead, they will not even be able to find solutions to simple problems. If AI tools were used wisely, in a limited manner and with teacher guidance, they would help students foster their autonomous learning. These findings aligned closely with the research conducted by Darwin et al. (2023) and George et al. (2024), demonstrating that AI tools had the potential to help learners improve and enhance their learning. However, implementing these instruments in education might also negatively impact students' critical thinking, problem-solving, and creativity. Both studies indicated the risks of over-reliance on AI, the challenges of managing too much information, and the lack of deep understanding. A balanced approach was suggested by Darwin et al. as a solution that supported self-driven learning while avoiding the downsides of depending too much on AI devices.

2.8. Suggestions and Recommendations for Future Research

The results of this research lead to the following suggestions and recommendations:

❖ Suggestions for students:

Learning schematically is one of the best strategies EFL students should follow to be autonomous. With AI's help, students can create a plan that acts like a roadmap for their learning, which means working based on a specific schedule that meets their needs and requirements. Before using AI tools, learners should attend university lectures, take notes, and summarise the main ideas and concepts. Then, they should use AI to design diagrams, practice exercises, and ask for feedback or further clarification.

❖ Suggestions for teachers:

EFL teachers should first train their students to be autonomous by asking them to prepare lessons before attending sessions, reading books and articles about their field of study, and providing them with assignments at home. Additionally, it is the responsibility of teachers to raise awareness of the ethical and excessive use of AI technologies among their students. Moreover, creating a fun and enjoyable atmosphere in the class by combining interactive learning with AI tools. For instance, in collaborative work, the teacher gives his/her students a problem to solve in the form of an activity to enhance their critical thinking and problem-solving skills, then asks them to provide the same problem to AI and try to make a comparison between their answers and AI-driven insights.

❖ Recommendations for both:

One of the most effective solutions for this problem could be collaborative work: students should be honest when using AI, and teachers should allow them to use these devices with limits and under close supervision. Also, teachers and students need to be trained by subject specialists on how to use these technologies without causing any harm to the educational system or students' progress. The combination of teachers' guidance, AI assistance and students' awareness represents a powerful trio for a dynamic learning environment. This balanced method provides a solid basis for effective autonomous learning.

2.9. Conclusion

This chapter presents a detailed analysis of quantitative and qualitative data collected from an online questionnaire and structured interview. The results of the research instruments showed that third-year EFL students were indeed misusing AI, raising concerns among students and teachers about using it wisely and ethically. Integrating AI into traditional EFL classrooms positively and negatively affects autonomous learners. From the students' point of view, AI tools provide reasonable assistance that helps them learn independently, but only if they are well guided by their teachers on how to use them appropriately. From the teachers' perspective, raising awareness among students about the dangers of depending too heavily on AI is essential. Therefore, combining the two perspectives in a blended approach, in which AI complements traditional teaching methods effectively, is most beneficial. overall, AI can enhance autonomy only when used wisely and within a balanced learning framework.

General Conclusion

General Conclusion

Introducing AI tools into traditional EFL classrooms represents a decisive step toward fostering learner autonomy. This study has explored the positive aspects of AI, including personalised learning and supporting students when they study independently. Additionally, AI tools can assist teachers in creating teaching materials tailored to the students' needs and help create a more autonomous environment than traditional classroom settings. However, this does not simply mean students are responsible for their learning, because if AI is misused, it can have an opposite effect. Over-reliance on AI tools can lead to loss of critical thinking, laziness, and reduced personal touch of the autonomous learners. That is why the main objective of this study is to examine the perspectives of both teachers and students about implementing AI tools in EFL classrooms and how AI tools can better facilitate students' ability to learn autonomously.

Therefore, the dissertation was divided into two main chapters: the theoretical framework, which was presented in the first chapter, identifying autonomy, the factors and challenges influencing autonomous learning, introducing AI tools in EFL traditional classrooms and the impact of these tools on autonomous learning. while the second chapter focused on the practical aspects, including research design, sample population, research instruments, data analysis and interpretation, and a set of suggestions and recommendations.

This dissertation employed an exploratory case study (mixed-method approach) using two research instruments. The study involved 52 participants, including an online questionnaire addressed to 42 students and a structured interview for 10 teachers from the English Department at Tlemcen University. After the analysis and interpretation of data gathered from these tools the three hypotheses put forward were confirmed. The results revealed that third-year EFL students positively perceived the role of AI tools in developing their learning autonomy. AI tools provided many benefits that enhanced independent learning, such as personalised learning, accessibility, immediate feedback, and data-driven answers. These essential features helped students improve their autonomous learning skills (the first hypothesis was confirmed). Additionally, teachers believed that students would benefit from AI tools if there was close supervision of their practical application. This guidance ensured that students understood how these technologies worked and how to use them safely without any potential risks. Teachers

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mentioned that their guidance, combined with AI assistance, fostered a deeper sense of autonomy among students by offering personalised feedback and learning support (the second hypothesis was confirmed). On the other hand, teachers also expressed concerns about the exaggerated use of AI tools. They believed that if students kept using them over time, they would become passive and lazy learners. Over-reliance on these technologies represented a negative factor that might influence students' abilities to think critically or hinder their self-driven learning efforts (the third hypothesis was confirmed).

This study sheds light on the role of AI technologies in shaping autonomous learning in the traditional EFL classroom in particular and the educational system in general. The findings suggest that third-year EFL students consider AI tools as a means to develop their autonomy in learning, but only if such tools are used under the teacher's guidance. Teachers feel that close supervision can ensure that students make the best use of AI by enhancing their cognitive thinking instead of copying and pasting the information as it is. This research also highlights the need for a balanced approach. AI technologies, when combined with traditional teaching methods, allow learners to use the speed of AI as well as the experience of the teacher and support students in developing themselves to be more independent. In fact, preparing teachers and learners through training and equipping the EFL classroom with appropriate ICT instruments are integral components to this research to enhance autonomous education in Algeria.

Many challenges were faced during this study. First, since it was exploratory research, no official authorisation would allow full implementation of AI tools into classroom practices in the current educational context, which limited the use of some research tools, such as classroom observation or tests. In addition, limited student participation and teachers' availability presented additional difficulties in collecting the necessary data. Despite these limitations, the study provides valuable insights regarding the integration of AI tools to support autonomous learning in traditional EFL

This study may open the door for more debates on how AI tools can be used effectively to promote autonomy in the Algerian EFL classroom. The findings that the researcher came across through this case study revealed that while AI tools offer many

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opportunities, their integration still faces many challenges. Therefore, more research is needed to explore how AI tools can support autonomy without replacing the teacher's role. Additionally, making a study to compare AI-assisted classrooms with traditional classrooms to understand the real impact of such technologies. Moreover, future studies may focus on teachers' training programmes to guide students in using AI tools effectively and what are the main modifications teachers would anticipate in their teaching methods. Researchers could also investigate how cultural and social factors influence the success of AI in Algeria. Finally, the ethical side of using AI, such as student data privacy and ethical concerns, remains an important topic for future investigation.

To sum up, this study shows that AI has the potential to support autonomy in EFL classrooms. However, in Algeria, this goal is not fully reached yet. Many students still depend on their teachers or use AI tools in ways that do not promote independent learning. Additionally, teachers face challenges in encouraging students to study independently. Both students and teachers need adequate support, training and awareness. Only then can AI be a helpful aid in the classroom, rather than an easy way to get quick answers. In general, AI can only enhance autonomy when used wisely and within a balanced learning framework.

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Appendices

Appendices

Appendix A: Students' Questionnaire

The present questionnaire aims at investigating the role of AI tools on third year EFL students' learning autonomy. You are kindly invited to fill in this questionnaire objectively since your answers are highly required for the fulfillment and the validity of the present research.

Note that your identity as well as your answers will be kept in total confidentiality. Please put a ✓ where there is a small box, and answer the questions in the given space.

Before filling in the questionnaire, you are kindly invited to put ✓ in the following box to show your consent to participate in this research

I do agree to take part in the present study ☐

Section 01: Students' personal information

Gender :

☐ Male ☐ Female

Age :

Section 02: Students' difficulties with learning autonomy

1.What methods do you typically use when studying autonomously?

- ☐ Note-taking
- ☐ Re-reading material
- ☐ Practicing exercises independently
- ☐ Other

2.Do you find learning autonomy a difficult task?

- ☐ Yes
- ☐ No

Justify your answer

.....
.....
.....
.....

3.Which macro skill do you find most difficult in autonomous learning?

- ☐ Speaking
- ☐ Listening
- ☐ Reading
- ☐ Writing

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4.Do you find it difficult to set your own learning goals independently?

☐ Yes

☐ No

5.Do you find it difficult to track your progress independently?

☐ Yes

☐ No

6.How important do you think teacher guidance is for independent learning?

☐ Very important

☐ Important

☐ Neutral

☐ Not very important

☐ Not important at all

Section 03: Students' attitudes towards the use of AI tools in learning autonomy

7.Do you use AI tools when studying?

☐ Yes

☐ No

If yes, which ones? (You can choose more than one answer)

ChatGPT ☐

QuillBot ☐

Gemini ☐

Duolingo

Quizlet ☐

Grammarly ☐

☐ Other

8.How often do you use AI tools?

☐ Daily

☐ Weekly

☐ Monthly

☐ Rarely

9.What types of tasks do you usually rely on AI tools for? (You can choose more than one answer)

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- ☐ Research and information gathering
- ☐ Language correction or improvement
- ☐ Writing and brainstorming ideas
- ☐ Practice exercises and quizzes
- ☐ Other

10.How do you find learning autonomy with AI tools?

- ☐ Extremely useful
- ☐ Moderately useful
- ☐ Not useful at all

11.Do you think that AI tools have supported your autonomous learning

- ☐ Yes
- ☐ No

If yes, in what ways?

- ☐ By offering personalized learning activities
- ☐ By providing clear corrections and explanations
- ☐ By helping me set and follow my learning goals
- ☐ By keeping me motivated to study independently

Indicate your level of agreement with the following statements:

Statement	Agree	Neutral	Disagree
I prefer to learn autonomously with modern AI tools rather than traditional methods.			
AI tools reduce my reliance on teachers			
AI tools save me time compared to traditional methods.			
I am comfortable using AI tools for learning.			
I feel more confident studying independently with the help of AI tools.			
AI tools help me learn more effectively.			
AI tools enhance my comprehension of the course.			
AI tools motivate me to take responsibility for my own learning progress			

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Statement	Agree	Neutral	Disagree
AI tools help me to personalise my learning to meet my specific needs.			
AI tools help me in determining my strengths and weaknesses in learning autonomy.			

12. Have you ever used AI tools to generate feedback to your work?

Yes ☐

No ☐

If yes, what do you think of the feedback AI tools provide?

- ☐ Excellent
- ☐ Good
- ☐ Average
- ☐ Poor
- ☐ Very poor

13. How frequently does the generated feedback helped you improve your learning?

- ☐ Always
- ☐ Often
- ☐ Sometimes
- ☐ Rarely
- ☐ Never

14. Do you prefer:

- ☐ The feedback provided by AI tools?
- ☐ The feedback given by the teacher?

If you prefer the feedback provided by AI tools, do you think that these tools can replace the role of teachers in guiding your learning autonomy?

- ☐ Yes
- ☐ No

Justify your answer

.....
.....
.....

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If you prefer the teacher's feedback, what areas of learning autonomy do you think AI tools cannot fully support compared to teacher guidance? Please select all that apply:

- ☐ Explaining complex ideas or concepts
- ☐ Offering emotional support
- ☐ Providing tailored support to each student's unique learning pace and style
- ☐ Addressing cultural and social nuances
- ☐ Offering detailed and constructive feedback
- ☐ Other

15. Has your teacher ever used an AI tool in the classroom?

- ☐ Yes
- ☐ No

16. would you like your teacher to combine his/her feedback with the one generated by AI tools in the classroom?

- ☐ Yes
- ☐ No

17. Do you think this combination would help you learn more interpedently?

- ☐ Yes
- ☐ No

Explain

.....
.....
.....

18. Would you be interested if a module was created specifically to learn how to use AI tools as a means of helping you improve your learning autonomy?

.....
.....
.....

Section 04: the impact of AI tools on students' learning autonomy

19. Do you face challenges when in learning independently without AI tools?

- ☐ Yes
- ☐ No

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20. Do you believe that relying too much on AI tools could render you become passive learner?

☐ Yes

☐ No

21. Do you think relying too much on AI tools could impact your critical thinking?

☐ Yes

☐ No

22. Do you think relying too much on AI tools could impact your abilities to solve problems independently?

☐ Yes

☐ No

Thank you

Appendices

Appendix B: Teachers' Interview

Dear teachers,

Thank you for accepting to participate in this interview.

The purpose of this interview is to gain insights into the integration of AI tools into traditional EFL classrooms and their impact on enhancing third-year EFL students' learning autonomy, as well as the potential challenges they might face, such as the risk of over-reliance. Your experiences and perspectives will help me to achieve this goal.

I would like to inform you that this conversation will be kept confidential, without any reference to your name during the entire phase of the study.

If you do not mind, I would like to tape-record our conversation for the sake of making sure that no single detail is being missed and being able to concentrate with you during the whole meeting.

Before starting the interview, would you please introduce yourself?

- What is your position at Tlemcen University? (MAB/MCB/MCA/Professor)
 - What is your area of specialty?
 - Which module(s) do you teach?
 - What level(s) do you teach (L1, L2, L3, M1, or M2)?
 - How many years of teaching experience do you have?
1. What problems do you believe EFL students face while trying to learn independently?
 2. Which strategies do you use to encourage your students to be more autonomous in their learning?
 3. Do you think AI tools could help your students develop their learning autonomy? How?
 4. Do you employ AI tools in the classroom?

If yes, which tools do you use?

According to you, have these tools helped your students become more autonomous?

If not, have you ever thought of using them to enhance your students' learning autonomy?

What modifications do you anticipate your teaching methods would undergo if AI tools were integrated in EFL classrooms?

5. Do you think that balancing between the feedback generated by AI and teacher's guidance could be beneficial for students' learning autonomy?

Appendices

6. Do you believe that a dependence on AI tools could affect your students' critical thinking or ability to learn on their own?
7. What advice would you give to schools or universities that want to use AI tools to promote autonomous learning in EFL classrooms?

ملخص

تهدف هذه الدراسة إلى استكشاف مدى فعالية دمج أدوات الذكاء الاصطناعي في أقسام اللغة الإنجليزية كلغة أجنبية، وكيف يمكن أن تسهم هذه الأدوات في تطوير الاستقلالية لدى طلاب السنة الثالثة. لتحقيق هذا الهدف، أجريت دراسة استكشافية باستخدام منهج يجمع بين الأسلوبين الكمي والنوعي. وقد تم تنفيذ البحث في قسم اللغة الإنجليزية بجامعة تلمسان. بدأت الدراسة بجانب نظري يوضح المفاهيم الأساسية، تليه منهجية البحث التي شملت جمع البيانات من 42 طالبًا في السنة الثالثة و10 أساتذة أجريت معهم مقابلات. وبعد تحليل استبيانات الطلاب ومقابلات الأساتذة، أظهرت النتائج أن أدوات الذكاء الاصطناعي يمكن أن تكون فعالة في تعزيز التعلم الذاتي.

كلمات مفتاحية: الاستقلالية، الذكاء الاصطناعي، بيئة التعلم، اللغة الإنجليزية كلغة أجنبية، الفصول الدراسية التقليدية

Résumé:

Cette étude vise à explorer l'intégration des outils d'intelligence artificielle dans les classes traditionnelles d'anglais, et comment ces outils peuvent contribuer au développement de l'autonomie chez les étudiants de troisième année. Pour atteindre cet objectif, une enquête exploratoire a été menée en utilisant une approche mixte, combinant des données quantitatives et qualitatives. La recherche a été réalisée au département d'anglais de l'Université de Tlemcen. L'étude commence par une partie théorique qui explique les concepts de base, suivie de la méthodologie utilisée pour collecter les données auprès de 42 étudiants de troisième année et 10 enseignants interviewés. Après avoir analysé les questionnaires des étudiants et les entretiens avec les enseignants, les résultats ont montré que les outils d'IA peuvent être efficaces pour renforcer l'apprentissage autonome.

Mots clés : Autonomie, Intelligence artificielle, Environnement d'apprentissage, Anglais langue étrangère, Salles de classe traditionnelles

Summary

The aim of this study was to examine the integration of Artificial Intelligence (AI) tools in English as a Foreign Language (EFL) traditional classrooms and how these tools can influence the development of autonomy among third-year students. To achieve these objectives, an exploratory survey was conducted using a mixed-method approach, integrating both qualitative and quantitative data. This research was carried out in the English department at the University of Tlemcen. The study begins by a theoretical part and then describes the research methodology used to collect data from forty-two third-year students and ten interviewed teachers. After analysing and interpreting the students' questionnaire and the teachers' interview, the results demonstrated the effectiveness of AI tools in enhancing autonomous learning.

Key words: Autonomy, Artificial Intelligence, Learning Environment, English as a Foreign Language, Traditional Classrooms.