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**Artificial Intelligence and Gamification: Enhancing Motivation in EFL Learning**  
**The Case Study of Master one EFL Students at Chadli Bendjedid University**

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## Dedication

*To my guiding stars, my beloved parents, this accomplishment, the culmination of countless hours and boundless dedication, is profoundly and eternally dedicated to you.*

*Mother, the very genesis of my existence, your immeasurable love, quiet sacrifices, and gentle guidance wove the textile of my life and instilled in me the curiosity and resilience to pursue this work. Father, your steadfast support and unyielding faith were the bedrock of every aspiration, fueling this arduous academic journey.*

*And to my siblings, my staunchest allies, your tireless encouragement and understanding were invaluable.*

*This thesis stands as a testament to the values you instilled: the relentless pursuit of knowledge, the courage to innovate, and the endless commitment to excellence. It is a humble offering, a token of my immense gratitude for your extraordinary love and unparalleled opportunities.*

**Boualia Amel**

*To my esteemed parents, whose presence was a quiet strength and constant light throughout my journey.*

*To my siblings, my unwavering support through every moment, and the source of both my strength and my smile.*

*To my brother-in-law, whose quiet support left an indelible mark at defining moments.*

*To my dearest friend, kindred spirit who stood beside me throughout this long journey with her heart, love, sincerity and warmth.*

*And to the one who believed in me, and became the most beautiful addition at the final chapter of this path...*

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### Abstract

English language proficiency possesses a recognizably capitalized role in the contemporary globalized era, which necessitates addressing the enduring challenge of sustaining student motivation in English as a Foreign Language (EFL) learning. This research endeavors to explore the influence of implementing cutting-edge educational technologies, specifically the amalgam of artificial intelligence (AI) and gamification on energizing learner enthusiasm along with examining the transformative potential of such pedagogical instruments to significantly enhance learner engagement, self-efficacy, and crucially, motivation in EFL contexts. Seizing the opportunity presented by this potent approach, the current research aims to assess how these settings affect learners' motivation, with the primary objective of evaluating AI's ability to personalize EFL gamified experiences; and analyzing the subsequent influence of combining AI-driven personalization with gamification on EFL learners' proficiency. A mixed-methods approach was employed with 27 Master one students of English at Chadli Bendjedid University in the department of English language to accomplish the established objectives. Data collection procedures comprised the distribution of questionnaires to the targeted population. Complementary, semi-structured interviews with EFL teachers at the aforementioned institution were conducted to gather nuanced insights on their perspectives and observations regarding the potential of AI and gamification in language learning, and any obstacles or opportunities they foresee. The findings revealed that the adaptation of AI and gamification offer a remarkably positive avenue to bolster EFL learners' motivation and persistence. The results suggest that strategically incorporating AI and gamification holds considerable promise for consolidating EFL students' motivation, as the engaging orientation of such confluence can induce more productive and stimulating learning experiences, ultimately leading to optimized language mastery.

**Keywords:** Motivation, Artificial intelligence (AI), Gamification, English as a Foreign Language (EFL).

**List of Abbreviations**

AI	Artificial Intelligence
EFL	English as a Foreign Language
SDT	Self-Determination Theory
L2	Second Language
ZPD	Zone of Proximal Development
AIED	Artificial Intelligence in Education
ELL	English Language Learning
APPS	Applications
NMC	New Media Consortium
RAMP	Relatedness, Autonomy, Mastery, Purpose
SPSS	Statistical Package for social Science
GPT	Generative Pre-trained Transformer

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RÉSUMÉ

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# *Chapter One*

## **Introductory Chapter**

## **Introduction Background of The Study**

The present digitally-infused age has ushered in a robust educational paradigm as the escalating advent of technology has reshaped conventional pedagogical techniques. One of the major ground-breaking progressions in recent years is the integration of artificial intelligence (AI) and gamification in educational settings, specifically to galvanize motivation in English as a Foreign Language (EFL) environment. To illustrate, AI can provide personalized feedback and adaptive learning pathways, ultimately fostering a sense of competence and progress (Chen et al., 2020), while gamification can enhance autonomy through choice and control, and relatedness through collaborative challenges and leaderboards (Deterding et al., 2011). As educators seek to bolster students' motivation and engagement, the convergence of such innovative methods presents a promising avenue for cultivating deeper and more meaningful learning experiences.

Nevertheless, the field of foreign language education has long grappled with the persistent challenge of sustaining student fluctuating motivation, particularly among young learners who often exhibit versatile degrees of enthusiasm and engagement. Traditional teaching practices can inevitably be susceptible to a tedious, uninspiring, and passive learning experience devoid of engagement and meaningful interaction, resulting in diminished language acquisition (Deci & Ryan, 2000). Conversely, the confluence of AI-driven educational tools and gamification strategies embody a transformative opportunity that aligns with the intricate cognitive and emotional requirements of students, thereby warranting a genuinely dynamic and personalized learning atmosphere. Constructing on the established principles of self-determination theory (SDT), which posits that individuals are driven by innate psychological demands for autonomy, competence, and relatedness. Ergo, AI and gamification can effectively address these needs within a language learning context (Ryan & Deci, 2017). Thereby, the

fervent bilateral of AI and gamification presents an enticing paragon for transforming EFL instruction into an intrinsically motivating and highly effective endeavor.

### **Statement of problem**

The incessant hurdle of preserving learner motivation in traditional EFL contexts necessitates sophisticated pedagogical interventions. Despite the increased acknowledgement regarding motivational affordances of Artificial Intelligence (AI) for personalized education and gamification for solidifying learner engagement, the synergistic capacity of their integrated application within English as a Foreign Language (EFL) learning settings remains a relatively under-investigated area. This study seeks to address this nascent, uncharted territory by exploring how a pedagogically-driven intersection of AI with gamification can potentially augment the personalization and effectiveness of pedagogical approaches to EFL instruction, thereby cultivating long-term motivation, leveraging learner autonomy, and accelerating language acquisition.

### **Research Objectives**

The primary objective of this study is to investigate the effects of AI-enhanced gamification on EFL students' motivation. The specific objectives include:

1. To explore the inherent correlation between gamification elements and student motivation in EFL classrooms.
2. To evaluate the role of AI in personalizing the gamified learning experience for EFL students.
3. To analyze the impact of AI and gamification on students' language acquisition outcomes.
4. To measure student attitudes regarding the effectiveness of AI-driven gamification strategies in improving their motivation.

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### **Significance of the Research**

This research holds significant implications for the field of EFL education. By investigating the synergistic potential of AI and gamification, this study aims to:

- Contribute to the theoretical comprehension of how technology-enhanced gamification can impact learner motivation in language acquisition.
- Provide empirical evidence on the effectiveness of AI-driven gamification strategies in optimizing EFL student engagement, persistence, commitment, and motivation.
- Offer practical insights for educators and curriculum designers on how to leverage AI and gamification to design more stimulating and effective EFL learning ecosystems.
- Inform the development of innovative AI-powered educational tools that can personalize learning experiences and adapt to the diverse needs of EFL learners.

Potentially contribute to upgraded learning outcomes and a more positive learning experience for EFL students.

### **Research Questions**

This research seeks to answer the following key questions:

1. How does the integration of AI-driven gamification strategies impact the intrinsic and extrinsic motivation of EFL students?
2. In what manners can AI personalize gamified EFL learning experiences to better cater to individual student needs and learning styles?
3. What specific AI-powered gamification mechanics (such as adaptive difficulty levels, personalized feedback, intelligent tutoring embedded in games) are most impactful in promoting EFL student motivation?

4. What are the perceptions of EFL students and educators regarding the usability and effectiveness of AI-driven gamified learning platforms?

### **Research Hypotheses**

Based on the identified problem and research questions, the following hypotheses are proposed:

H1: EFL students who learn through an AI-driven gamified platform will exhibit significantly higher levels of intrinsic and extrinsic motivation compared to students learning through traditional methods.

H2: AI-powered personalization within a gamified EFL environment will lead to significantly greater improvements in student engagement and persistence compared to non-personalized gamified approaches.

H3: Specific AI-driven gamification mechanics, such as adaptive difficulty and personalized feedback, will have a major positive correlation with EFL students' self-efficacy levels.

### **Structure of The Research**

The present thesis is structured across five distinct chapters, providing a thorough exploration of the theoretical underpinnings, empirical investigation, and practical applications of leveraging AI and gamification within the realm of EFL education. The research layout is as follows:

- **Chapter 1**

Introduction: This chapter lays the groundwork for the study by introducing the research problem, highlighting motivation as a determinant of student success in EFL acquisition, and illuminating the affordances of AI and gamification as genuine motivational entities. It outlines the research anticipated objectives, questions, hypothesis, significance, and the overall structure of the thesis.

- **Chapter 2**

Literature Review: This chapter heavily accumulates a critical examination of existing literature body and extant scholarly work on student motivation in EFL learning, the principles, ramifications, and applications of gamification in education, and the burgeoning role of AI in language learning. It examines theoretical frameworks cultivating motivation, explores successful incorporations of gamification and AI in educational contexts, and identifies gaps in the current research that this thesis endeavor to address.

- **Chapter 3**

Research Methodology: This chapter details the research blueprint and methodology employed in the study. It scrupulously delineates the research guiding inquiries, participants comprising a randomly select sample of 27 Master one students from Chadli Bendjedid University ,and data collection instruments including a rigorously designed students survey and a pertinent, purposefully crafted interview implemented to furnish a complementary qualitative perspectives to quantitative insights, and explicates the data analysis techniques used to assess the effects of AI-powered gamified interventions on EFL students' motivation.

- **Chapter 4**

Results and Analysis: This chapter presents the inclusive findings of the empirical investigation. It provides a meticulous statistical analysis of the collected data, utilizing appropriate statistical methods to address the research questions and test the formulated hypotheses. The chapter will present the results in a clear and organized manner, supported by tables, figures, and pertinent qualitative insights where applicable.

- **Chapter 5**

Discussion, Conclusion, and Recommendations: This final chapter synthesizes the key findings of the research, discusses their implications in relation to the existing literature, and

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provides substantiated answers to the research questions. It draws conclusions about the effectiveness of AI and gamification in enhancing EFL student motivation, highlights the limitations of the study, and offers practical recommendations for educators, curriculum designers, and future research directions in this burgeoning field.

By systematically exploring the theoretical and practical dimensions of integrating AI and gamification, this thesis intends to form valuable insights into fostering more engaging and effective EFL learning experiences, ultimately empowering students to achieve greater success in their language acquisition journey.

*Chapter Two*  
**Literature Review**

## **Introduction**

Motivation is a fundamental prerequisite to effective English as a Foreign Language (EFL) acquisition. Artificial Intelligence (AI) and gamification are powerful allies in boosting such incentive. AI yields numerous instrumental functions that can adapt to individual fluctuating demands, much like a dedicated tutor. Gamification, conversely, injects game-design elements into EFL instructions, making it genuinely stimulating. This strategic application leverages the inherent appeal of games to foster consistent engagement and build confidence, crucial for EFL learners who often face challenges like limited exposure and a fear of mistakes. By synergizing AI's intelligent adaptation with gamification's motivational design, EFL education becomes more rewarding, inclusive, and captivating, ultimately leading to greater success for EFL learners.

### **Section One : Motivation**

#### **Definition of Motivation**

Motivation comes from the Latin word « movere, » which means to move, and it provides energy for people's actions (Eccles et al., 1998 ; T. Jansen et al., 2022). It is a simple concept, but it is difficult to define because the word itself is complicated. According to Nakata (2006), —motivation cannot be explained by a single definition. Due to the complexity of defining the term, there has been a paradigm shift in our understanding of motivation over the last 50 years. || (P.24). Gredler, Broussard, and Garrison (2004) broadly defined motivation as—the attribute that moves us to do or not to do something. (p. 106). Furthermore, Brophy (2004) claimed that student motivation refers to students' willingness to devote time and effort to activities that may not align with their teachers' expectations. Motivation according to Maddukuri (2022), is an internal drive to fulfill basic needs or desires. It stems from both internal and external causes. Additionally, Mullins (2005) defined motivation as the internal and external elements that drive enthusiasm, desire, purpose, and tenacity towards a specific

path of action. Moreover, motivation is a critical aspect in determining the success or failure of any challenging endeavor. Motivation is a key factor for task performance. In second language learning, motivation is often assumed to be a key to success (Alizadeh, 2016).

According to Luthans (2010), motivation stems from a physiological or psychological need that drives action toward a goal or an incentive. Furthermore, Turner (1995) associated motivation with cognitive engagement, which he described as « voluntary uses of high-level self-regulated learning strategies, such as paying attention, connection, planning, and monitoring » (p. 413). Gottfried (1990) defined academic motivation as —enjoyment of school learning characterized by a mastery orientation; curiosity; persistence; task endogeny; and the Learning of challenging, difficult, and novel tasks‖ (p. 525).

« The definition of motivation is powering people to achieve performance within high levels & overcoming barriers to change, it is the driver of guidance, control, and persistence in human behavior (Tohidi & Jabbari, 2012). »

Zoltán Dörnyei is a prominent figure in the field of second language acquisition, particularly known for his extensive research on motivation.

### **Motivation as a Dynamic Process**

Dörnyei emphasizes that motivation is not a static trait but a dynamic and evolving process. It involves various factors that influence a learner's behavior over time.

He views motivation as « the direction and magnitude (intensity) of human behaviour » (Dörnyei, 2001). This highlights the choice of action, persistence, and effort.

### **The L2 Motivational Self System**

One of Dörnyei's significant contributions is the L2 Motivational Self System, which comprises three components:

- **Ideal L2 Self:** The vision of the person one would like to become by learning the second language.

- **Ought-to L2 Self:** The attributes one believes they should possess to avoid negative outcomes.
- **L2 Learning Experience:** The immediate learning environment and experiences.

This system emphasizes the role of self-concept and future aspirations in driving language learning motivation.

Dörnyei has also extensively researched and developed frameworks for motivational strategies that teachers can use in the classroom. These strategies aim to:

- ✓ Generate initial motivation.
- ✓ Maintain and protect motivation.
- ✓ Encourage positive retrospective self-evaluation.

'Motivation is, without question, the most complex and challenging issue facing teachers today.' (Scheidecker and Freeman 1999 :116)

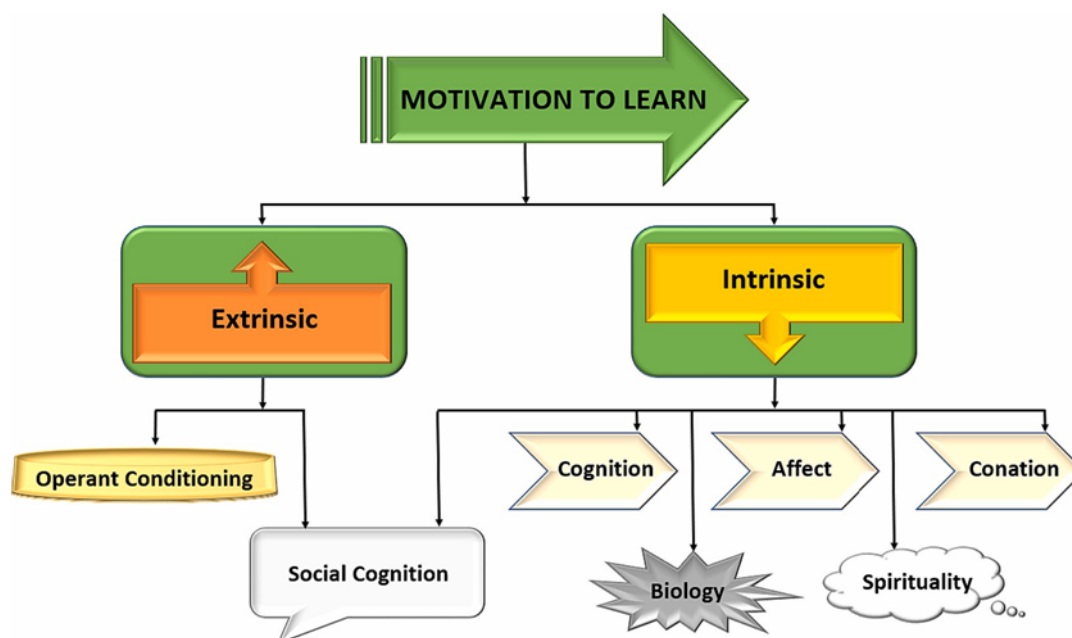
As stated on Wikipedia, « Motivation is an internal state that propels individuals to engage in goal-directed behavior. It is often understood as a force that explains why people or animals initiate, continue, or terminate a certain behavior at a particular time. » Source: wikipedia.org.

The dominant views (such as Sigmund Freud's) conceptualized motivation as being determined by basic human instincts and drives many of them being unconscious or repressed. Although such unconscious motives do not feature strongly in current motivational thinking, it seems clear that they play a significant role in our lives and therefore they are likely to be 'rediscovered' before long.

Rogers and Maslow posited that humans, in contrast to animals, are primarily driven by a « self-actualizing tendency, » which is the innate desire to realize their full potential and cultivate their inherent abilities.

## Motivation Types

Motivation falls into four major types: intrinsic, extrinsic motivation. Instrumental, and integrative. Dörnyei (1998 as cited in Pourhosein Gilakjani, Leong, & Saburi, 2012) defined the terms intrinsic and extrinsic motivation.



**Figure 1.** A social framework of motivation to learn.

## Intrinsic Motivation

Intrinsic motivation refers to the motivation to engage in an activity because that activity is enjoyable to do. Intrinsic motivation is aimed at bringing about certain internally rewarding consequences like feelings of competence and self-determination.

Paul Eggen & Kanchak Don (2005:398), refers to the meaning of intrinsic motivation as the performance of a certain act for pleasure or enjoyment without being rewarded or punished. Based on self-determination theory, there are three types of intrinsic motivation in the field of foreign language learning, Intrinsic-Knowledge, Intrinsic-Accomplishment, and Intrinsic Stimulation. It is important to highlight, that all these three types have a common basis, which is the learner's enjoyment of the activity. (Noels et Al,2001).

- **Intrinsic knowledge** referred “to the feelings of pleasure or satisfaction that come from developing knowledge and satisfying one’s curiosity about a topic area.” (Noels, 2001, p45) in other terms, the pleasure of knowing and learning new things in order to develop cognitive skills.
- **Intrinsic-Accomplishment** referred to the sense of pleasure contrasting with being engaged in difficult challenges to master a task or achieve a goal.
- **Intrinsic-Stimulation** known as the sense of excitement and enthusiasm during performing an activity in order to become bilingual.

### **Extrinsic Motivation**

Conversely, extrinsic motivation stands for the actions that are performed to obtain some instrumental aims like earning a reward or stopping a punishment.

Deci & Ryan (1994; p.275) point out that extrinsic motivation is “behavior that the individual performs to receive some extrinsic rewards such as getting good grades, being praised by the teacher or to avoid punishment”.

Brown (2000) indicates the relationship between these two kinds of motivation. As extrinsic motivation may turn out to be integrative motivation if someone else wants the L2 learner to know the L2 for integrative purposes; extrinsic motivation may turn out to be instrumental motivation if an external power wishes the L2 learner to learn the L2 language.

Within the realm of education, four levels of extrinsic motivation are arranged from the lowest to the highest level of self-determination these are, External regulation and Introjected regulation, Identified regulation, and Integrated regulation.

- **External Regulation** which is the lowest level of self-determination; refers to doing a task to satisfy an external demand such as obtaining rewards or avoiding punishments from others (deCharms,1968). For example, the foreign language

student might dislike the civilization class but he is obliged to finish the program to obtain sufficient grades.

- **Introjected Regulation** is the process by which a student does a task to avoid guilt and shame to attain ego enhancements (deCharms, 1968, Nicholls, 1984, Ryan 1982).

- **Identified Regulation** which is considered as an autonomous motivation because the student's performance does not be under external pressure, but being under the influence of thinking that the task is personally important and relevant to his self to develop his skills.

- **Integrated Regulation** which is the most autonomous form of extrinsic motivation, as Deci and Ryan claimed: "when regulations are integrated people will have fully accepted them by bringing them into harmony or coherence with other aspects of their values and identity" (2000, p. 236), which means that, the second language learner performs the task because it forms a significant part of his identity.

The other dimension of motivation construct is the degree to which learners are intrinsically or extrinsically motivated. According to Edward Deci (1975), intrinsic motivation is the one for which there is no apparent reward except the activity itself. People engage in the tasks for their own sake and not because they lead to an extrinsic reward. Intrinsic motivation is aimed at bringing about certain internally rewarding consequences such as feelings of competence and self-determination. Extrinsically motivated behaviors are done in anticipation of a reward from outside and beyond the self. Behaviors initiated to avoid punishment are also extrinsically motivated, even though many intrinsic advantages can result from those who view punishment avoidance as a challenge that can make their sense of proficiency and self-determination. Integrative Motivation According to Gardner and Lambert (1959 as cited in

Pourhosein Gilakjani, Leong, & Saburi, 2012), integrative motivation refers to language learning for personal growth and cultural enrichment; that is, the learner likes to learn.

### **Motivation Theories**

Motivation is a psychological construct that drives individuals to undergo certain behaviors or activities. In the context of learning, motivation stands for the factors that drive an individual to engage in the process of acquiring knowledge and skills (Willy, n.d.; Hilgard, 2004; Svinicki & Vogler, 2012). There exist several motivation theories that possess enormous influence on language learning. Educational psychologists, in their pursuit of illuminating the labyrinthine pathways of human learning, have crafted a tapestry of diverse incentive theories. These theories, rich in nuance and insight, serve as sophisticated instruments for comprehending, predicting, and ultimately, orchestrating a solid foundation of pupil engagement. At their core, these frameworks recognize the pivotal role of motivation animates the processes of pedagogy and intellectual acquisition. Yet, each theory, reflects a unique facet of such multifaceted concept, offering a distinct and often opulent perspectives on enthusiasm.

### **Instinct Theory of Motivation**

Instinct theory, which has been considered as a root for all motivation theories, was very popular in the early 20th century. The term ‘instinct’ was coined by Charles Darwin and George Romanes in the late 19th century to demystify animal behavior. It is a psychological theory which suggests that certain behaviors are innate or hard-wired into individuals and that these behaviors are triggered by specific stimuli or cues in the environment. The theory proposes that certain behaviors are not learned through experience but are instead pre-programmed into the individual's biology. It is critical to note that such theory has been falling out of favor recently in recent researches, which suggest that most behaviors are the result of a combination of genetic, environmental, and cultural influences. Critics of the instinct theory argue that it is difficult to define an instinct clearly and objectively and that many behaviors that have been

labeled as “instinctive” are the result of complex interactions between genes and the environment. Furthermore, many behaviors that appear to be instinctive in one species are not present or are much less prominent in closely related species, which suggests that they are not solely determined by genetics (Burnham, 1972; Gillespie, 1971; Harlow, 2004; Loewald, 1972; Loewald, 1978; Oppenheimer, 1958). Instinct theory yields that certain behaviors are innate and not learned. In the context of learning, it implies that certain behaviors may be driven by instinctual responses rather than acquired knowledge or conditioning.

### **Incentive Theory of Motivation**

The incentive theory, which was first proposed by a behaviorist, Clark Hull in 1943. Hull proposed that behavior is a function of drive, which is a physiological state that creates a need, and incentive, which is the positive or negative values of a particular situation. This theory explains how behavior is influenced by the presence or absence of incentives, or rewards.

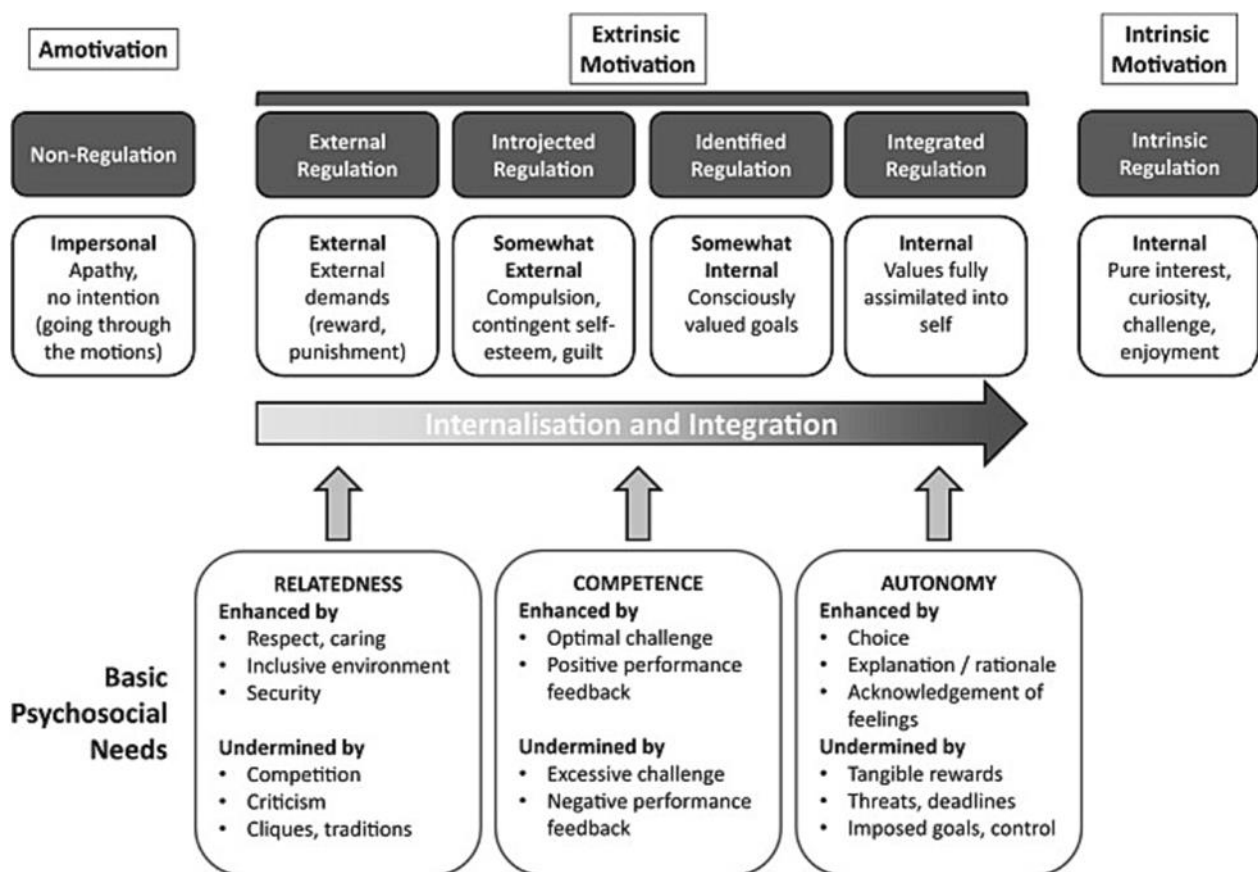
The theory suggests that the magnitude and proximity of an incentive can influence behavior by increasing the perceived value of a particular action or outcome, which in turn increases the motivation to engage in that behavior. It further proposes that behavior is driven by an organism's attempt to maximize pleasure and minimize pain. Incentives can be positive or negative, they can be external, such as money, or intrinsic, such as hunger or thirst. Incentive theory has been used to clarify a wide range of behaviors, such as drug addiction, consumer choice, and work motivation. It has also been used to explicate how rewards and punishments can influence behavior in educational and work settings. Recent research has suggested that incentives are just one of many factors that can influence behavior and that the effectiveness of incentives may depend on the specific context and individual characteristics. It's worth mentioning that there are some criticisms of the theory, some argue that the theory oversimplifies the complexity of human motivation and can be reductionist in nature (Bosha et al., 2017; Ellingsen & Johannesson, 2008; Hattie et al., 2020; Killeen, 1982; Vi & Thuy, 2020).

Incentive theory emphasizes the role of rewards and motivations in influencing behavior. In learning, it implies that offering incentives, such as rewards or positive outcomes, can stimulate engagement and enhance the learning process. In its most basic form, the concept of motivation may be broken down into three distinct categories: intrinsic motivation, extrinsic motivation, and amotivation (Gopalan et al., 2017). In addition, there are a number of additional theories that have the potential to be put into practice, most notably in the field of education. These theories are the attribution theory (Weiner, 1972), self-determination theory (Gagn'e, & E.D.-J. of O. behavior, undefined, 2005), the ARCS model (Keller, 2010), the social cognitive theory (Bandura, 1991), and the expectancy theory (Wabba & House, 1974). These educational theories are capable of existing on their own and forming a contribution to the intakes of the learning process without requiring the support of any other educational theories.

### **Self-determination Theory**

(SDT) is a theory of human motivation that examines a wide range of phenomena across gender, culture, age, and socioeconomic status. It is a macro theory of human motivation and personality regarding individuals' innate tendencies toward growth and innate psychological needs. It pertains to the stimulation behind individuals' choices in the absence of external influences and distractions. SDT focuses on the degree to which human behavior is self-motivated and self-determined. As a motivational theory, it addresses what energizes people's behavior and moves them into action, as well as how their behavior is regulated in the various domains of their lives. Furthermore, SDT's explanations are focused at the psychological level (rather than the sociological or physiological levels), thus using human perceptions, cognitions, emotions, and needs as predictors of regulatory, behavioral, developmental, and experiential outcomes (e.g., Ryan and Deci, 2000b). Essentially, the Self-Determination Theory (SDT) represents a resplendent construction established on the threads of human motivation and personality, it illuminates the profound pathways to authentic well-being and flourishing. This

macro-theoretical framework, meticulously crafted, delves into the innate human drive towards psychological growth, transcending the superficial boundaries of demographic distinctions and societal constraints (Ryan & Deci, 2000b). At its core, SDT champions the notion that human behavior, when optimally motivated, emanates from a place of thorough self-endorsement, a homogeneous intersection of autonomy, competence, and relatedness, stipulating the very essence of psychological vitality.



**Figure 2.** *Deci's self-determination theory.*

The foundation of SDT rests upon three fundamental psychological needs, the essential nutrients for psychological health and optimal functioning, each a jewel in the crown of human experience:

- **Autonomy:** This is the exquisite experience of volition, the perception that one's actions are a true and unadulterated reflection of personal values, goals, and

interests, unburdened by external pressures or controlling influences (Gagné & Deci, 2005). It is the sense of perceived choice and the feeling of internal locus of control.

- **Competence:** The profound satisfaction derived from mastering challenges and exercising one's capabilities, fostering a sense of efficacy and achievement (Deci & Ryan, 2000a). It is the feeling of being capable and effective in one's pursuits, of rising to meet challenges and experiencing the joy of accomplishment. This includes the feeling of growing skills, and the sense of optimal challenge.

- **Relatedness:** The deep-seated need for meaningful connections, the experience of belonging and emotional intimacy with others, providing a foundation of support and security (Reis, Sheldon, Gable, Roscoe, & Ryan, 2000). It is the sense of being connected to, and cared for by others, of experiencing mutual respect and understanding. This includes the feeling of belonging, empathy, and the sense of secure connection.

SDT distinguishes between diverse forms of motivation, each painting a unique and nuanced portrait of human engagement:

- **Autonomous Motivation:** This is the zenith of motivation, where behavior is driven by intrinsic interest, identified value, or integrated regulation, reflecting a harmonious alignment with one's core self (Deci & Ryan, 2008 ; Vallerand et al., 2008). This is the most desirable form of motivation, as it leads to greater well-being, persistence, and creativity.

- **Controlled Motivation:** This form of motivation is characterized by external or introjected regulation, where behavior is driven by external rewards, punishments, or internal pressures such as guilt or shame (Ryan & Connell, 1989). While it can lead to compliance, it often comes at the cost of diminished well-being and creativity.

- **Amotivation:** This represents the absence of motivation, a state of apathy where individuals lack the intention to act, often due to feelings of incompetence or a lack of perceived value (Deci & Ryan, 2000b). This is the least desirable state, as it leads to inactivity and stagnation.

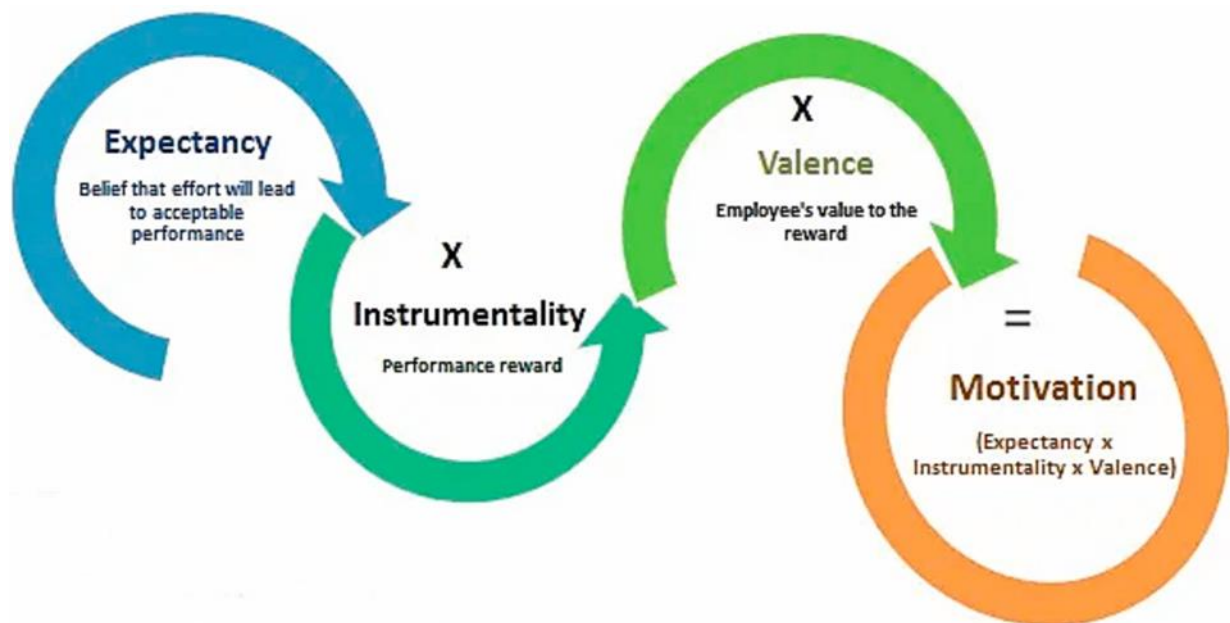
In the nuanced and intricate realm of foreign language acquisition, SDT delineates a hierarchical progression of regulatory styles, each representing a distinct level of internalization:

- **External Regulation:** Compliance driven by external contingencies, such as rewards or punishments (deCharms, 1968). For example, studying to avoid getting a bad grade.
- **Introjected Regulation:** Behavior motivated by internal pressures, such as avoiding guilt or seeking ego enhancement (Nicholls, 1984 ; Ryan, 1982). For example, studying to feel proud of oneself.
- **Identified Regulation:** Action stemming from the conscious valuing of a goal or activity, recognizing its personal significance (Deci & Ryan, 2000a). For example, studying because one values the ability to communicate in another language.
- **Integrated Regulation:** The most refined form of extrinsic motivation, where regulations are fully assimilated into one's sense of self and values, creating a seamless integration (Deci & Ryan, 2000a). For instance, studying because it aligns with one's identity as a global citizen.

In essence, Self-Determination Theory offers a sophisticated framework for interpreting the intricate formula of human motivation, emphasizing the pivotal role of autonomy, competence, and relatedness in fostering psychological well-being, optimal performance, and a life lived with purpose and meaning.

### Expectancy Theory of Motivation

According to the expectancy theory of motivation, people are prompted to act, if they think doing so will bring about positive results. The theory suggests that expectancy, instrumentality, and valence are the three most important components of expectancy motivation. The expectancy is that hard work will provide positive results. The idea that one's efforts should be rewarded with the best possible results is known as “instrumentality.” The term “valence” is used to describe the significance of an outcome to a person (Chopra, 2019; Fudge et al., 1999; Isaac et al., 2013). Expectancy theory was developed by Victor Vroom in the 1960s, and it suggests that motivation is a function of expectancy, instrumentality, and valence (Parijat & Bagga, 2014).



**Figure 3.** Vroom's expectancy theory (Parijat & Bagga, 2014).

FIG.3 depicts the framework of this theory. The theory asserts that an individual will be motivated to engage in a behavior if they believe that their effort will lead to high performance (expectancy), ii). high performance will ultimately lead to the desired outcomes (instrumentality), and iii). the desired outcomes are valuable or important to them (valence). The theory also proposes that people may be motivated to engage in different behaviors

depending on the strength of their expectancies, the perceived instrumentality, and the valence of the outcomes. Expectancy theory has been employed in a variety of fields, including education, sport, and the workplace, and has been used to elucidate how factors such as goal-setting, feedback, and rewards can influence motivation (Estes & Polnick, 2012; Geiger & Cooper, 1996).

### **Motivation Strategies in Foreign Language Classroom**

The assertion that teachers should create and sustain high levels of learner motivation is well supported. To achieve this, they should systematically utilize diverse motivational strategies.

#### **Teachers' attitudes**

##### **Belief in Student Potential**

Teachers who genuinely believe in their students' ability to learn and succeed create a self-fulfilling prophecy. When students perceive that their teacher has high expectations and believes in them, they are more likely to internalize those beliefs and strive to meet them.

"The expectations of the teacher are a powerful determinant of student performance." (Rosenthal & Jacobson, 1968). This classic study, "Pygmalion in the Classroom," demonstrated the impact of teacher expectations on student achievement.

#### **Offering Choice and Autonomy**

Self-determination theory, developed by Deci and Ryan, emphasizes the importance of autonomy in fostering intrinsic motivation. Giving students choices in their learning nurtures their sense of autonomy and control, which are essential for intrinsic motivation. It is asserted that "Providing students with choices in their learning can enhance their sense of autonomy and intrinsic motivation." (Cordova & Lepper, 1996).

### **Providing Constructive Feedback**

Feedback that focuses on effort, progress, and specific areas for improvement can enhance students' sense of competence and motivation. "Feedback that emphasizes effort and progress, rather than ability, can promote a growth mindset and increase motivation." (Dweck, 2006).

### **Utilizing Engaging and Interactive Teaching Strategies**

Active learning is not merely a physical activity, but about the student interacting with the material in a meaningful way as in group work, discussions, and hands-on activities, ultimately leading to more robust knowledge integration.

Chickering and Gamson (1987) contemplates that "Learning is not a spectator sport. Students do not learn much just by sitting in classes listening to teachers, memorizing prepackaged assignments, and spitting out answers. They must talk about what they are learning, write reflectively about it, relate it to past experiences, apply it to their daily lives. They must make what they learn a part of themselves."

### **Positive and Supportive Classroom Climate**

"Effective teachers create a sense of community in their classrooms, where students feel valued and supported." (Wentzel, 2002). Which is why it is a fundamental requirement to construct a safe atmosphere where students can commit mistakes without fear of ridicule for the sake of unlocking their utter potentials. Additionally, "Learning is inherently a social activity. It is talking with others that provides the primary arena for the development of higher mental functions." (Vygotsky, 1978). In other words, supportive context must prioritize interaction. This urge fostering environments where learners can actively engage with each other, share ideas, and collaborate on tasks.

## **Factors That Influence EFL Learners Motivation**

### **Self-efficacy**

The conviction in one's capacity to execute behaviors necessary to produce particular performance attainments, exerts a profound influence on motivation (Bandura, 1997).

Perceived self-efficacy is defined as people's beliefs about their capabilities to produce designated levels of performance that exercise influence over events that affect their lives. » (Bandura, 1994, p. 2). This belief system shapes goal setting and opportunity selection, as individuals with high self-efficacy tend to embrace challenges and set ambitious targets, while those with low self-efficacy often avoid them, perceiving them as unattainable (Bandura, 2009).

As Dorney (2003) emphasizes, self-efficacy is a dynamic construct, subject to change through experience, and plays a substantial role in language learning motivation, highlighting its domain-specific relevance. Dorney (2011) further underscores the effect of self-efficacy on learner autonomy, suggesting that a robust sense of self-efficacy empowers learners to manage their learning processes. In essence, self-efficacy acts as a powerful catalyst, shaping not only what individuals aspire to achieve, but also how diligently and effectively they pursue those aspirations.

### **Positive Attitude towards L2 Community**

Gardner and Lambert's research emphasized the significance of attitudes toward the L2 community. They proposed that motivation to learn an L2 is substantially tied to these attitudes and desires to integrate with that community.

As stated, « motivation to learn an L2 depends on the attitude toward the L2 community and the desire to become a member of that community » (Gardner and Lambert, 1959). In other words, learners who hold positive views regarding the target language's speakers and culture are more likely to be motivated to learn the language. This « integrative motivation » is a key factor in L2 acquisition.

### **The Enjoyment of Learning**

The concept of intrinsic motivation is vital here, as the « enjoyment of learning » extends beyond superficial pleasure, when learners find enjoyment in the learning process itself, they are more likely to persist.

This aligns with the idea that « intrinsically motivated learners are more likely to continue their studies than extrinsically motivated learners and simply participate in an activity for the pleasure of learning the L2 » (Wu, 2003). This ultimately prop the fact that when the learning activities are appealing, and intriguing to the learner, the learner will want to continue to learn.

### **External Pressures**

External pressures, or extrinsic motivation, drive language learning through rewards and consequences. As Noels et al. (2001, as cited in Liu, 2007) state, this includes “pressures or rewards from the social environment, internalized reasons for learning an L2, and/or personal decisions to do so and their value for the selected goals.” Essentially, external factors like excellent grades, parental approval, or career advancement motivate learners.

The « pressures or rewards from the social environment » are not necessarily negative constraints. They can also be powerful catalysts, transforming the act of learning from a solitary pursuit into a shared, socially validated endeavor. The learner is not an isolated entity, but a participant in a network of relationships, where the value of their linguistic proficiency is constantly being assessed and affirmed.

### **Teachers' Enthusiasm**

A teacher's genuine enthusiasm and passion for their subject matter is contagious. These aspects are fundamental for creating a vibrant and effective learning environment. When a teacher genuinely loves what they teach, that love radiates, captivating students and fostering a deeper connection with the material.

Teacher's passion encapsulates the essence that enthusiasm is a palpable quality that can be transmitted from one person to another through observation and interaction. As Palmer (1998) suggests, « Good teaching cannot be reduced to technique; good teaching comes from the identity and integrity of the teacher. » When a teacher's identity is intertwined with their passion, it naturally flows into their teaching. Additionally, teachers who demonstrate a genuine love for learning act as powerful role models, inspiring students to develop their own intrinsic motivation.

### **Learning Environment**

A collaborative, respectful, and inclusive classroom climate encourages active participation and risk-taking. As Deci and Ryan (2000) argue in their Self-Determination Theory, « relatedness, » or feeling connected to others, is a fundamental psychological need that supports intrinsic motivation.

It is asserted that « The need for relatedness is satisfied when individuals feel connected to others, experience a sense of belonging, and feel loved and cared for. » (Deci & Ryan, 2000, p. 231).

### **Significance of Motivation**

Motivation, as a cornerstone of successful second language acquisition (SLA), transcends mere desire, evolving into the very engine that propels learners toward fluency. As Rehman et al. (2014) observe, it's "an important factor that has a positive influence in any educational learning process, especially in learning a second language," underscoring its pivotal role.

Moreover, motivation in SLA is not a monolithic entity. It encompasses a complex interplay of factors, including intrinsic drive, extrinsic rewards, and the learner's perceived value of the target language. As Dörnyei (2001, p. 117) states, "motivation provides the primary impetus to initiate learning the L2 and later the driving force to sustain the long and often

effortful learning process." This highlights motivation's dual role namely igniting the initial spark and sustaining the learner's commitment over time.

Furthermore, Gardner (1985, p. 5) posits that "motivation involves four components: goals, effort, desire to attain the goal, and favorable attitudes toward the activity in question." This framework illuminates the multifaceted nature of motivation, emphasizing the weight of clear objectives, sustained effort, and a positive outlook.

Intrinsically, motivation acts as a catalyst, transforming potential into proficiency. It fuels the learner's engagement, directs their attention, and fosters resilience in the face of challenges. As Brown (2007, p. 160) summarizes, "motivation is the extent to which you make choices about (1) goals to pursue and (2) the effort you are willing to exert in that pursuit." Consequently, nurturing motivation is paramount for both learners and educators alike.

### **Conclusion**

To encapsulate, the role of motivation in the educational realm, precisely within the realm of second language acquisition, extends far beyond a superficial inclination. It functions as a monumental supplier, a dynamic interplay of intrinsic desires, extrinsic reinforcements, and the learner's evolving self-perceptions and affective states. Motivation's pervasive and positive traits hold immense influence on the entire educational learning process, with heightened significance in the demanding context of acquiring a SL.

Therefore, a sophisticated comprehension of educational thrive necessitates recognizing motivation not as a singular, static attribute, but as a multifaceted and vital construct. Cultivating and sustaining this intricate motivational ecosystem, by addressing learners' inherent interests, yielding meaningful external validation, and fostering a positive self-concept, emerges as a critical demand for educators and pedagogical frameworks aiming to optimize learning outcomes and support genuine fluency in a linguistic environment.

## **Section Two: Artificial Intelligence**

### **Definition of Artificial Intelligence**

The term "Artificial Intelligence," a phrase now ubiquitous, was first formally articulated by John McCarthy for a seminal workshop at Dartmouth College in the summer of 1956, an event graced by the presence of Claude Shannon (Cope et al., 2022). McCarthy's initial framing, "making a machine behave in ways that would be called intelligent if a human were so behaving" (McCarthy et al., 1955, p. 12), laid the groundwork for a field that has since resisted singular, static definition. As Nils Nilsson observed, "Artificial intelligence is that activity devoted to making machines intelligent" (Nilsson, 1998, p. 2), a perspective that underscores the active pursuit of machine-based intellect. More recently, Tucci (2021) refines this, characterizing Artificial Intelligence (AI) as "the simulation of human intelligence processes by machines, especially computer systems," highlighting the mimicry of cognitive functions. Stuart Russell and Peter Norvig, in their influential textbook, offer a broader view, stating AI is "concerned with the problem of how to make computers do things that, at the moment, people do better" (Russell & Norvig, 2016, p. 2).

Substantially, AI outstretch a fertile ground in a myriad of domains, which reflects its dynamic nature and progressive capabilities.

### **Artificial Intelligence in Education**

In the educational sphere, AI is not merely a tool, but a novel force. As Holmes et al. (2019) articulate, "AIED (Artificial Intelligence in Education) is concerned with the design, development, and evaluation of intelligent technologies to support learning." This support manifests as a sophisticated systems capable of "reasoning, discovering meaning, generalizing rules, or learning from past experience," mirroring the nuanced processes of human cognition.

### Artificial Intelligence in EFL Classroom

The application of AI in language learning, particularly English, exemplifies this luxurious potential. Zhang and Zou (2020) highlight that AI facilitates "personalized learning experiences," tailoring instruction to individual learner needs and paces. Xia et al. (2022) further emphasize that AI tools enhance "language skills and sub-skills" through interactive and adaptive environments.

Additionally, the instantaneity and veracity of AI-powered academic assistance create a seamless, almost opulent, learning experience. As Luckin et al. (2016) observe, "AI has the potential to provide learners with immediate, personalized feedback and guidance." This exquisite capability allows for a continuous, uninterrupted flow of knowledge acquisition, reminiscent of having a personal tutor.

#### The Effects of Artificial Intelligence in Boosting EFL Learners Motivation

AI-supported language learning tools, as posited by Divekar et al. (2022), cultivate immersive and stimulating learning environments, enabling learners to conveniently execute language learning tasks and bolster their overall language proficiency. The integration of AI in English Language Learning (ELL) is not merely a trend, but a strategic appeal, designed to enrich linguistic proficiency and amplify motivation.

- **Gamification and Interactive Exercises:** AI-driven tools frequently incorporate gamified elements, such as quizzes, challenges, and rewards, which render learning more appealing. This playful approach transforms language learning from a tedious task into an intellectually engaging activity. Deterding et al. (2011) assert that gamification can elevate learner motivation by making learning more enjoyable.
- **Personalization and Tailored Learning:** Addressing Individual Needs: AI algorithms analyze a learner's strengths and weaknesses, identifying distinct areas that require attention. This personalized approach ensures that learners are equipped

with tasks and materials that are relevant to their level and learning style, mitigating frustration and boredom. It is contended that "technology can be used to provide individualized instruction, tailored to the needs of each learner." (Warschauer and Matuchniak 2010)

- **Customized Feedback:** AI can deliver instant and detailed feedback on pronunciation, grammar, and vocabulary. Narciss (2008) emphasizes that this evaluation is "crucial for effective learning and motivation." Such feedback is often more meticulous and actionable than traditional feedback, enabling learners to interpret their mistakes and make targeted improvements.
- **Virtual Conversational Partners (Chatbots):** AI-powered chatbots offer learners opportunities to practice their conversational skills in a safe and supportive environment. Fryer et al. (2019) suggest that this interactive experience can reduce anxiety and cultivate confidence and linguistic dexterity, encouraging learners to engage more actively with the language.
- **Increased Access to Resources:** AI tools grant access to a vast array of language resources, such as dictionaries, example sentences, and real-world language usage. Little (2007) argues that access to a plethora of authentic language resources can enhance learner motivation by providing opportunities for real-world language use. This access empowers the learner to unveil language in a manner far exceeding the capabilities of traditional methods.

In summation, the integration of artificial intelligence into ELL represents a paradigm shift, transcending conventional pedagogical boundaries. By deploying sophisticated algorithms to personalize instruction, deliver itemized feedback, and facilitate immersive conversational practice, AI platforms foster a dynamic and resilient learning ecosystem, enabling learners to unravel the tangles of English with unprecedented efficacy.

### **Challenges of Integrating AI in EFL Classroom**

The integration of Artificial Intelligence into the horizons of EFL education, while promising a gilded age of personalized learning, unveils a constellation of challenges demanding a meticulous attention.

- **Teacher Training and Technological Proficiency**

A significant hurdle is the need for EFL teachers to develop the necessary skills to effectively integrate AI tools into their teaching practices.

As Warschauer (2004) noted early on, "technology itself does not guarantee language learning; rather, it is the way that technology is integrated into the curriculum and pedagogy that makes the difference" (p. 1). This includes understanding how to use AI-powered language learning platforms, analyzing AI-generated data, and adapting their teaching strategies accordingly.

- **Concerns about Human Interaction and Critical Thinking**

A paramount concern arises from the potential for the over-reliance on AI to erode the very essence of L namely human interaction and the cultivation of critical thinking faculties.

This excessive reliance on AI could diminish students' critical thinking skills and reduce face-to-face interaction, which is crucial for language acquisition.

as Chapelle (2009) pointed out, we need to consider how technology impacts "learner autonomy and critical thinking" (p. 167).

- **Infrastructure and Accessibility**

Unequal access to technology and reliable internet connectivity can create disparities in AI implementation. Kukulska-Hulme (2012) highlighted the ongoing challenges of "access, equity, and digital literacy" in technology-enhanced language learning (p. 201).

For EFL classrooms, particularly within developing nations, the requisite technological foundations for seamless AI integration may be conspicuously absent.

- **Maintaining the Human Element in Language Learning:**

Language acquisition transcends the mere assimilation of grammatical rules and lexical items; it encompasses cultural awareness, the development of communication skills, and the cultivation of empathy. As Kramsch (1993) put it, language is "a social practice" and "a cultural phenomenon" (p. 1).

The teachers, in their role as facilitators and cultural ambassadors, plays an irreplaceable role in nurturing these human centered aspects of language proficiency. It is therefore imperative that AI tools serve as augmentative resources in enhancing the teacher's capabilities rather than supplanting their vital human presence.

### **Section Three: Gamification**

#### **Definition of Gamification**

According to the experts' definition, gamification is the use of game-design elements and game mechanics in non-game contexts (Deterding et al., 2011). It is associated with the use of points, levels, leaderboards and badges (Hamari, Koivisto, and Sarsa 2014; Seaborn and Fels 2015); Similarly, Werbach and Hunter (2012) defined it as the use of game elements and game design techniques in non-game settings.

Bunchball (2010), defined gamification as "the use of game mechanics, dynamics and game thinking to engage and motivate people to achieve their goals." Which highlights the utilization of actual game mechanics and the underlying thought processes behind game design.

Zichermann and Cunningham (2011) claims that "Gamification is the process of using game-based mechanics, aesthetics and game thinking to engage people, motivate action, promote learning, and solve problems." They bring in the visual and experiential aspects ("aesthetics") and emphasize the broader applications beyond mere motivation.

Kapp (2012) provides a practical lens, stating that gamification is "using game-based mechanics, aesthetics and game thinking to stimulate people, motivate action, promote learning, and solve problems. Generally, gamification occurs in non-game environments." Kapp's addition clearly reiterates the "non-game environment" as a key differentiator.

#### **Games Elements**

Game elements are the fundamental building blocks of games, the core components that designers use to create interactive experiences. They define what players do and what they interact with. As Schell describes it « game elements are the « atoms of games » (Schell, 2019, p. 55). They are the discrete parts that, when combined thoughtfully, result in a cohesive and compelling game.

**Table 1.** *Game elements and definitions*

Points	Numeric accumulation based on certain activities.
Badges	Visual representation of achievements for the use shown online.
Leaderboards	How the players are ranked based on success.
Progress bars/Progression	Shows the status of a player.
Performance graph	Shows player performance.
Quests	Some of the tasks players have to fulfill in a game.
Levels	A section or part of the game
Avatars	Visual representation of a player or alter ego.
Social elements	Relationships with other user through the game.
Rewards/reward system	System to motivate players that accomplish a quest.

Core game elements such as points, badges, leaderboards, challenges, and narratives represent a profound set of motivational mechanisms that tap into fundamental aspects of human psychology.

They can be purposefully integrated into EFL activities to foster a more interactive and stimulating learning experience.

For instance, points are like digital trophies that can be awarded for correct grammar usage or vocabulary acquisition, while badges are digital trophies that could be employed to recognize achievements in speaking fluency or writing proficiency. Leaderboards can introduce a healthy sense of competition, encouraging students to strive for improvement and dive in Challenges that can turn potentially tedious exercises into exciting missions.

Moreover, Personalization permit learners to customize their own avatars to foster a sense of ownership and identity within the learning environment.

Additionally, customization allows for a degree of self-expression that can be particularly valuable for learners who might be more introverted or hesitant to speak up in traditional settings. Their avatar can become a way to project personality without the pressure

of direct interaction. Furthermore, Well-designed challenges, can make practicing new language more compelling, and narratives can contextualize learning, making it more memorable.

### **The Impact of Gamification in Enhancing EFL Learners Motivation**

Games have always been present in various didactic approaches to language teaching, from the most structuralist to the Most communicative approaches (Wright et al., 2006).

It is possible to locate a plethora of applications (APPS) for language learning that include game features and assist users in improving various language skills (Babbel, Duolingo, Busuu, Memrise, etc.). Game mechanics seem to help students increase interaction with their classmates and get involved in their learning tasks proactively.

As Wright et al. (2006) noted, games have long held a place in language teaching, and their digital evolution has only amplified their potential. The inherent interactivity and challenge embedded in game mechanics naturally draw learners in. Peterson (2012) highlighted how digital games can supply a sense of promoted communicative proficiency, and this likely stems from the increased engagement Squire (2008) observed in game-based education. This heightened stimulation directly translates to greater motivation, making gamification a true « catalyst of elements that foster motivation in language classrooms » (Kapp, 2012, 2016).

- **The Intrinsic Power of Gamified Learning**

The NMC Horizon Report (Johnson et al., 2014 : 42) points out that the motivational potential of games lies in their ability to « stimulate large gains in productivity and creativity among learners. » it is about actively participating and experimenting within the learning environment rather than the passive receipt of information. Ramirez et al. (2014 : 647) further underscore this by positioning « gamification techniques as a critical set of design tools in an educator’s toolbox, » emphasizing their practical value in fostering engagement and motivation.

- **Self-Determination Theory and the RAMP Model in EFL**

Marczewski's (2019) reinterpretation of the Self-Determination Theory yields a powerful framework for interpreting how gamification fuels both extrinsic and intrinsic motivation in EFL learners. The senses of autonomy, relatedness, and competence are key drivers. Learners gain a sense of agency when they have choices within the learning activity (autonomy), they connect with others through collaborative game elements (relatedness), and experience a sense of progress and accomplishment as they overcome challenges (competence).

Marczewski's (2013) RAMP model – Relatedness, Autonomy, Mastery, Purpose – connect these self-determination aspects with concrete gamification elements in the EFL context:

- ✓ **Relatedness:** Collaborative tasks, team-based challenges, and opportunities for peer interaction within a gamified learning environment can encourage a sense of community and shared purpose among EFL learners. As Kohn (1999) aptly stated, « People learn best when they are actively engaged and when the learning has personal meaning for them. » Gamification can create that shared meaning.

- ✓ **Autonomy:** Providing learners with choices in how they approach tasks, the pace at which they learn, or even the types of activities they engage in can significantly enhance their sense of ownership over their learning journey. Deci and Ryan (2000) emphasized that « autonomy support fosters intrinsic motivation. » Gamified environments can be designed to offer these choices.

- ✓ **Mastery:** The progression of challenges, the provision of immediate feedback, and the opportunity to observe tangible progress are central to enrich a sense of mastery. As Dweck (2006) highlighted in her work on mindset, the belief in one's ability to advance is a powerful motivator. Gamification, with its levels, points, and badges, can visually represent this progress.

✓ **Purpose:** Pink (2009) argued that purpose is a key driver of intrinsic motivation. Connecting language learning activities to meaningful goals or narratives within the game context can equip learners with a stronger sense of purpose.

- **The Engagement Loop and the State of Flow in Language Acquisition**

Once EFL learners are immersed in a gamified environment, Zichermann and Cunningham's (2011) « engagement loop » takes hold. The enjoyment derived from the task itself, fueled by the positive feedback and rewards received after each accomplishment, keeps learners motivated to persevere. Which aligns perfectly with the principles of effective language acquisition, where consistent practice and positive reinforcement are substantial.

Additionally, the concept of « Flow, » described by Csikszentmihalyi (1991), is particularly relevant to gamified EFL learning. When the challenges presented by the language learning tasks are optimally balanced with the learners' perceived skills, they can enter this state of deep immersion and enjoyment. Gamification, by carefully sequencing activities and providing scaffolding, can facilitate this « perfect balance » and make the learning process intrinsically rewarding. As Vygotsky (1978) theorized with the Zone of Proximal Development (ZPD), learning is most effective when tasks are challenging yet achievable with support.

In principle, gamifying EFL activities is a sophisticated technique that applies game-like learning procedures into EFL classroom. It provides learners with the immediate feedback so vital for language development, and the sense of self-achievement that comes from surpassing challenges (Kapp, 2012). Which yields that gamification nurtures a genuinely enjoyable and rewarding for every student.

### **Game Platforms for Boosting EFL Learners Motivation**

#### **Duolingo**

A gamified LL platform centered on structured, bite-sized lessons. It uses progress tracking, immediate feedback, and competitive elements like leaderboards to motivate consistent practice and vocabulary/grammar acquisition.

Duolingo effectually leverages principles of gamification to induce consistent involvement. The immediate reinforcement of correct answers and the hierarchical structure of levels supply learners with a tangible sense of achievement and progress. This aligns with Kapp's (2012) definition of gamification as the application of game-thinking and game mechanics in non-game contexts to optimize user engagement and problem-solving. For EFL learners, this translates to a transformation of traditionally rote, chore-like tasks, such as grammatical exercises and vocabulary acquisition, into interactive challenges.

### **Kahoot**

A game-based learning platform primarily used for designing real-time playing quizzes. Its core features are competitive leaderboards, instant scoring, and stimulating question formats, reinforcing active participation and swift recall in a group setting.

Kahoot's strength lies in its capacity to foster dynamic and engaging learning environments through real-time competitive quizzes, making it a brilliant way to inject energy into an EFL classroom. The algorithm of immediate feedback and the public display of scores on the leaderboard introduce an element of friendly rivalry that can significantly solidify learner motivation. Temel & Cesur's (2024) research underscores the influence of Kahoot on critical thinking skills, mediated by promoted motivation

Furthermore, the results of Ebadi et al. (2021) regarding the positive impact of Kahoot on learners' confidence are particularly relevant in the EFL context. The often-inhibiting affective filters associated with language learning can be mitigated by the low-stakes, game-oriented nature of Kahoot.

### **Quizizz**

An interactive learning platform offering customizable quizzes and lessons with game-like elements. It permits both live and asynchronous participation, providing adaptive learning experiences and detailed, reliable feedback for both students and educators.

The adaptive nature of Quizizz presents a notable avail in catering to the diverse learning paces and needs of EFL students. While retaining elements of gamification through avatars and thematic customization, the platform's capacity for asynchronous participation enables learners to engage with content at their own speed. This individualized approach can be instrumental in sustaining motivation by minimizing frustration for learners who require more processing time and preventing disengagement for those who progress more rapidly.

Zulfa & Ratri's (2022) research highlights the role of Quizizz's game-like features, such as auditory and visual stimuli, in rendering the learning process more enjoyable. In the context of EFL acquisition, this can make exposure to novel vocabulary and grammatical concepts less daunting and more appealing. The comprehensive feedback mechanisms provided to educators also offer a valuable tool for targeted instruction. By monitoring student performance, instructors can identify specific areas of hurdles and provide tailored support, thereby fostering a greater sense of competence and motivation among learners.

### **Blooket**

A versatile learning platform featuring a myriad of unique game modes designed to reinforce educational content, particularly vocabulary. Its novelty and diverse formats aim to sustain learner interest and promote active application of knowledge.

Blooket's distinctive array of game modes introduces an element of novelty that can effectively re-engage learners and capture their focus on EL content. The spectrum of interactive formats can be particularly beneficial for learners who may find traditional language learning exercises repetitive. Hadi et al.'s (2023) research exhibits evidence for Blooket's

efficacy in reinforcing vocabulary mastery, underscoring its potential within the EFL curriculum.

The vital engagement with vocabulary through an array of game formats, such as strategic defense games or auction-style activities, promotes deeper retention compared to passive memorization techniques.

### **Memrise**

A vocabulary-focused platform employing flashcards and mnemonic techniques which are mental shortcuts that assist learners to remember more complex concepts or words. It highlights spaced repetition and stimulating memory strategies to build a keen vocabulary base for EFL learners. As Memrise states on their website, "Memrise uses flashcards, spaced repetition, and mnemonics to help you learn and remember new words and phrases." (Memrise Website). To recapitulate, the incorporation of these groundbreaking gamified platforms promises an advancement in the field of EFL pedagogy. Such platforms effectively implement game mechanics into EFL pedagogical framework. By appealing to inherent motivators such as the desire for achievement, competition, and enjoyment, they transform the often-perceived obstacles of language learning into innovative, intriguing, and rewarding experiences.

### **Challenges of Integrating Gamification in EFL Contexts**

The introduction of gamification into English as a Foreign Language (EFL) classroom holds significant promise for maximizing student engagement and motivation (Prensky, 2001). Nonetheless, the successful implementation of game-based learning is not without its complexities and obstacles. A range of key challenges can immensely impede the English learning experience if not addressed effectively.

- **The Equitable Access to Language Learning Digital Opportunities**

The assumption that all students possess equal access to technology is a significant oversight. The « digital divide » (van Dijk, 2005), characterized by disparities in access to

reliable internet and digital devices, poses a fundamental barrier to the equitable integration of digital gamified activities. It is astutely validated that attempting to incorporate interactive vocabulary games when a portion of the class lacks connectivity immediately disadvantages those learners. This disparity directly impacts their opportunity to engage with the language in dynamic and potentially more effective ways. Consequently, students without reliable technological access may experience reduced exposure to authentic English input (Krashen, 1985), limited opportunities for interactive practice, and a widening gap in digital literacy skills substantial for navigating the increasingly digital world of English language use.

- **Balancing Engagement with Meaningful Language Acquisition**

The allure of creating highly entertaining games can overshadow the primary goal of language learning and hinder the internalization of linguistic mastery. As Gee (2007) highlights, effective educational games should consolidate « deep learning » rather than mere « fun. » While engagement is crucial for motivation (Gardner, 1985), gamified activities must be carefully designed to reinforce distinct EL objectives. To illustrate, a visually stimulating matching game might capture students' attention but may offer limited opportunities for the productive usage of new vocabulary in communicative contexts or the development of syntactic fluency (Skehan, 1998).

- **Teacher Workload, Technological Proficiency, and Pedagogical Integration**

The demands placed on EFL teachers are considerable, and expecting them to seamlessly transition into game designers without adequate training is unrealistic. As Bellotti et al. (2013) highlight, « the design and implementation of effective educational games require a rigorous investment of time and expertise from educators. » Without dedicated training and readily available infrastructure, teachers may struggle to create or adapt games that effectively target specific English language skills, such as grammatical accuracy (Ellis, 2003) or the

development of coherent discourse (Swain, 1985). Poorly designed or overly time-consuming games can detract from valuable instructional time and may not align with established pedagogical principles, ultimately hindering their adoption and effectiveness.

- **The Competition Impact on Learner Affect**

While competition, often manifested through leaderboards and points systems, can motivate some learners, it can also breed a climate of anxiety, demotivation, and discouragement for others, particularly in the context of language learning where errors are a natural part of the acquisition process (Corder, 1967). As Dörnyei (2001) notes, « anxiety can be a major impediment to language learning success. » Students who consistently perceive themselves as lower-achievers in competitive gamified atmospheres may become less willing to take risks in speaking or writing, which can detriment their intrinsic motivation and stifle their confidence.

A thoughtful navigation of such paramount hurdles through strategically accessible technology, expertly trained educators, a close focus on defined learning objectives, and a universally inclusive game design is pivotal to fully unlock the real potential and realizing the revolutionary power of gamification within EFL classroom.

## *Chapter Three*

# **Methodology and Design**

## **Introduction**

The given chapter outlines the methodological framework recruited to investigate the impact of Artificial Intelligence (AI) and gamification on enhancing the motivation of English as a Foreign Language (EFL) students. It meticulously details the research design, participants, data collection instruments, data analysis procedures, and all ethical considerations undertaken in this study.

## **Research Design**

This research adopted a mixed-methods research design, combining quantitative and qualitative data collection and analysis techniques. This approach permits a more flexible and comprehensive interpretation of the research problem by triangulating findings from different sources (Creswell & Plano Clark, 2017).

## **Research Instruments**

### **Quantitative Component**

A descriptive survey design was crafted to collect data on EFL students' perceptions regarding their motivation levels and their experiences or inclinations towards AI and gamified learning activities. This approach enabled the collection of copious data from a larger sample, providing affluent insights and permitting the obtainment of reliable and valid information.

### **Qualitative Component**

Correspondingly, semi-structured interviews were conducted with EFL teachers to gain in-depth perspectives on their experiences, observations, and opinions regarding student motivation, the potential of AI and gamification in language learning, and any obstacles or opportunities they foresee.

The integration of quantitative and qualitative data aims to provide a richer and more nuanced comprehension of how AI and gamification can influence EFL student motivation, going beyond statistical correlations to explore the underlying reasons and experiences.

## Participants

### Description of the Questionnaire

The participants for the quantitative component of this study comprised 27 EFL students enrolled in Master one classes of The English Language at the University of Chadli Bendjedid.

A random sampling technique was employed to recruit the targeted population. Participation in the survey was voluntary and based on informed consent

### Methodology Note:

The initial conceptualization and drafting of questions for the students survey were supported by the use of an AI language model, ChatGPT. This tool assisted in generating a broad range of potential questions, identifying key themes, and suggesting various phrasing options. All questions were subsequently reviewed, refined, and approved manually to ensure critical human oversight, relevance, clarity, and alignment with the study's objectives..

### Description of Students Questionnaire

#### Section 1: Background in English Language Learning

The initial section probes the respondents' foundational experience in learning English. Student were asked about their history with English learning (Q1), and their typical study habits (Q2). Mainly to gather data on their learning duration and the types of activities they usually engage in, establishing context for their subsequent responses regarding AI and gamification.

#### Section 2: Experience with AI in Language Learning

The second segment of the survey scout students' prior exposure to each technology separately to gauge initial impressions (Q3). Along with Identifying what aspects of each approach learners find intriguing and potentially instrumental (Q4). Gauging their trust and

optimism regarding the efficiency and reliability of such tools on their learning (Q5). Their interest in particular AI functionalities such as real-time feedback (Q6).

### **Section 3: Experience with Gamification in Language Learning**

This significant section measures participants willingness to utilize and participate in learning activities incorporating these technologies(Q7). In addition, it directly explores their perspective regarding the effectiveness and usability of this synergy(Q8).and the likelihood of increased engagement with game-like learning activities (Q9).

### **Section 4: Perspectives on the Combination of AI and Gamification**

This pivotal part delves into the respondents' insights regarding the synergistic potential of combining AI and gamification (Q10). Furthermore, it analyzes their conviction regarding the efficiency of this contemporary approach over traditional methods (Q11).

### **Section 5: Nuanced Insights and Potential Drawbacks**

The final section recruited open-ended questions to uncover the multifaceted perceived advantages (Q12) and potential demotivating aspects(Q13).

The survey results reveal a considerable promise for the juxtaposition of AI along with gamification to eradicate passive learning instructions. After embarking a detailed dissection of the participants EFL learners' experiences, current practices, and burgeoning receptivity towards innovative pedagogical approaches, the findings reveal a sharp inclination towards passive skills exemplified by listening to music and watching English media. Which necessitates urgent implementation of active and interactive language practices to overcome such passivity. Furthermore, despite the respondents limited yet ongoing exposure to AI and gamification in EFL contexts, a significant proportion of the sample reported occasional or frequent usage which signals a growing awareness and integration of these technologies into

their learning repertoire. Conspicuously, the survey analysis marked a vivid interest in gamification potential, particularly when intertwined with AI-driven feedback mechanisms to outweigh conventional teaching practices. Which suggests a fertile ground for monumental pedagogical evolution that can be potentially accomplished via thoughtfully designed technological interventions such as gamified tasks for mastering the nuances of English and consolidating a highly stimulating and engaging EFL atmosphere.

### **1.1. Quantitative Data Analysis**

The data collected from the student surveys was analyzed using descriptive and inferential statistical methods via numerical software namely SPSS and Excel.

#### **Description of Interviews**

The participants for the qualitative component of this study consisted of three experienced English language teachers currently working at Chadli Bendjedid University in El Tarf. These teachers were purposefully selected based on their expertise in teaching EFL and their interest in technology in education. The versatility of their perspectives and practical insights provided valuable contextual information to complement the student survey data. Prior to the interviews, each teacher provided informed consent.

#### **Data Collection Instruments**

This section presents a comprehensive analysis of the data collected through the questionnaire administered to a randomly selected cohort of 27 Master one students at Chadli Bendjedid University. The primary objective of this survey was to gather insights into their perceptions of how Artificial Intelligence (AI) and gamification strategies might influence their motivation levels in learning English as a foreign language. The data obtained exhibits valuable empirical evidence to address the research questions outlined in the earlier chapters.

### **Limitations of the Study**

While this study aims to provide multifaced insights into the impact of AI and gamification on EFL student motivation, certain limitations should be acknowledged:

**Sample Size and Generalizability:** The sample size of 27 student participants and three teacher participants may limit the generalizability of the findings to other EFL contexts or larger populations.

**Self-Reported Data:** The survey data relies on students' self-reported perceptions of their motivation and experiences, which may be subject to biases such as social desirability bias.

**Limited Exposure to AI and Gamification:** The study's results may be influenced by the participants' prior experiences with AI and gamification in language learning, which may vary.

**Cross-Sectional Design:** The survey provides a snapshot of students' perceptions at a single point in time and does not capture modification in motivation over time.

# *Chapter Four*

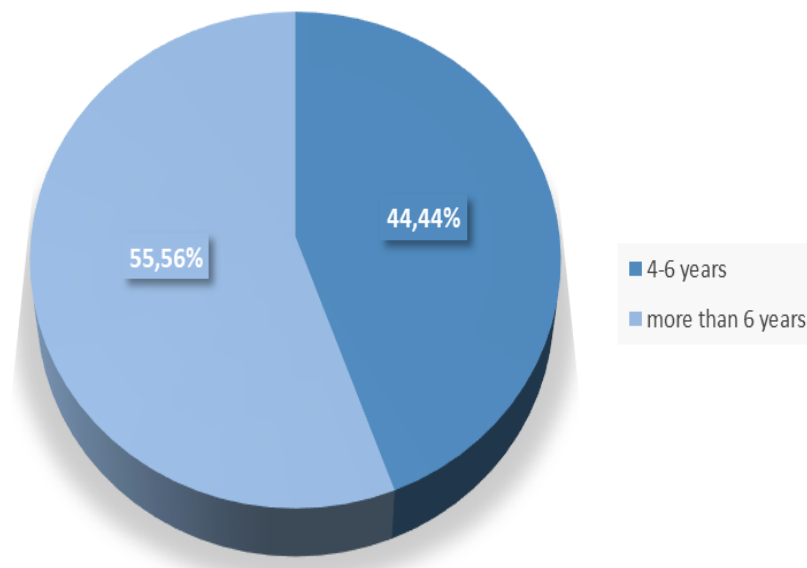
## **Analysis of Data**

### Students Questionnaire

Drawing upon Dörnyei's (2003) assertion that questionnaires serve as a « widely used data collection instrument in applied linguistics research, allowing for the efficient gathering of information on a range of issues from a relatively large number of respondents, » this analysis will systematically examine the students' responses. Dörnyei (2003) further highlights the significance of scrupulous design and rigorous analysis to ensure the validity and reliability of the results obtained through questionnaires. Following this principle, the subsequent subsections will delve into the descriptive statistics of the participants, explore their attitudes and certitude towards AI in language learning, their familiarity with and perceptions of gamification, and lastly, analyze the potential effects of integrating these elements in EFL environments.

#### *Section One: Background in ELL*

**Question one: How long have you been learning English?**

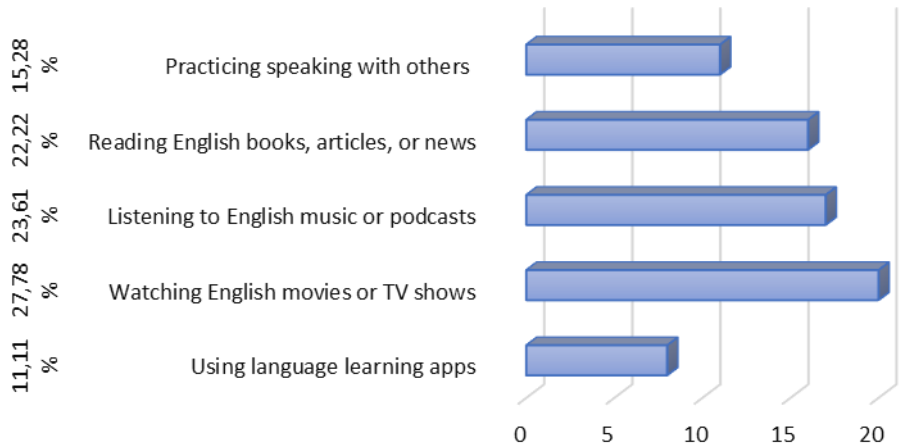


**Figure 4.** *Students' English Learning Experience*

This question intends to gauge the respondents’ overall experience and proficiency level in English as the duration of learning can influence their familiarity with discern learning tactics and their openness to modern approaches.

The pie chart illustrates that a larger proportion encompassing 55.56% of the sample surveyed possess more than 6 years of English learning. The remaining 44.44% have been learning English for 4-6 years. This suggests that the majority of the Master one students in the targeted sample have a prior substantial exposure of English language learning.

**Question Two: What types of English learning activities do you typically engage in? (Select all that apply)**



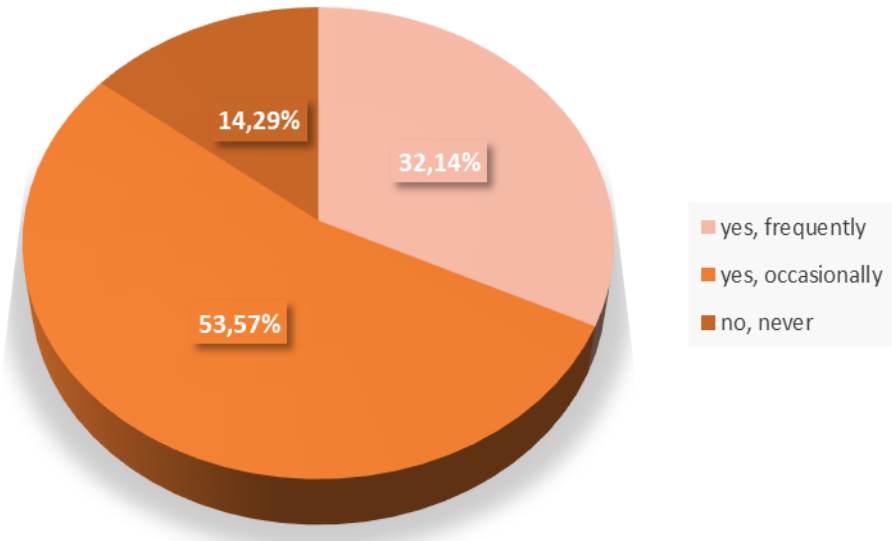
**Figure 5.** *Students' Current Learning Habits and Preferences*

The present question seeks to interpret the respondents’ current learning habits and preferences. It is evident that watching English movies and TV (27.78%) is the most prevalent way respondents learn English. Listening to music/podcasts (23.61%) and reading (22.22%) are also common. Notably, practicing speaking is the least frequent (15.28%), and using language apps accounts for the smallest share (11.11%). The given graph visualizes a preference

to passive forms of exposure to the English language along with an underutilization of dynamic practice in the selected sample.

*Section Two: Experience with AI in ELL*

**Question Three: Have you ever used any language learning apps or platforms that incorporate AI (e.g., personalized feedback, speech recognition)?**



**Figure 6.** *Students' Exposure To AI-Power Language Learning Tools*

This question was formed to assess the respondents' prior exposure to AI-powered language learning tools. In addition to scaling their familiarity, perceptions, and expectations regarding AI's capacity.

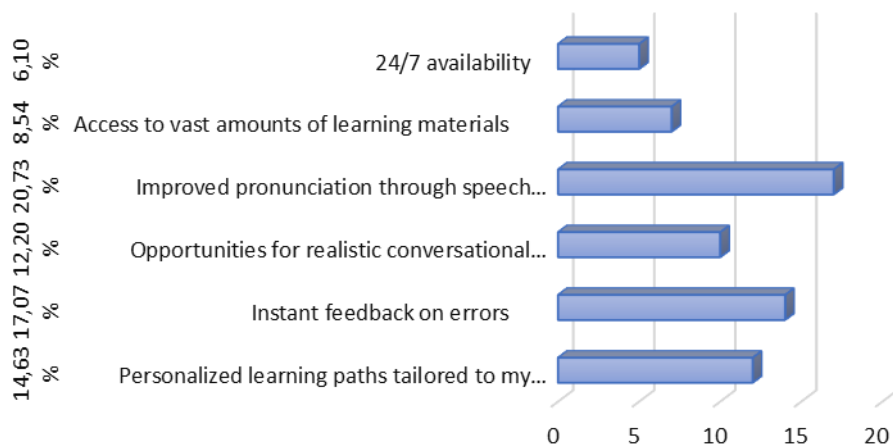
The chart demonstrates that a substantial proportion of respondents, constituting the largest segment at 53.57%, indicated an intermittent usage of AI powered apps and platforms, selecting « Yes, occasionally. » This signals that the majority of the sample is not consistently involved in AI platforms utilization.

Furthermore, a notable fraction, representing 32.14% of the surveyed group, reported frequent engagement (« Yes, frequently »). This signifies a consistent and regular interaction with AI driven apps.

Conversely, a smaller segment, accounting for 14.29% of the responses, indicated a complete absence of engagement (« No, never »). This suggests that a minority of individuals is not consistently involved with AI enhanced platforms.

The data gathered from this question yields a spectrum of engagement, with occasional participation being the most prevalent, followed by frequent involvement, and a minor fraction reporting no involvement whatsoever.

**Question Four: What aspects of AI-powered language learning tools do you find most appealing or potentially beneficial? (Select all That Apply)**



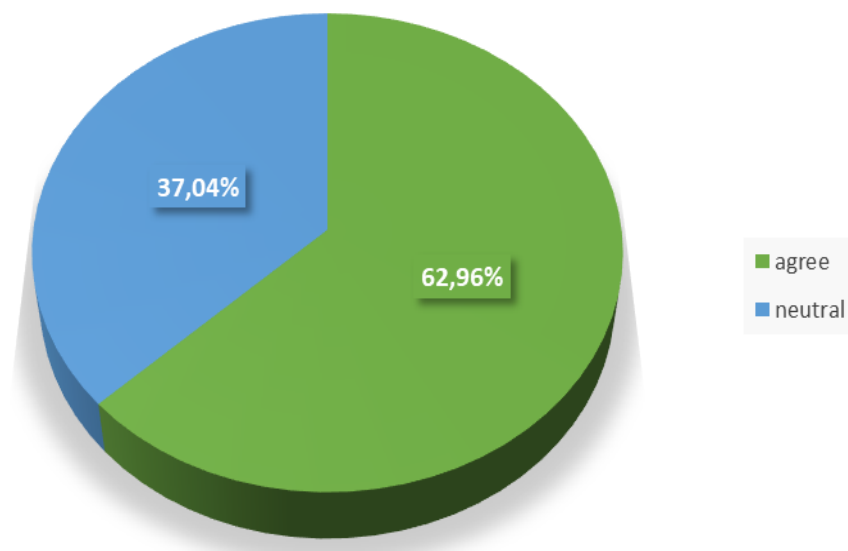
**Figure 7.** *AI Prevailing features in English Language Learning*

This question dives into the distinguished features of AI that learners find appealing.

The graph elucidates that a diversity of compelling advantages are supplied by AI-powered language learning tools. Personalized learning paths (44.44%), instant error feedback (51.85%), realistic conversational practice (37.04%), and improved pronunciation via speech

recognition (62.96%) are highly appealing to the selected sample of Master one students. Access to extensive learning materials (25.93%) and 24/7 availability (18.52%), are perceived as less critical in this cohort. The gleaned data underscores a tremendous preference for features directly energizing LA and personalized learning experiences.

**Question Five: Do you believe that AI-powered features (like instant feedback and personalized exercises) can help you improve your English language skills?**



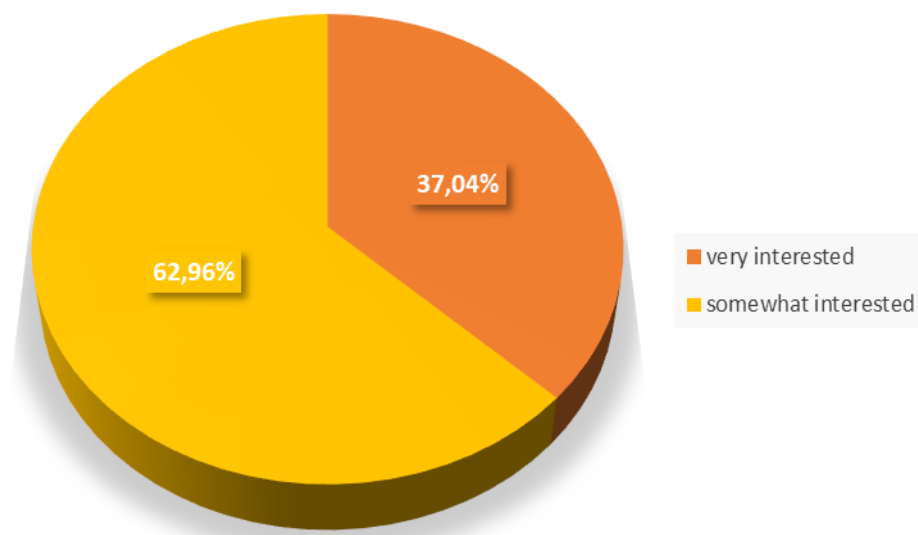
**Figure 8.** *Interest in AI Features*

The present question specifically targets interest in AI features that explicitly address key areas of language learning, namely pronunciation and grammar.

The obtained responses unveil a compelling consensus among respondents regarding the potential of AI-powered features to enhance their English language proficiency. The significant majority representing (62.96%) of the surveyed population expressed agreement with this proposition. Conversely, a notable minority (37.04%) adopted a neutral stance, while no respondents registered disagreement (0%). This distribution of responses reinforces a

prevailing positive attitude within the surveyed population concerning the facilitative role of AI in the realm of language acquisition.

**Question Six: How interested would you be in using AI-powered tools that provide real-time feedback on your pronunciation and grammar?**



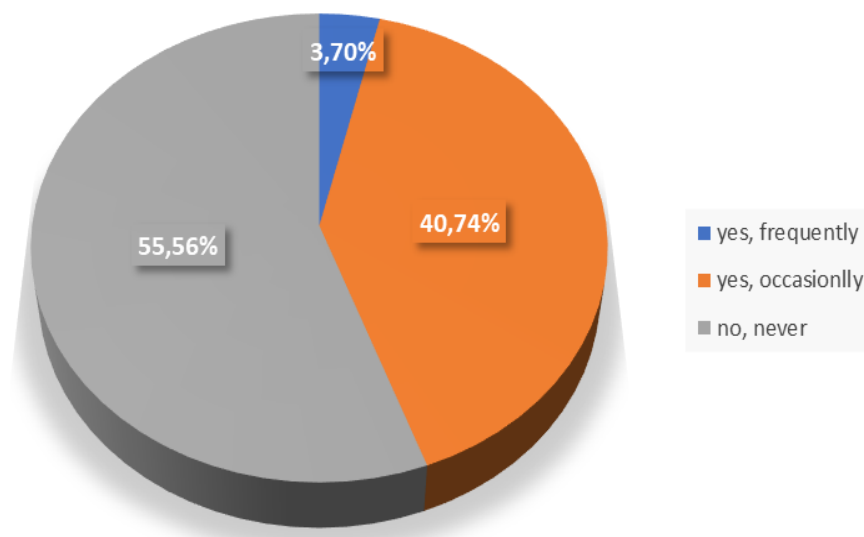
**Figure 9.** *Students' Perception Toward AI-Powered Platforms Influence in Pronunciation and Grammar*

This question investigates the perceived motivational influence of gamification on the learners. Their agreement or disagreement will indicate the potential of gamification to cultivate engagement.

The visual representation of responses to this question illustrates a robust leaning towards interest in AI-powered feedback tools for pronunciation and grammar. A substantial portion (62.96%) expressed being « Somewhat interested, » while a notable ratio (37.04%) indicated being « Very interested. » The results confirm a general positive reception toward AI-powered platforms for boosting pronunciation and grammar in EFL settings.

### *Section Three: Experience with Gamification in ELL*

**Question Seven: Have you ever used gamified elements (e.g., points, badges, leaderboards) in an English learning context?**



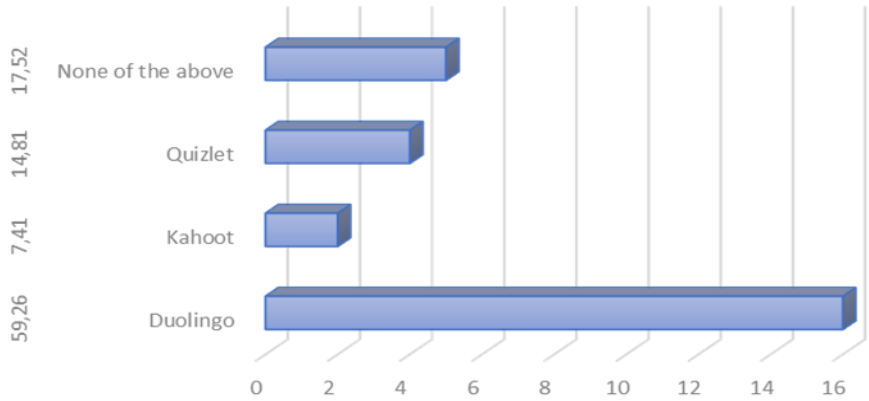
**Figure 10.** *Students' Familiarity with Gamified Elements in EFL Contexts*

The chart exhibits the frequency with which individuals have used gamified elements in an English learning context. A small portion, 3.70%, indicated the usage of gamified elements frequently.

A larger segment, 40.74%, reported using them occasionally. 55.56%, encompassing the majority stated they have never used gamified elements in their English learning.

This suggests that while some learners have experience with gamification, it is not a widespread practice among the sample.

**Question Eight: Which of the following gamified learning platforms have you used before or heard of?**



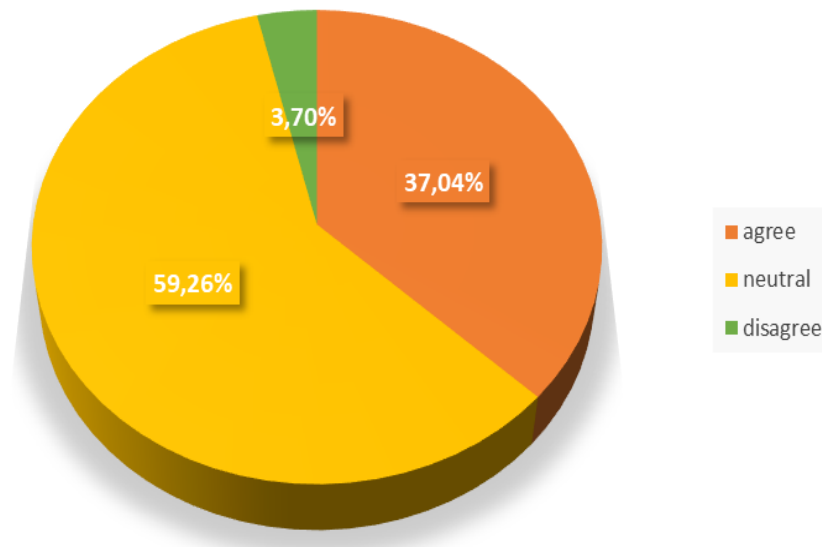
**Figure 11.** *EFL Learning Gamified Platforms*

The findings disclose a striking disparity in students’ predilection towards the gamified language learning facilities.

Duolingo exhibits remarkable dominance at 59.26%, Quizlet (14.81%), significantly outpacing the adoption rates of Kahoot! (7.41%). The 22.22% settling for "None of the above" suggests lack of familiarity or exposure to the listed options among the selected population.

Ergo, Duolingo's colossal adoption emphasize its mainstream presence and accessibility in gamified- language acquisition.

**Question Nine: Do you find gamified elements (like points, badges, and challenges) motivating when learning English?**



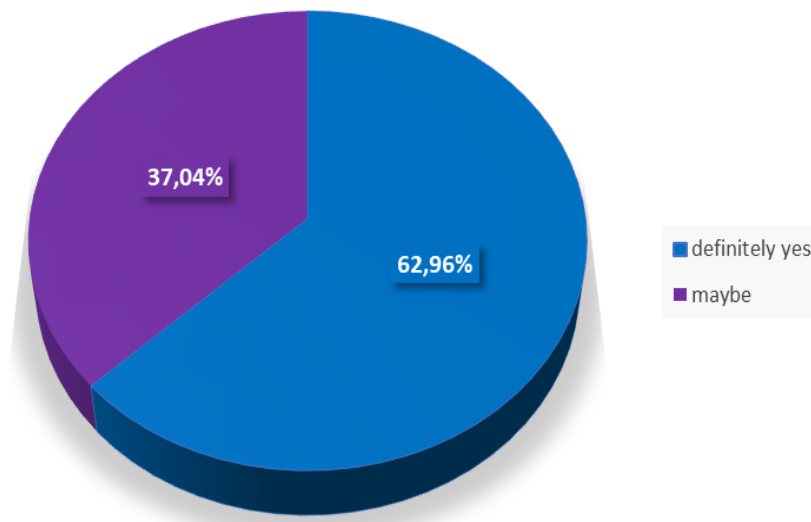
**Figure 12.** *Students' Perceptions Regarding Gamification' Motivational Aspects*

The question is designed to measure the perceived motivation derived from gamified elements in EFL learning.

The given chart displays that a significant portion, 37.04%, agree that gamified elements are stimulating. Furthermore, a substantial segment group of 59.26%, hold a neutral stance on whether these elements are motivating. While a very small group, 3.70%, disagree that gamified elements are motivating.

In essence, the data demonstrates that while exposure to gamified elements in English learning is not prevalent in the selected group, a considerable portion have an opinion leaning towards finding them motivating, though a large segment remains neutral.

**Question Ten: Would you be more likely to engage with English learning activities if they included game-like features?**



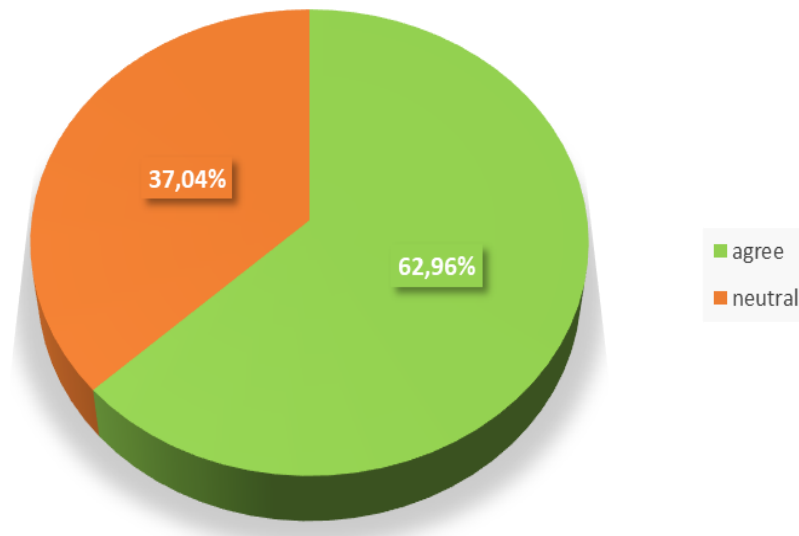
**Figure 13.** *Students' Inclination Towards Game Like Features in EFL Activities*

The pie chart indicates a significant preference towards gamified English learning activities, with a majority (59.26%) responding « Definitely yes, » and a considerable portion (40.74%) selecting « Maybe. »

The results manifest a strong positive inclination towards gamification, despite limited prior experience, it suggests a potential for increased engagement and motivation if game-like instruments were employed in English learning instructions.

#### **Section Four: Perspectives on The Combination of AI and Gamification**

**Question Eleven: Do you think a combination of AI and gamification would make learning English more engaging and effective?**

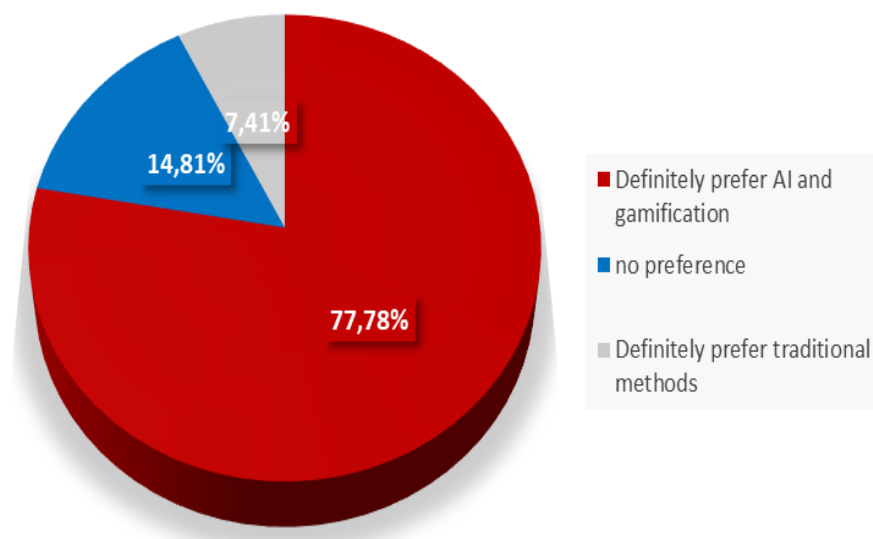


**Figure 14.** *Students' Preferences and Perspectives Regarding AI and Gamification*

The purpose of the question is to assess the respondents' preference for these innovative methods compared to more conventional learning approaches. It indicates the potential for adoption and acceptance of such interventions.

The chart reveals a supportive outlook towards the integration of AI and gamification in English learning, where most participants (62.96%) « Agree » that this commixture would be more engaging and effective, while a notable percentage (37.04%) remain « Neutral. »

**Question Twelve: If you had the choice, would you prefer English learning activities that include AI and gamification over traditional methods?**



**Figure 15.** *EFL Students' Insights about The Integration of AI and Gamification in EFL Activities*

The chart shows that 77.78% of the sample corresponds to the option « Definitely prefer AI and gamification. » Nevertheless, a smaller portion of 14.81% showing « No preference. » While 7.41% stands for the smallest fraction representing those who « Definitely prefer traditional methods. »

The numerical data derived from the responses highlights that the vast majority of respondents clearly indicates a strong inclination towards English learning activities that incorporate AI and gamification over passive traditional methods.

The following section represents a thematic analysis of student responses regarding the strategic integration of AI and gamification in English as a Foreign Language (EFL) setting.

*Section 5: Nuanced Insights and Potential Drawbacks*

**Question Thirteen: In your own words, what specific benefits do you think a combination of AI and gamification could offer for English learners?**

The students' responses towards the integration of AI and gamification in EFL settings bestow an overwhelming vision towards this potent amalgam.

Students' responses demonstrated a salient recognition regarding AI-enhanced gamification platforms, namely:

"A combination of AI and gamification represents a Facilitation of learning tasks".

A remarkable segment of the population articulated that "Gamification is an exceptional way to add enjoyment into the classrooms".

This response encapsulates that students perceive these innovative technologies as beneficial interventions that simplify the cognitive load associated with language acquisition as educational games can Increase engagement through rewards and challenges.

Some platforms are beginners friendly, like Duolingo.

Some respondents underscored the user- friendliness of such gamified-platforms to resonate with students' language proficiency level and diminish pressure.

A pioneering portion of students highlighted how the synergy of AI and gamification streamlined their learning process. This often stemmed from features such as AI-powered feedback on pronunciation and grammar, which reduced the demand for constant educator intervention.

One of the respondents stated that "Automatic correction and 24/7 availability can enhance language mastery".

This speaks to the accessibility and immediacy of feedback loop that AI offers, which transcends the limitations of a human instructor's availability.

A remarkable portion of the answers suggests that "gamification provides a sense of accomplishment".

The reward systems inherent in gamification propels a sense of progress and success, ultimately boosting learner confidence and motivation.

- Some students stated that "AI can be used to customize the learning contents to match students' levels"

This indicates that AI's capacity to personalize content and adjust difficulty to individual learner progress is highly valued, ensuring adaptive, relevant, and efficacious practice.

- "Stimulating game elements".

A major percentage of the sample stated that "Educational games can Simplify Both learning and teaching". This is a recurring response indicating that gamified structures can operate as active facilitators EFL skills development by breaking down complex learning objectives into manageable, engaging steps.

A fragment of the sample encompassing 62% emphasized that the playful and amusing nature of gamification is seen as a way to alleviate the stress and eliminate anxiety occasionally associated with EFL conventional pedagogical approaches, hence creating a more relaxed and conducive environment.

**Question fourteen: are there any aspects of gamification in language learning that you find demotivating or ineffective?**

This question intended to emulsify opposed attitudes towards AI and gamification demotivating aspects in EFL environments.

The respondents pointed out miscellaneous detrimental outcomes.

While recognizing the numerous benefits, students also articulate significant concerns regarding the potential downsides and practical difficulties of implementing gamification in EFL settings. Their responses highlight a tension between the engaging nature of games and the core objectives of language acquisition.

A tight portion of the sample indicated that AI- gamified- platforms could potentially lead to a "Raise of Competition which increases anxiety". The competitive nature of some gamified elements can be detrimental, leading to increased stress and demotivation for learners who struggle or feel pressured to perform. This directly deactivate engagement and contribute to counterproductive competition.

Moreover, distraction and misalignment from the learning main goals represents a critical concern, respondents suggests that the "game" aspect can overshadow the actual "learning" objectives, leading to superficial engagement rather than deep comprehension.

Additionally, a fraction of the sample stresses that negligence of communicative skills and erosion of transparent interaction points to a potential overemphasis on isolated grammar or vocabulary aspects within gamified exercises, at the expense of developing a fluent, fluid, and authentic communication.

A noteworthy segment of the sample highlights that "over-reliance can damage critical thinking and problem-solving skills. This raises a fundamental pedagogical concern about the potential for learners to become overly dependent on automated systems, hindering the development of independent thought and strategic problem-solving essential for real-world language use.

Some student's answers disclose a striking consensus regarding the repetition of games. The respondents stated that even engaging activities can become monotonous if there is not sufficient diversity or progression, diminishing their motivational power over time.

The obtained responses revealed that the lack of experience and practical implementation barriers are considered a potential lacuna in educator training or interpreting of how to effectively integrate gamification into the curriculum without compromising learning outcomes.

A decent number of compelling views display an emphasis towards deficiency in materials and necessary technical equipment. This pragmatic concern speaks to the real-world hurdles of resource allocation and equitable access, especially in diverse pedagogical contexts.

### **Teachers' Interview**

A rigorously structured interviews were executed with the three EFL teachers. An interview protocol was developed to guide the discussions, ensuring that key areas related to the research questions were fully addressed while enabling flexibility to explore emerging themes. As Holstein and Gubrium (1995) pinpoint, "The qualitative interview is a situated and unfolding interaction between interviewer and interviewee, a socially constructed exchange" (p. 2). The interview inquiries underscored Observations of Student Motivation: Teachers' perceptions of current motivation levels among their EFL students and factors they believe influence. Furthermore, the questions revolved around teachers' views on the promising capacities and challenges of integrating AI tools to enhance student motivation and learning.

Moreover, it investigates their experiences with or perspectives on using gamified activities to boost student engagement and motivation. In addition, the interview targeted analyzing teachers' insights into the practical aspects of implementing AI and gamification in their classrooms, including resources, training, and potential obstacles.

The interviews were conducted face-to-face and were audio-recorded to ensure accurate transcription and analysis. Each interview lasted approximately 15 to 35 minutes.

### **Qualitative Data Analysis**

The audio-recorded teacher interviews were transcribed verbatim to facilitate a thorough analysis and achieve data saturation. Thematic analysis (Braun & Clarke, 2006) was employed to identify, organize, and interpret patterns of meaning (themes) within the interview data.

### **Analysis of Teachers Interview**

The following segment presents a compilation of insights gathered from a thoughtfully structured interview with three experienced EFL teachers at Chadli Bendjedid University. The inquiries intend to investigate teachers' perceptions, exposure, and insights regarding the significant role of motivation in language acquisition and the potential of integrating Artificial Intelligence (AI) and gamification into their pedagogical instructions.

**Question One: Motivation is often cited as a cornerstone of successful language acquisition. Could you please define motivation in the context of language learning and elaborate on its significance within EFL classrooms?**

#### **Teacher A**

Normally motivation is an internal drive and desire to learn and you know to keep consistent in learning a new language.

#### **Teacher B**

Motivation in the context of language learning, I believe it is the drive and the force that pushes students to learn the language, and normally, if we are interested about learning a language, it comes from inside, so motivation is usually going to be intrinsic, I believe.

Sometimes it can be extrinsic due to external factors. So, students decide to learn that language. And, of course, it is something that is mandatory that should be there, or else there would be no learning.

### **Teacher C**

Motivation is having the desire or the willingness or the ability to do something, and if you have the motivation, you can do absolutely anything, you can be amazing in many fields or anything you are doing. And in relation to what you said, language learning.

If you, for example, are not motivated to learn a particular language, you will not do your best, your participation will be unsatisfactory, along with your level of engagement and participation in general. If you do not have the desire to do something you cannot thrive. Similarly to love, if you do not love something, you cannot do it. It has to involve that passion, that love, that is basically the "what" behind every single behavior. I mean what are the factors that motivated you to learn that specific language.

Notably, the three teachers unanimously agree on the massive importance of motivation as the impetus that drives engagement, participation, effort, and ultimately, success in EFL learning. Mainly because without motivation, learners are less likely to invest the necessary time, efforts, and energy.

### **Question Two: What gamified learning platforms are you familiar with?**

#### **Teacher A**

I do not have much experience with these platforms but I once used Quizlet as an attempt to design an interactive lesson to facilitate vocabulary retention. Also, I liked how it allows the user to design a sort of flashcards that makes memorization really enjoyable and easy and I find that feature extremely beneficial to help students cultivate their vocabulary.

**Teacher B**

I am not exactly familiarized with gamified-learning applications but I know that they are mostly AI -driven and can make the pedagogical process more Stimulating and personalized. In fact, the absence of specialized training for teachers might be the primary reason why some teachers are completely unfamiliar with such, let's say new techniques.

**Teacher C**

I implemented Kahoot once in a teaching session to design a quiz and I noticed that students actually enjoyed using it because they found it interesting and it made learning more like a game. They got to pick the correct answer and win a reward, like a virtual reward. It even stimulated them to delve into deep discussions with their classmates and that must have increased their confidence, their participation, and encouraged them to interact more frequently using English.

The teachers shed light on AI transformative potential to design adaptive and interactive game-like activities personalize learning experiences, catering to diverse individual demands and interests, while gamification adds elements of fun, competition, virtual rewards, productivity, increasing participation, and making learning more enjoyable.

**Question Three: In your professional opinion, how can Artificial Intelligence (AI) and gamification be synergistically applied to foster and activate motivation among EFL learners?**

**Teacher A**

Artificial intelligence and gamification are going to provide students with the change in order to try to personalize their learning so basically teachers can create a tailored content that adapts to their needs, wants, and desire to create a dynamic atmosphere. Also, students might

feel bored with the traditional textbooks and worksheets so everything will be somehow like computer-based. Also, gamification is going to increase their interaction in the classroom whether with the teacher or with their peers.

**Teacher B**

I think that it should be well thought of. I mean, as far as the application, or let me say the implementation of AI and gamification in language learning and teaching before that.

So, the teacher should think well about when and how to integrate these.

I mean, is it going to be before any learning or during learning or after learning?

So, I'm not really sure about how, since we did not implement it except for gamification that was used in, if I give you my example, in oral expression courses.

**Teacher C**

I think both AI and gamification are the best combo, they can work together, specially making the learning fun. Nowadays, in this era, we are living in an era of technology where everybody and everything is dependent on technology, right? Everything and everyone need technology. Including the administration, students, and teachers. So, in terms of AI and gamification, for example, can I talk about experiences? Like I said previously, I used Kahoot, it's a popular learning-based a platform, it is a kind of educational platform. I mean I used it once as a tool of teaching and designing interactive quizzes and it really made the learning process fun. I mean even those students who are not motivated they will be subconsciously motivated to talk, participate, and become highly engaged and stimulated to learn.

The teachers collectively specify factors related to curriculum and teaching methods encompassing the heavy workload, traditional approaches, psychological factors such as

anxiety, fear of public speaking, lack of confidence, the teacher's influence including personal enthusiasm and strategies, and the learning environment such as the lack of stimulating technology and passivity.

**Question Four: What are the primary factors that often lead to a lack of motivation in students learning English as a foreign language?**

**Teacher A**

I think that it is the heavy load, for example, of lessons and lectures, especially if they are going to be long chapters. Also, the traditional as a way of teaching and learning methods.

they are not being somehow that modern for, you know, students will somehow be customized with content which is going to help them to internet more. Also, self-efficacy editor and lack of confidence, anxiety, and fear of failure, and so all of these factors are going to affect students' motivation.

**Teacher B**

Let us start from the teacher himself. So, if a learner comes with, a certain level of motivation for learning, and he encounters a teacher who is not motivated at all, and his style and method do not invite learners to learn, then this is going to be number one for me, I guess. In addition, maybe the materials if, take an example, if technology is integrated in their learning, I believe learners will be involved, will be motivated.

And if technology is absent, just an example of a material that should be implemented in teaching /learning.

If it is absent, then they are not going to be motivated. Especially, remember, that we are dealing with digital natives, I always say this, so they want to work with motivation.

You see, they want to learn with technology. So, if there is no technology, I think they are going to be bored, because it's no more time of F to F, if I can say, it's no more face-to-face learning only,

they want to be involved using technology, I guess. So, if this is absent, in addition to the teacher's passive methods, demotivating way of teaching, and external pressures. So, these are, I believe going to lead to demotivation.

### **Teacher C**

There are actually many factors, including the psychological factors, personal factors, So, factors as well. By psychological I mean some students often feel they are demotivated to talk, they are like scared of being judged, you know. Some students also have that fear of public speaking, so that's a major factor, also related to the psychological factors, and other factors. For instance, boredom, they might feel the session is boring.

The teachers echo an overarching vision regarding the merits possessed by AI and gamification to leverage and address the identified motivational challenges. They emphasize AI's efficiency to provide tailored learning content and personalized feedback, ultimately fostering self-awareness of key areas for improvement. Furthermore, the educators' underscores AI capacity to grant access to authentic resources and empower learners through the "fun" element, thereby aligning with learners' inherent desire to learn through play, and cultivating autonomy, creativity, communicative competence, and aligning with learners' inherent desire to learn through play.

**Question Five: In what specific ways do you believe AI and gamification can effectively address these identified motivational challenges in EFL education?**

### **Teacher A**

Workshops might be a good strategy as that would provide practical methods for incorporating game elements into my lessons in a pedagogical way. In addition to AI-supported projects that require students to work together, communicate in English, and solve problems collaboratively via AI tools.

**Teacher B**

If AI and gamification are well implemented in the teaching and learning processes, then I believe they are going to seize students' attention. Especially if they are well integrated well thought of. As far as their implementation is well concerned, then I believe it's going to be very engaging.

Learners want to learn while playing. So why not doing this inside the classroom? If we successfully integrate gamification in our teaching. Let's say, it will add a layer of

fun and students are going to be very productive and stimulated.

**Teacher C**

I believe this combination can absolutely make the learning process kind of personalized and adapted to the learners needs but there is a point for example it all depends on the teacher because it is a learning environment and teachers are included as well. For instance, when you come in class, you make a Kahoot assignment, you ask them questions in that application. Students will select the right option in that platform, and then they gain points and rewards, and at the end students will win. It's a game, but in an educational manner. If you do that for instance for one session let's, say we have one hour and a half session if you devote the whole session for that application for learning it would be beneficial for the interaction of students. So, I think that it should be balanced. If I have one hour and a half, or let's say three hours, the first one hour and a half should be based on that gamification, you can call it an AI session, and then the second hour will be devoted to speaking and communication to encourage interactions between

students, or teacher to students. Because the interaction is the first aspect you should focus on in EFL classrooms. It is exactly what contributes to enriching students' language.

The respondents suggest addressing numerous motivational obstacles throughout AI for its capacity to generate customized learning paths and content that cater to individual needs and learning styles to effectively mitigate irrelevance and passivity. Furthermore, Gamification transform learning into an interactive and enjoyable process. Along with combating boredom and reducing anxiety through a less threatening, game-like environment. Such functionalities can augment self-efficacy and confidence.

**Question Six: Considering the integration of AI and gamification into your EFL teaching practices, what specific professional development or support would be essential for your effective implementation?**

**Teacher A**

I believe that teachers should be well trained in order to use AI and gamification effectively. Especially for novice teachers. They should know how, for example, to design and customize tasks specially to suit the learner's dynamic needs and levels. All of these aspects should be taken into consideration.

**Teacher B**

The first thing would be the availability of the materials. If there is to technical support, then how are we successfully going to integrate AI and gamification?

And remember, the deficiency of material in our setting unfortunately does not allow for an effective implementation because it is not there. Also, the technical issues, if not properly addressed, then we are going to suffer from these problems of the technical support.

And engineers are not always there for help. Take the language laboratories, for instance, that we have. They are there for nothing. They are not operating at all.

### **Teacher C**

To effectively implement AI and gamification in EFL teaching practices, I would highly emphasize that the educational curriculum designers should provide special training and professional support from the ministry to the teachers because that would be essential, such as Understanding and AI learning-based applications and websites. Also, Teachers need technical training on how to effectively integrate applications and platforms like Kahoot to make learning fun and engaging.

The teachers highlight the tremendous demand for professional training and technical support for educators to effectively harness the potential of AI and gamification. The results unveil a stressed importance of training teachers to design and customize tasks that align with learners' diverse needs and levels. Moreover, the educators highlight the indispensable requirement for the "availability of materials" and consistent technical support, lamenting current resource limitations. The unanimous insight is that inclusive professional development, constituting both the provision of reliable infrastructure and thoughtful recruitment of these pedagogical tools are crucial for successful integration.

**Question Seven: What potential challenges or pitfalls do you foresee when heavily incorporating AI and gamification in an EFL context, particularly concerning the development of learner autonomy? (Demonstrating critical thinking and awareness of potential limitations)**

**Teacher A**

I think I students now are somehow using artificial intelligence excessively. It is not used as a tool or a facilitator. They are over relying on artificial intelligence. So, this will affect, for example, their critical thinking and this happens a lot with my students because when I ask them a certain question, they directly grab their phones and ask CHAT GPT for immediate answers. They won't be able to Think independently. Also, it could somehow replace that teacher-student relationship. Especially if we're going to rely, for example, on online learning. So, there wouldn't be that interaction, whether with the teacher with the students.

**Teacher B**

I may think of the training that is not there. Teachers are not trained to use technology or AI. If only a personal attempt, if I can, effort from the part of the teacher who, if in case he wants to implement it, then it's going to be his personal effort. There would be no administrative support or training for the youth.

so, I guess this is going to be a major pitfall. In addition to what we have mentioned for the absence of material, etc.

I also can say that the overall alliance on AI and gamification can kill the creativity of the both teachers and learners

They will be, if I can say, a slave of that bot because of the addictive usage of this instrument. Also, it can negatively affect students critical thinking skills and they will become simply lazy as they will only resort to the bot for their thinking as if it is the brain that's going to think on their behalf. And you know that there is a gradual move towards the deletion of the brain because of the use of these AI tools.

**Teacher C**

The lack of interaction, when it comes to language learning, motivation is significant. Also, the imbalance of this new approach can negatively impact students' performance and skills. For example, it may hinder their writing skills because they always use their phones to take notes and their spelling mistakes would be automatically corrected, and then in exams they have to write using pen and paper and they make horrible spelling mistakes because they do not practice enough on their own.

Despite the acknowledgement of the benefits, the teachers also caution against the potential setbacks of over-reliance on AI and gamification. The insights hand over an anticipated concern regarding AI's potentially sabotaging over-dependence to hinder students critical thinking skills, cognitive capacity, and independent problem-solving abilities, along with the risk of declined teacher-student interaction.

**Question Eight: How would you strategically ensure that the application of AI and gamification serves to enhance, rather than diminish, meaningful human interaction within your EFL classroom environment?**

**Teacher A**

I would limit the use of artificial intelligence in my classroom and I will somehow sensitize my students to be optimal in using artificial intelligence during interaction in the classroom so I will somehow oblige them to rely more on their own thinking skills or for example what are the solutions that they would have for a certain problem instead of just going and asking AI for possible answers. So basically, we try to boost their autonomy instead of depending on AI.

**Teacher B**

It should be well planned, well prepared in terms of implementation along with the training, which should go hand in hand in order to guarantee effective integration of AI and

gamification. Also, teachers can create activities and tasks that can boost learners' level of motivation by integrating AI through well-thought of phases and personalizing contexts to fit each learner's needs and purposes.

### **Teacher C**

I think AI and gamification can serve as aid to the teacher but they cannot replace him/her because only the teacher can make students interact because AI powered platforms can give them instant feedback but only the teacher can give them instructions. The presence of the teacher is totally crucial in instructing, guiding, and facilitating so they cannot replace teachers but they can help them because the teacher is the one who leads discussions and customize the design of the appropriations. We should also emphasize on integrating AI as a module or else students will become so dependent on AI and gamification and that will damage their critical thinking and cognitive abilities. Moreover, we should allow students to have some space to engage in free discussions with their peers and that would encourage them to practice more outside and develop a sense of autonomous learning.

The teachers advocate the necessity of adopting a balanced approach where AI and gamification are instruments to support learning and engagement, not to substitute the teacher guidance or human interaction. The respondents posit that AI and gamification should be regarded as supplementary tools in educators' respiratoria. Strategies include cultivating students' awareness to narrow AI usage, ultimately encouraging the prioritization of critical thinking skills, designing activities that combine technology without supplanting the foundational human connection which are massively critical for successful language acquisition.

### **Integration of Quantitative and Qualitative Data**

The findings from the quantitative survey data and the qualitative interview data were implemented during the interpretation phase. This triangulation involved comparing and contrasting the results from both data sources to offer a more comprehensive and nuanced interpretation of the research problem.

### **Conclusion**

This chapter has detailed the methodological groundwork applied in this study, outlining the mixed-methods research design, the selection of participants, the data collection instruments (student survey and teacher interviews), the data analysis procedures (statistical analysis and thematic analysis), and the ethical considerations adhered to. By integrating quantitative and qualitative data, this study aims to provide a comprehensive realization of how AI and gamification can potentially boost the motivation of EFL students. The limitations of the study have also been acknowledged herein to ensure a balanced perspective on the results that will be presented in the subsequent chapters.

## *Chapter Five*

# **General Discussion**

### General Discussion

This chapter attempts to comprehensively synthesize the research results on AI-driven gamification to reinforce motivation in EFL realm, through relating them back to the predetermined research questions and contextualizing them with existing scholarly literature.

Additionally, this section further addresses the theoretical and practical implications, acknowledge the study's limitations, and offer suggestions for future research.

The current study presents compelling evidence that the strategic integration of Artificial Intelligence (AI) and gamification holds significant promise for revitalizing student motivation in English as a Foreign Language (EFL) realm. The results firmly indicate a remarkably positive effect on magnifying learners' intrinsic motivation, engagement, and persistence in EFL tasks.

Data collection constituted questionnaires distributed to the participants. These questionnaires were thoughtfully designed to quantitatively assess the effects of gamification and AI on motivational levels, willingness, and self-efficacy. correspondingly, an extensively structured interviews were conducted with three EFL teachers. These interviews endeavored to gather rich, qualitative perspectives into their experiences, observations, and opinions specifically concerning student motivation, the capacity of AI and gamification in underpinning enthusiasm, and any perceived obstacles or opportunities within their teaching contexts.

The study set out to investigate three key areas. Firstly, the analysis confirmed a lucid relationship between the integration of gamification elements and increased motivational levels in EFL classrooms. This aligns with broader pedagogical comprehension that game-like functions possess the transformative potential to make classic learning experiences more appealing, less daunting, and directly combat the often-cited issue of waning motivation in EFL acquisition.

Secondly, assessing perceptions for evaluation of AI's efficiency to personalize gamified learning experiences for EFL students revealed a salient influence on learner motivation.

AI's ability to dynamically cater to individual student needs, progress, and preferences, tailoring content and challenges accordingly, appears to be a prominent factor in preserving interest and unremitting focus. This adjustable approach moves away from a one-size-fits-all model, offering a more accommodating and immersive learning journey for each student. Finally, the analysis of unifying AI-driven personalization with gamification strategies highlights their merged positive influence on language acquisition outcomes, specifically promoting intrinsic motivation, autonomy, and persistence.

The survey results overwhelmingly yield a substantial augmentation in both intrinsic and extrinsic motivation among EFL students using AI-driven gamified platforms. The targeted population generally reported a striking positive perspective on the usability and effectiveness of AI-driven gamified learning tools.

Furthermore, the recruited sample disclosed that incorporating game elements such as reward systems can clearly solidify extrinsic motivation, leading to increased task completion rates. Which strongly supports the initial hypothesis, which posited higher motivation levels in AI-gamified learning compared to conventional practices. Additionally, the participants were highly satisfied about the potential of the platforms' user-friendliness and the intuitive design of the gamified elements.

The qualitative insights provided valuable feedback for further development, emphasizing the need for continuous iteration based on user experience, echoing Nielsen's (1993) emphasis on user-centered design in educational technology. Ultimately accelerating L2 acquisition and preventing error reinforcement without jeopardizing fervency, consistent with Shute's (2008) findings.

This solid evidence immensely supports the third Hypothesis, recommending a significantly positive alchemist between specific AI-enhanced gamification functionalities and EFL student motivation. Which apparently resonates with the concept of "meaningful gamification" proposed by Deterding et al. (2011) to unlock learners utter motivational potential.

Moreover, the gleaned qualitative data illuminated the critical value of AI feedback immediacy, competitive assignments, and personalized learning paths, all of which unanimously address prevalent motivational roadblocks in traditional EFL settings, such as delayed assessment and standardized instruction. These outcomes profoundly resonate with the work of Kapp (2012) and Werbach and Hunter (2012), who assured gamification's pedagogical usefulness which is extended by demonstrating how AI amplifies these effects through dexterous adaptation.

In juxtaposition to this, the captured data reported a multifaceted potential for sustained concentration and supreme proactive involvement with supplementary materials. Gamified-platforms, coupled with AI's ability to track progress and offer meaningful milestones to intensify the learning efforts.

These findings further validate the second Hypothesis by demonstrating the fueling effects of AI-driven personalization on engagement and persistence, reinforcing the overall positive effect on motivational factors. Additionally, it indicates concordance with the perspective that incessant effort is a critical predictor of language acquisition success (Dörnyei & Ushioda, 2011).

Evidently, the study bestows affluent empirical evidence for the tangible benefits of AI-driven personalization in EFL, building upon theoretical frameworks that advocate for learner-centered approaches (e.g., Brusilovsky & Millán, 2007). Which demonstrates the capacity of

this nascent instrument to moves beyond theoretical discussions and display how AI can effectively create individualized learning paths in practice. Furthermore, the research results grant a vivid compatibility with existing literature which affirms the documented advantages of both gamification and AI in EFL contexts.

### **Discussion of the Results**

The survey results reveal a considerable promise for the juxtaposition of AI along with gamification to eradicate passive learning instructions. After embarking a detailed dissection of the participants EFL learners' experiences, current practices, and burgeoning receptivity towards innovative pedagogical approaches, the findings reveal a sharp inclination towards passive skills exemplified by listening to music and watching English media. Which necessitates urgent implementation of active and interactive language practices to overcome such passivity. Furthermore, despite the respondents limited yet ongoing exposure to AI and gamification in EFL contexts, a significant proportion of the sample reported occasional or frequent usage which signals a growing awareness and integration of these technologies into their learning repertoire. Notably, the survey analysis marked intrigue in gamification potential, particularly when intertwined with AI-driven feedback mechanisms to outweigh conventional teaching practices. Which suggests a fertile ground for monumental pedagogical evolution that can be potentially accomplished via thoughtfully designed technological interventions such as gamified tasks for mastering the nuances of English and cultivating a highly engaging EFL atmosphere.

### **Unexpected Results and Limitations**

While the results are unequivocally positive, they should be interpreted with circumspection, limitations, and minor unexpected outcomes that warrant discussion and honest acknowledgement.

Initially, the relatively small sample of 27 master students narrows the generalizability of the attained findings to a broader EFL student population with diverse cultural backgrounds, proficiency levels, or educational systems. This is a significant limitation on the external validity of the results.

Furthermore, the empirical nature of the current investigation on AI-driven gamification's impact on EFL motivation was primarily theoretical, limiting its capacity to fully explore practical, long-term effects on sustained motivation and language proficiency. Future research should adopt more practical methodologies and real-world application scenarios to comprehensively interpret how such technological interventions influence the durability of observed motivational gains and their influence on long-term language acquisition.

Additionally, the effectiveness of such platforms relies heavily on students' access to technology and their digital literacy. These factors vary significantly across educational settings, potentially limiting the applicability of these findings in contexts with limited technological infrastructure or lower digital literacy rates.

### **Key Findings and Their Implications**

To recapitulate, the current research definitively suggests enlightened evidence for the efficacy of AI and gamification confluence to magnify motivation among EFL students.

AI-driven gamification significantly possesses the capacity to optimize motivation in EFL students, resulting in promoted enjoyment and a stronger desire to persist in language learning. Furthermore, AI-driven gamified environment can remarkably cultivate EFL learners' sustained concentration, willingness to pursue challenging topics, and proactive engagement with educational materials. Additionally, the recruited participants generally held affirmative

visions regarding the usability and effectiveness of these resourceful platforms, indicating high potential for prevalent integration.

These findings articulated that AI-driven gamification posits a potent solution to long-standing motivational hurdles in EFL education, leading to promoted learning outputs and a dynamic educational experience.

### **Conclusion**

In summation, the empirical evidence drawn from both qualitative and quantitative analysis utterly manifest that strategically incorporating AI and gamification represents a revolutionary paradigm and engaging heuristics for supplying EFL students' motivation.

The customized and inherently captivating nature of such visionary technologies can encourage a more gratifying and genuinely stimulating learning experiences.

### **Recommendations**

#### **For EFL Teachers**

The research findings strongly suggest a compelling affirmative impact regarding the integration of AI and gamification to vitalize EFL student motivation.

Due to the promising avenues offered by such innovative approach, educators should proactively explore and adopt AI-driven gamified platforms as supplementary or core components of EFL curricula.

On the same vein, EFL teachers should prioritize platforms with user-friendly interfaces and intuitive designs taking into consideration students' attitudes and perceptions regarding the usability and effectiveness of such techniques for successful implementation.

Furthermore, EFL teachers should capitalize on AI's mechanism to offer immediate feedback, as this has been shown to address the often-cited motivational impediment in traditional EFL settings.

Moreover, EFL mentors should exploit AI personalization functionalities to sufficiently tailor learning contents to match individual student versatile needs, progress, and preferences. Along with offering adaptive content, customized challenges, and personalized feedback to preserve student enthusiasm and genuine interest.

Equally significant, EFL students should be allowed to make independent decisions regarding their learning paths, styles, and pace to foster a sense of autonomy. This creates a sense of ownership and cultivate intrinsic and extrinsic motivation through stimulating game challenges and timely feedback.

To fulfil the aforementioned initiatives, pedagogical institutions should ensure equitable access to necessary technology and provide support and special training to educators for developing digital literacy among students to maximize the effectiveness of AI-driven gamified platforms.

### **For Future Research**

Future research should aim for significantly larger sample sizes to enhance the generalizability of findings across various proficiency levels and educational systems.

correspondingly, future studies should adopt longitudinal designs to thoroughly explore the long-term effects of AI-driven gamification on sustained motivation, language proficiency development, and retention of linguistic knowledge over extended periods.

Moreover, future research should shift focus from primarily theoretical investigations to practical methodologies that examine the real-world application of AI-driven gamification. This includes studying its integration into existing curricula, teacher training needs, and infrastructural requirements.

Furthermore, future examination should also address potential obstacles and ethical considerations associated with implementing AI and gamification in pedagogical settings, such as data privacy, algorithmic bias, and potential over-reliance on technology.

### **General Conclusion**

The involvement of AI and gamification in EFL pedagogical realm unleashes the promising force of strategically incorporating such synergy to revive EFL students' motivation. Through a rigorous methodological approach encompassing both qualitative and quantitative analyses, the empirical evidence consistently manifested that such sophisticated pedagogical paradigm offers a revolutionary pathway for strengthening engagement and sustained effort in EFL acquisition.

The qualitative findings demystified the pivotal impact of AI personalized learning experiences, immediate feedback mechanisms on students' intrinsic motivation as a perpetual incentive to achieve a greater willingness to persevere through linguistic hurdles and offer a sense of accomplishment. Complementing these insights, the quantitative data provided valuable statistical validation, revealing significant potential for optimized participation rates, task completion, and self-efficacy among EFL learners.

To conclude, this research strongly advocates for the agile incorporation of AI and gamification convergence in EFL education. It emphasizes their capacity to transcend conventional teaching methods, ultimately cultivating a more dynamic, interactive, and genuinely stimulating learning ecosystem. By embracing such cutting-edge technologies, EFL educators can not only address the continuous hurdle of student demotivation but also empower learners to become more autonomous and persistent in their attempts towards English language proficiency.

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# Appendices

## **Appendix A: *Students' Questionnaire***

The aim of the present questionnaire is to gather data for the accomplishment of a master dissertation under the title "AI and Gamification: Enhancing motivation in EFL learning".

The data claimed will be used specifically to explore how the integration of Artificial Intelligence (AI) within gamified learning environments can boost the motivation of students learning English as a Foreign Language (EFL).

**Instructions:** Please select the answer that best reflects your opinion or experience for the multiple options questions. Please provide a written response for the open-ended questions. Your individual responses will be kept private and will only be used for academic research purposes.

### **Section 1: Background in English Language Learning**

**1. How long have you been learning English?**

- a. Less than 1 year
- b. 1-3 years
- c. 4-6 years
- d. More than 6 years

**2. What types of English learning activities do you typically engage in? (Select all that apply)**

- a. Using language learning apps
- b. Watching English movies or TV shows
- c. Listening to English music or podcasts
- d. Reading English books, articles, or news
- e. Practicing speaking with others

### **Section 2: Experience with AI in Language Learning**

- 3. Have you ever used any language learning apps or platforms that incorporate AI (e.g., personalized feedback, speech recognition)?**
- a. Yes, frequently
  - b. Yes, occasionally
  - c. No, never
- 4. What aspects of AI-powered language learning tools do you find most appealing or potentially beneficial? (Select all that apply)**
- a. Personalized learning paths tailored to my needs
  - b. Instant feedback on errors
  - c. Opportunities for realistic conversational practice
  - d. Improved pronunciation through speech recognition
  - e. Access to vast amounts of learning materials
  - f. 24/7 availability
- 5. Do you believe that AI-powered features (like instant feedback and personalized exercises) can help you improve your English language skills?**
- a. Agree
  - b. Neutral
  - c. Disagree.
- 6. How interested would you be in using AI-powered tools that provide real-time feedback on your pronunciation and grammar?**
- a. Very interested
  - b. Somewhat interested
  - c. Not interested.

***Section 3: Experience with Gamification in Language Learning***

**7. Have you ever used gamified elements (e.g., points, badges, leaderboards) in an English learning context?**

- a. Yes, frequently
- b. Yes, occasionally
- c. No, never

**8. Which of the following gamified learning platforms have you used before or heard of?**

- a. Duolingo
- b. Kahoot
- c. Quizlet
- d. All the above
- e. None of the above

**9. Do you find gamified elements (like points, badges, and challenges) motivating when learning English?**

- a. Agree
- b. Neutral
- c. Disagree.

**10. Would you be more likely to engage with English learning activities if they included game-like features?**

- a. Definitely yes
- b. Maybe
- c. Definitely not

***Section 4: Perceptions of AI and Gamification Combined***

**11. Do you think a combination of AI and gamification would make learning English more engaging and effective?**

- a. Agree
- b. Neutral
- c. Disagree

**12. If you had the choice, would you prefer English learning activities that include AI and gamification over traditional methods?**

- a. Definitely prefer AI and gamification
- b. No preference
- c. Definitely prefer traditional methods

*Section 5: Open-Ended Questions*

**13. In your own words, what specific benefits do you think a combination of AI and gamification could offer for English learners? (Open-ended)**

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**14. Are there any aspects of gamification in language learning that you find demotivating or ineffective?**

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## **Appendix B: *Teachers' Interview***

Dear esteemed educator. Thank you for your participation in this interview. We are exploring the promising capacities of AI and gamification to optimize motivation in English as a Foreign Language (EFL) landscape.

The contribution of your expert insights into these areas are highly valued. Please be assured that your responses will be anonymized and used solely for the purpose of this academic research.

**Question One:** Motivation is often cited as a cornerstone of successful language acquisition. Could you please define motivation in the context of language learning and elaborate on its significance within EFL classrooms?

**Question Two:** What gamified learning platforms are you familiar with or have utilized in a teaching session?

**Question Three:** In your professional opinion, how can Artificial Intelligence (AI) and gamification be synergistically applied to foster and activate motivation among EFL learners?

**Question Four:** What do you identify as the primary factors that often lead to a lack of motivation in students learning English as a foreign language?

**Question Five:** In what specific ways do you believe AI and gamification can effectively address these identified motivational challenges in EFL education?

**Question Six:** Considering the integration of AI and gamification into your EFL teaching practices, what specific professional development or support would be essential for your effective implementation?

**Question Seven:** What potential challenges or pitfalls do you foresee when heavily incorporating AI and gamification in an EFL context, particularly concerning the development of learner autonomy?

**Question Eight:** How would you strategically ensure that the application of AI and gamification serves to enhance, rather than diminish, meaningful human interaction within your EFL classroom environment?

## RÉSUMÉ

L'acquisition de la maîtrise de la langue anglaise joue un rôle prépondérant et reconnu à l'ère mondialisée contemporaine, ce qui exige de relever le défi constant de maintenir la motivation des étudiants dans l'apprentissage de l'anglais comme langue étrangère (ALE). Cette recherche vise à explorer l'impact de l'application de technologies éducatives avancées, spécifiquement la combinaison de l'intelligence artificielle (IA) et de la gamification, sur la stimulation de l'enthousiasme des apprenants, en plus d'examiner le potentiel transformateur de ces outils éducatifs pour améliorer l'engagement des apprenants, leur auto-efficacité, et, plus important encore, leur motivation dans les contextes d'apprentissage de l'ALE. Saisissant l'opportunité offerte par cette approche robuste, la présente recherche vise à évaluer comment les environnements d'apprentissage de l'ALE influencent la motivation des apprenants, avec l'objectif principal d'évaluer la capacité de l'IA à personnaliser les expériences d'apprentissage de l'ALE basées sur la gamification ; et d'analyser l'impact subséquent de la combinaison de la personnalisation pilotée par l'IA et de la gamification sur l'efficacité des apprenants d'ALE. Une méthodologie mixte a été utilisée avec 27 étudiants de Master 2 en langue anglaise du département de littérature et langues anglaises de l'Université Chadli Benjedid pour atteindre les objectifs spécifiés. Les procédures de collecte de données quantitatives ont inclus la distribution de questionnaires au groupe cible. En complément, des entretiens structurés ont été menés avec des enseignants d'ALE de l'institution susmentionnée afin de recueillir des informations qualitatives précises sur leurs points de vue et observations concernant le potentiel de l'IA et de la gamification dans l'apprentissage des langues, ainsi que les obstacles ou opportunités qu'ils anticipent. Les résultats ont révélé que l'adaptation de l'IA et de la gamification offre des moyens significativement positifs d'améliorer la motivation et la persévérance des apprenants d'anglais. Les résultats indiquent que l'intégration stratégique de l'IA et de la gamification est très prometteuse pour renforcer la motivation des étudiants en

ALE, car l'orientation attrayante de cette convergence peut conduire à des expériences d'apprentissage plus productives et stimulantes, menant finalement à une maîtrise optimale de **la langue**. **Mots-clés** : Motivation, Intelligence Artificielle, Gamification, Anglais Langue Étrangère.

## المخلص

يتمتع إتقان اللغة الإنجليزية بدور بارز ومعتترف به في العصر المعولم المعاصر، مما يستلزم معالجة التحدي المستمر المتمثل في الحفاظ على تحفيز الطلاب في تعلم اللغة الإنجليزية كلغة أجنبية. يسعى هذا البحث إلى استكشاف تأثير تطبيق التقنيات التعليمية المتطورة، وتحديدًا مزيج الذكاء الاصطناعي والتلعيب، على تنشيط حماس المتعلمين، بالإضافة إلى فحص الإمكانيات التحولية لهذه الأدوات التعليمية لتعزيز مشاركة المتعلمين وكفاءتهم الذاتية، والأهم من ذلك، تحفيزهم في سياقات تعلم اللغة الإنجليزية كلغة أجنبية.

اغتناماً للفرصة التي يوفرها هذا النهج القوي، يهدف البحث الحالي إلى تقييم كيفية تأثير بيئات تعلم اللغة الإنجليزية كلغة أجنبية على دافعية المتعلمين، مع الهدف الأساسي المتمثل في تقييم قدرة الذكاء الاصطناعي على تخصيص تجارب تعلم اللغة الإنجليزية كلغة أجنبية المعتمدة على التلعيب؛ وتحليل التأثير اللاحق للجمع بين التخصيص المدفوع بالذكاء الاصطناعي والتلعيب على كفاءة متعلمي اللغة الإنجليزية كلغة أجنبية.

تم استخدام منهجية مختلطة مع 27 طالباً من طلاب الماستر 1 في اللغة الإنجليزية بجامعة تاشادلي بن جديد بقسم اللغة الإنجليزية لتحقيق الأهداف المحددة. شملت إجراءات جمع البيانات الكمية توزيع استبيانات على الفئة المستهدفة. تكاملاً، تم إجراء مقابلات منظمة مع معلمي اللغة الإنجليزية كلغة أجنبية في المؤسسة المذكورة أعلاه لجمع رؤى وصفية دقيقة حول وجهات نظرهم وملاحظاتهم فيما يتعلق بإمكانات الذكاء الاصطناعي والتلعيب في تعلم اللغة، وأي عقبات أو فرص يتوقعونها. كشفت النتائج أن تكييف الذكاء الاصطناعي والتلعيب يقدم طرقاً إيجابية بشكل ملحوظ لتعزيز دافعية متعلمي اللغة الإنجليزية ومثابرتهم. تشير النتائج إلى أن الدمج الاستراتيجي للذكاء الاصطناعي والتلعيب يحمل وعداً كبيراً لتعزيز دافعية طلاب اللغة الإنجليزية كلغة أجنبية، حيث أن التوجه الجذاب لهذا التلاقي يمكن أن يؤدي إلى تجارب تعلم أكثر إنتاجية وتحفيزاً، مما يؤدي في النهاية إلى إتقان اللغة الأمثل.

**الكلمات المفتاحية:** التحفيز، الذكاء الاصطناعي، التلعيب، اللغة الإنجليزية كلغة أجنبية.