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The Role of Gamified Learning Tools in reducing Stress Levels among Primary School Pupils.

The Case of Third-Year Pupils at Tbaina Loucif Primary School in Biskra,

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Dissertation submitted to the department of foreign Languages in partial fulfilment of the requirements for a Master Degree in Language Sciences.

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Declaration

I, "**AFAF Filali**" hereby declare that the dissertation titled "**The Role of Gamified Learning Tools in reducing Stress Levels among Primary School Pupils: The Case study of Third-Year Pupils at Tbaina Loucif Primary School, Biskra, Algeria.**" submitted to the Department of English language and Literature at Biskra University is entirely my own work, free from plagiarism, and has not been submitted to any other educational institution. I also declare that the list of references is provided forward indicating all the sources of the cited and quoted information.

Dedications

This work is dedicated to the cherished memory of my father, who is no longer with us. Your spirit and values continue to guide me.

To my incredible mother, your boundless love and sacrifices are the foundation of this achievement.

To my dear sisters and brother, thank you for your constant support and shared journey.

To my best friend, Sara, thank you for your unwavering friendship and belief in me.

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For my heart , my beloved son ZIN- EDDIN.

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Abstract

The current study explores the role of gamified learning tools in reducing stress levels among third-year pupils at Tbaina Loucif Primary School, Biskra, Algeria.Thus, the study adopted an exploratory research design using,mixed-methods approach that included a questionnaire administered to thirty five third-year pupils and interviews conducted with six teachers. Data were gathered to provide a comprehensive understanding of the perceptions of English teachers and pupils towards the role of gamified learning tools in reducing stress levels among primary school pupils. The results showed that gamified learning tools reduce primary pupils' levels of stress, and they help them learn new words better, improve their speaking skills, and boost their self-confidence. In addition, teachers have positive attitudes toward the use of gamified learning tools in reducing levels of stress among primary school pupils in English classes.The study concludes with pedagogical recommendations for teachers to effectively implement gamified learning tools to reduce stress and enhance engagement in their primary English classrooms.

Keywords: Gamified Learning Tools, Stress Levels, Teachers of English, Primary School Pupils.

List of Acronyms

GBL   Game-Based Learning

L2   Second Language

PRISMA   Reporting Items for Systematic Reviews and Meta-Analysis

SEGRESS   Software Engineering Guidelines for Reporting Secondary Studies

SPSS   Statistical Package for Social Sciences

List of Figures

List of Tables

Table of Contents

General Introduction

General Introduction

1. Introduction

It has become increasingly clear that the primary language of many international and professional organizations is English, which is the most widely spoken language in science, research, and occupations. Therefore, establishing a strong foundation in English during the primary school years is crucial, as it is increasingly becoming a key language for global communication and future educational opportunities. Developing early proficiency, particularly in speaking, can significantly shape a pupil's long-term learning trajectory. Nevertheless, many young pupils experience significant anxiety when asked to speak or perform in a new language. This feeling, often termed foreign language stress, can hinder their willingness to participate and negatively affect their confidence and oral development.

According to Sun et al., (2011), educational stress is a form of subjective stress that emerges from multiple difficulties encountered during academic learning, rather than from a single negative life event. It reflects the overall pressures learners face in their educational experience. However, many studies explored the role of gamified learning reducing stress levels. Desai et al. (2021) suggested that casual video games reduce slightly the levels of stress and support learners at their peaks of stress. Pallavicini et al. (2021) argued about the benefits of commercial off the shelf video games in reducing stress in children. Additionally, Edwards (2022) claimed that serious games, narratives, quests, cooperation, and story telling all participate in reducing stress levels. Moreover, Fadzillah et al (2024) said that gamified affects use management when using stress management application. The findings also showed that there is a significant different between the two applications in terms of

engagement. In the current study, the researcher aims to investigate the role of gamified learning in reducing stress levels in educational setting.

2. Statement of the Problem

Academic problems are the most common source of stress among pupils. Studies have found that the most bothersome daily problems for pupils are related to school, such as constant study pressure, limited time, assignments, and tests. Stress related to tests or exams is one of the main causes of school stress, and getting lower grades than expected is another source of stress. Additionally, various studies have found a link between stress related to school activities and numerous negative outcomes, such as illness, depression, and academic failure. In the current study, an informal discussion with some primary English teachers at the primary school of Tbaina Loucif at Biskra showed that pupils experience various types of stressors, such as academic pressure to succeed, an uncertain future, difficulty integrating into the educational system, and social, emotional, and family issues. All these factors impact their pupils' ability to perform at their best academically. Therefore, the current study aims to investigate the role of gamified learning in reducing stress levels in an educational setting.

3. Significance of the Study

The present study focuses on investigating the role of gamified learning tools in reducing stress levels among primary school pupils.Understanding the effects of gamified learning tools is essential for addressing key challenges in teaching and learning English in primary schools. By identifying effective strategies for integrating gamified learning tools into primary instruction, educators can better support pupils in overcoming common challenges such as stress and ultimately improve their academic performance. The study findings will enhance teaching and learning practices and contribute to the broader understanding of gamified learning tools in language acquisition.

4. Aim of the study

The purpose of this research is to explore how the use of game-based learning tools reduces the levels of stress among primary school pupils in English classes. In addition, it aims to seek teachers' attitudes of the role of game-based learning tools in reducing the levels of stress among primary school pupils in English classes. Moreover, by exploring both the effectiveness and potential challenges of using gamified leaning tools, the study aims to inform best practices and strategies for incorporating new learning strategies, techniques, and methods into language education.

5. Research Questions

This current study seeks to answer two important research questions which are as follows:

- How can game-based learning tools reduce the levels of stress among primary school pupils in English classes?
- What are teachers' attitudes of the role of game-based learning tools in reducing the levels of stress among primary school pupils in English classes?

6. Research Methodology

This study is exploratory in nature, so the research design is chosen in order to investigate the role of gamified learning in reducing stress levels in educational setting: the case of third-year primary school pupils at Tbaina Loucif Primary School at Biskra, . Mixed methods approach is used, and the research tools that are used to collect the data are pupils'questionnaire addressed to thirty five pupils, and teachers' questionnaire distributed to six teachers of English. The participants of the study were selected randomly from the 3 primary schools of Tbaina Loucif, Al-Ikhwa Manfoukh Al-Aliya, and 17 OctobreAl-Aliya at Biskra .Because of the large number of primary pupils, a sample of thirty five pupils is

extracted from the entire population to have a better manipulation of the group. In addition, the current study is conducted at the primary schools of Tbaina Loucif, Al-Ikhwa Manfoukh Al-Aliya, and 17 Octobre Al-Aliya at Biskra , Algeria, during the academic year of 2024/2025. The data collected from the research tools were analysed quantitatively using SPSS program and qualitatively using thematic analysis.

Chapter One
Gamified Learning Tools for Teaching English to Primary School Pupils

Chapter One: Gamified Learning Tools for Teaching English to Primary School Pupils

Introduction

Gamified learning classrooms have become widely used as a teaching method because it helps deliver course content effectively and facilitates foreign language. Thus, it is essential to draw on relevant studies regarding the role of game-based learning. Therefore, the current study is conducted to investigate the role of gamified learning tools in reducing stress levels among primary school pupils. Thus, drawing on related research underpinning this study is fundamental in order to have a comprehensive understanding of the research topic. This chapter deals mainly with game-based learning overview. Additionally, this chapter explores the fundamental elements of games design it investigates the role of game-based learning in cognitive development; it tackles the benefits of game-based learning; and it tackles game-based learning in online education.

1.1 Game-Based Learning Overview

The primary focus of the definition of game-based learning lies on the combination of games with structured learning (Schafer et al., 2005). The use of games in teaching a language was nevertheless not used until lately when studies shown their effectiveness. Studies found that there is a relationship between learning and games, for the latter was proved to be beneficial when learning a new language (Plass et al., 2010). Consequently, gamified in learning can be defined as the use of game components such as language, plays, prizes…etc. to learn new skills related to language.

Furthermore, there are differing opinions among academics about what constitutes and does not constitute an academic game. For example, Salin and Zimmerman (2004) view non-academic games as a form of structured play where users engage in an artificial, rule-based conflict that leads to a non-desired outcome. These games are not educational. However, it can be argued that there are games in which learners can use incentives such as points and

stars to complete their boring math homework in a more entertaining manner. It can also be argued that the educational games help pupils structure their homework and make it more interesting and interactive through the use of advanced rules (Salin& Zimmerman, 2004).

Although many studies have examined whether gamified learning can improve learning or job performance, there is still a lack of understanding of how gamified learning brings about these results. Researchers now use well-known learning theories to design and explain gamified learning experiences. Plass et al., (2015); for example, emphasize that emotional, motivational, cognitive, and social foundations are all crucial when designing an educational game. This highlights theories such as situated learning theory (Brown et al., 1989; Lave & Wenger, 1991), achievement goal theory (Elliot & McGregor, 2001), social cognitive theory (Bandura, 1986), and activity theory (Vygotsky, 1978) as important for creating a gaming environment.

Current gamified research encompasses theoretical frameworks; however, many literature reviews do not represent the different theories used in each study. For example, Seaborn and Fels (2015) mentioned that many gamified learning studies are based on self-determination theory (Ryan &Deci, 2000), contextual theory (Wilson, 1973), and the trans theoretical model of behavior (Prochaska&Velicer, 1997). In contrast, Martí-Parreño et al. (2016) focused on theories such as cognitive load theory (Sweller, 1988), the ARCS motivational model (Keller, 1987), and the technology acceptance model (Davis, 1989).

1.2 Fundamental Elements of Games Design

Despite the on-going disagreements over the definition of games, the fundamental components of games, such as game mechanics, visual aesthetics, narrative design, incentive system, and content and skills, are generally accepted. These components are explained below:

1.2.1 Game Mechanics

Plass et al. (2013) agree that the main activities learners perform during the game (which may focus on learning, assessment, or both) are referred to as game mechanics. These mechanics can be created for single-player or cooperative games and often represent essential behaviours related to the game's instructional or assessment goals. Platform games and first-person shooters are two examples of distinct game genres that can be described using game mechanics. The player (learner) clicks on a missing angle, selects a specific angle, and then chooses the correct rule to fill the empty angle. This is an explanation of the game mechanics for the middle school geometry game "Noobs v. Leets" (G4LI, 2013).

1.2.2 Visual Aesthetics

Figure 1

Educational Games for Kids

Characters, the presentation of important messages, and the overall look of the game are all examples of visual aesthetic design. Decisions about how to present game mechanics, the display of hints, and the delivery of feedback all have cognitive and aesthetic functions.

Thus, the multimedia learning components of games must be accurately represented through visual aesthetic design, while the design also reflects the game's aesthetic and narrative connections (Plasset et al., 2013).

1.2.3 Narrative Design

The story told in a game through cut-scenes, dialogues, voiceovers, and game actions are called narrative design. Unlike books or movies, games can implement nonlinear narratives that depend on the player's decisions. Narratives are important for linking game rules, characters, activities, events, and rewards and providing a context for learning. They can also play an important motivational role by increasing game engagement, that is, the player's willingness to continue playing the game (Create, 2013a).

1.2.4 Incentives System

Figure 2:

Game Elements like Badges, Points, or Stars

According to Plass et al. (2013), the motivation system of a game consists of various incentive elements designed to encourage players to continue playing and give them feedback

that can influence their behavior. Motivators can be internal(in-game) or external and include points, stars, badges, trophies, and power-ups. While extrinsic rewards such as points do not directly drive the game forward but can form a meta-game as players compete against each other, intrinsic rewards, such as power-ups that grant players extraordinary abilities, are essential to gameplay. Game developers often use different incentives to satisfy the preferences of different players (Plass et al., 2013).

1.2.5 Content and Skills

The content, skills, and abilities that an educational game seeks to develop influence the game's design, impacting the learning mechanics, visual aesthetics, storylines, rewards, and musical scores(Plass& Homer, 2012). Educational games are designed to achieve goals and help pupils improve language skills. For example, these games are designed to engage pupils in games such as games that include learning activities, such as class debates, to prepare them for future learning.

The second purpose is to provide players with new information and skills that they can learn in the game by presenting new material. The third purpose is to allow players to automate existing knowledge or physical and mental abilities through training and reinforcement. The development of 21st century skills such as cooperation, collaboration, problem solving, creativity and communication is the fourth function. Because there are many different game genres, including casual games, puzzle games, role-playing games, real-time strategy games, and first-person shooters, each genre requires a unique approach to creating game elements (Plass et al., 2013).

1.3 Strategies of Gamified Learning in Primary Education

To effectively implement gamified learning in a primary school setting, educators can employ several strategies that leverage the fundamental elements of game design. These strategies are tailored to the developmental stage of pupils primary school, focusing on engagement, motivation, and creating a positive learning environment.

1.3.1   Storytelling and Narrative Integration

A core strategy for primary pupils is to frame learning activities within a compelling narrative. Instead of presenting isolated tasks, a teacher might create a story where pupils are heroes on a quest. For example, a vocabulary lesson can become a "magical journey to collect enchanted words," making the learning process more immersive and meaningful.

1.3.2   Points, Badges, and Leaderboards

This classic trio can be highly effective with pupils when implemented carefully. Points can be awarded for completing tasks or demonstrating effort, providing immediate positive reinforcement. Badges can be given for mastering a specific skill (e.g., a "Spelling Star" badge), which serves as a visual marker of achievement. To reduce anxiety, leaderboards are often best used to track team progress rather than individual competition, fostering collaboration.

1.3.3   Visual Progress and Levelling Up

pupils are motivated by seeing their progress visually. This can be achieved through simple progress bars that fill up as they complete exercises or a system of "levelling up" to new topics. This strategy provides a clear sense of accomplishment and makes the learning journey feel tangible.

1.3.4   Personalization and Avatars

Allowing pupils to create and customize their own digital avatar or character can significantly increase their personal investment in the learning activity. This sense of ownership makes the experience more engaging and fun, as the pupil's avatar represents them in the learning "game."

1.3.5   Instant and Constructive Feedback

A key feature of games is immediate feedback. In a gamified classroom, this means providing instant confirmation for correct answers and gentle, constructive guidance for incorrect ones. Instead of simply marking an answer as "wrong," a gamified tool might offer a hint or allow the pupil to try again without penalty, which aligns with the principle of "graceful failure" and helps reduce learning-related stress.

1.4 Game-Based Learning and Cognitive Development

Piaget believed that play is a very important tool for children's cognitive development and that play takes on a more symbolic character as children grow older. Therefore, language learning through games can be said to be an important process in the development of children's language skills and cognitive skills. Through play, children can apply their higher thinking patterns and represent things in different ways, which in turn promotes their

cognitive development. For example, a child can imagine an eraser as a car while simultaneously recognizing that it is not a car (Piaget, 1962).

Therefore, children can learn symbolic thinking through play, which is essential for cognitive development. Games contain components that develop children's mental skills for reading, writing, arithmetic, and even understanding representations of reality. Thus, it is recommended to teach children games first (Plass et al., 2013).

Loftus, G.R. and Loftus, E. F. (1983) were among the first to research the psychology of video games and their enjoyment factor. They highlighted that rewards in video games occur sporadically, according to an intermittent reinforcement schedule, drawing on ideas from behaviorism. The highest known response rates were achieved with this reinforcement schedule. Loftus, G.R. and Loftus, E. F. (1983) believed that the "sweet spot" is where the player must exert effort to succeed, and that the game should be successful there. It is said that this "sweet spot" can give players a feeling of "flow." Csikszentmihalyi (1990) defines flow as a highly concentrated mental state that occurs when a person is totally absorbed in an activity.

The Zone of Proximal Development (ZPD) was first proposed by Vygotsky (1978). He believed that play is essential to children's development because it provides them with space to grow. According to Vygotsky, real play involves social and symbolic activity and allows children to master tasks that are slightly beyond their current level of ability, especially when played with adults or more experienced peers. Children can imagine themselves "growing a head taller" as they play, which helps them transcend their normal age and everyday behaviours. All well-designed games, including modern digital games, fall into this concept.

1.5 The benefits of Game-Based Learning

Using games in educational settings have many benefits. Boosting motivation, enhancing engagement, achieving adaptivity, allowing graceful failure are some of the many benefits of game-based learning.

1.5.1 The Use of Game-Based Learning to Boost pupils Motivation

The most frequently cited benefit of games is their ability to stimulate learning. Educational games are designed to sustain pupils" interest and motivation over time through a variety of motivational factors, including reward systems such as stars, points, leader boards, badges, and trophies. Furthermore, engaging game mechanics and activities can stimulate strong contextual interest, which can further motivate these young pupils (Hidi&Renninger, 2006; Rotgans& Schmidt, 2011).

1.5.2The Use of Game-Based Learning to Enhancepupils Engagement

In many ways, games are the best way to engage pupils. For example, characters can evoke emotions, game mechanics allow players to perform physical actions or use gestures as input, and social features can encourage cooperative play to participate in social culture. The underlying goal of these engagement strategies is to promote cognitive engagement because this drives learning. Games enable all conceivable forms of engagement, but different games and features promote different forms of engagement for specific pupils and in specific contexts (Plass et al., 2013).

1.5.3 The Use of Game-Based Learning to Achievepupils Adaptivity

Games can be modified or adapted to encourage pupils participation. The ability of a game to appeal to each player under specific circumstances is called adaptability and is a key element of game design. Their knowledge level, cognitive ability, mood, or other factors may be relevant. To achieve adaptive design, games must measure variables such as prior

knowledge or self-regulation skills. The game should then respond to the player accordingly. This may require changing the types and difficulty levels offered, as well as providing suggestions and feedback based on players' play activity. Scaffolding can also be used for additional support and guidance when needed (Steinkuehler & Duncan, 2008).

1.5.4 The Use of Game-Based Learning to Allow Graceful Failure

Game-based learning has the advantage of allowing for "real failure," viewing failure as an expected or even necessary part of the learning process rather than a negative conclusion. Some researchers such as Kapur&Bielaczyc (2012); Kapur&Kinzer (2009); and Plass et al. (2010)support this strategy. Games allow players to take risks, try new strategies, and consider multiple possibilities because the penalties for failure are usually small. Furthermore, games provide opportunities for self-regulated learning during game play, as players can set goals, track progress, and evaluate the efficiency of their tactics (Barab et al., 2009; Kim et al., 2009). Several benefits of game-based learning, such as motivation, engagement, and adaptability, are related to the ability to fail gracefully.

1.6 Game-Based Learning in Online Education

Due to the impact of the COVID-19 pandemic, teachers around the world now have to adapt their teaching strategies and switch to online distance learning. A lack of connection between pupils and teachers, as well as between pupils themselves, can make it difficult for pupils to participate and engage in the learning process. Even in a typical classroom setting, it can be difficult to maintain a pupil's attention. And even maintaining pupils-cantered instruction can be challenging in this new environment. Therefore, introducing simulation games into the classroom has successfully reduced pupils ' anxiety about abstract concepts and increased their engagement. To test their continued effectiveness, Subhash and Cudney

(2018) incorporated Game-Based Learning (GBL) strategies into their distance learning program, as they found these strategies can be useful tools in this regard.

Applying this principle to the primary school context, GBL can be particularly effective in online education for young pupils.For example, Digital games can help them grasp difficult vocabulary, practice basic math skills, or understand scientific concepts through interactive simulations that are both fun and educational .these results suggests that game based learning can successfully help pupils understand learning objectives in a remote setting.this understanding is further enhanced by the immediate feedback and encouragement that games provide, wich can be especially motivating for young pupils learning English as a foreign language.

1.7 Types of Language Games

Games may be divided into many different categories, which make classification hard. A good teacher should always have a variety of games available. Hadfield (1984) explained two ways of classifying language games; linguistic games that focus on accuracy and communicative games that focus on exchanging information. Further, games are classified into more detailed forms composed of both linguistic and communicative games.

Figure 3

A Board Game or a Word Puzzle
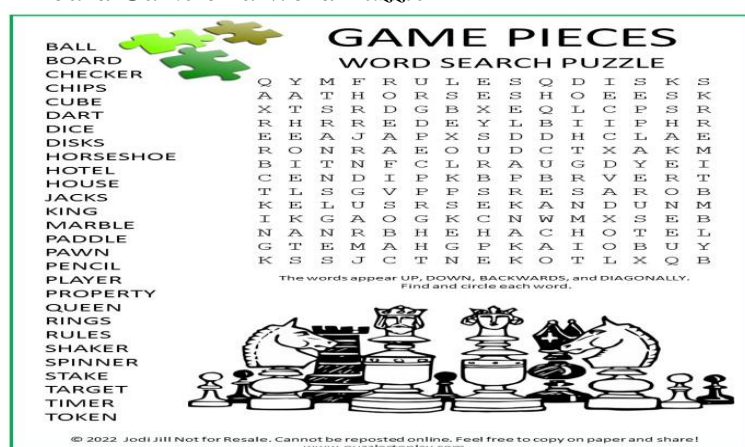
➢ Sorting, ordering, or arranging games: for example, giving pupils a set of cards with months on them, and they have to arrange those cards in order.

➢ Information gap games require those with information to exchange it with those who do not in order to complete a task.

➢ In guessing games, learners with a flash card must just mime it to others who try to guess the word.

➢ Searching games: everyone is given a clue to find out who the criminal is.

➢ They ask and reply to solve the problem.

➢ Matching games: participants need to find a match for a word, picture, or card.

➢ Role-playing Games: pupils play roles that they might not play in real life. They might also practice dialogues (Hadfield, 1984).

Language games may also be classified as follows:

Listening Games

In class, listening is often carried out in a boring and uninteresting way, which makes the lesson more stressful. To make pupils enjoy listening, the teacher needs to bring it closer to them. A good way is the use of listening games to maintain the pupil's attention and interest (Hadfield, 1984).

Speaking Games

They can be used at any time, especially as a follow-up to the previous listening to reinforce vocabulary and expressions heard earlier. Their main aim is to make speaking and expressing ideas orally enjoyable and stress-free (Hadfield, 1984).

Kinetic Games

They provide refreshment in the class, especially when pupils are getting tired and find it difficult to concentrate. They always need to be joined with another activity of reading, listening, or speaking (Hadfield, 1984).

Experiential Games

Their real aim is not to win or complete a language task, but to experience the process and learn from it. They may influence people's attitudes and teach them about themselves and the phenomena around them (Hadfield, 1984).

1.8 The Use of Language Games with Beginners

All language levels can benefit from the use of games in language teaching and learning. Gamified learnng makes all pupils feel more comfortable and confident while learning a new language. Furthermore, this method is more useful and easier for beginners, which is in line with current research. According to Nalasco and Arthur (1991, p. 76), "pupils , in addition to the personal challenge, enjoy competing with their peers, and introducing a game element is one way to make the material more lively." Since children often have difficulty remembering new words and expressions in a foreign and unfamiliar language, it can be challenging to maintain their interest over time. Although children enjoy repetition, they do not need to hear just the desired part of the target language repeatedly. Instead, a quick and easy game can be played again. Therefore, incorporating games into language instruction helps build a positive relationship with the new language (Nalasco& Arthur, 1991).

1.9 The Advantages of Using Language Games

Games have many benefits: they encourage, entertain, teach and support pupils. They encourage communication and interaction, promoting relationship building through a friendly

atmosphere of equality among participants. They provide learners with opportunities to practice a variety of language skills (speaking, listening, reading and writing) in everyday situations. Furthermore, they also bring variety to the curriculum and break the routine. They allow pupils to take on more responsibilities and gain new experiences, which in turn increases their self-confidence. Furthermore, they engage pupils emotionally, which has a positive impact on their learning success because pupils experience feelings such as joy, excitement, pleasure, and surprise when exposed to the target language. They also provide a great opportunity for shy, introverted and insecure pupils because the atmosphere during play is more relaxed and people can easily forget about being shy. In this way, they encourage participation from the whole class. Additionally, they promote diversity in the classroom among pupil of all ages and the ability levels, which is essential to a successful school program. Through the actions in the game, it helps learners learn vocabulary faster and easier. Finally, they are valuable for all language learners because they can be easily adapted to age, level, and interests (Uberman, 1998).

Conclusion

This chapter demonstrates that game-based learning is a useful tool for increasing primary school pupils, engagement, and adaptability, as well as providing them with opportunities to make mistakes. Teachers can create a learning environment that encourages creativity and critical thinking by combining basic game design elements such as game mechanics, visual aesthetics, narrative design, incentive systems, content, and skills. This chapter provided an overview of game-based learning, the basic elements of game design; the role of game-based learning in cognitive development; the benefits of game-based learning; and game-based learning in online education as it pertains to young pupils.

Chapter Two
Stress Reduction through Gamified learning

Chapter Two: Stress Reductio through Gamified learning

Introduction

Primary pupils face many psychological pressures and problems during their childhood , including stress , and a low level of social competence. Therefore, the school must provide an environment that helps primary pupils feel safe and relaxed. Thus, it is essential to draw on relevant studies regarding stress in education and how can games reduce levels of stress. This chapter deals with the definition of stress, its types, and sources of stress in education. Moreover, this chapter explores the effects of stress on the learning process and the role of gamified learning in reducing stress. The chapter ends with previous research studies that dealt with the role of games on reducing stress levels.

2.1 Definition of Stress in Education

According to Sun et al. (2011), educational stress is a form of subjective stress that emerges from multiple difficulties encountered during academic learning, rather than from a single negative life event. It reflects the overall pressures young pupils face in their educational experience. Burnett and Fanshawe (1997), Kouzma and Kennedy (2004), and other scholars have broadened the definition of academic stress to include factors such as low academic grades, poor school conditions, excessive homework, high academic expectations, and academic demands that surpass an individual's skills and abilities.Educational stress is also described as a combination of perceived work pressure, workload, grade anxiety, self-anticipation, and hopelessness. Sun et al. (2011) identified these components as the primary factors contributing to educational stress, shaping the way primary pupils perceive and react to academic demands.

In addition, stress is defined as the body's complex reaction to stimuli that disrupt its internal balance. Modern psychology understands it in three dimensions: reaction, stimulation and interaction. Stress occurs in humans at two levels: biological and psychological.

Contemporary researchers place special emphasis on identifying the key factors of stress resistance, their manifestations and their role in the professional development of professionals. The body's response to stress is receiving increasing attention as a reaction to social influences (Dubczak, 2020).

2.2 Types of Stress in Education

Every pupil has a unique way and capacity to respond to difficult situations. When academic challenges are seen as opportunities for growth and tackled with determination, stress can have a positive influence. However, if these hurdles become overwhelming, stress can significantly impact the psychological well-being of pupils. The American Psychological Association identifies three main forms of stress (Iqra, 2024).

Figure 4

Types of Stress (Iqra, 2024, p.3)
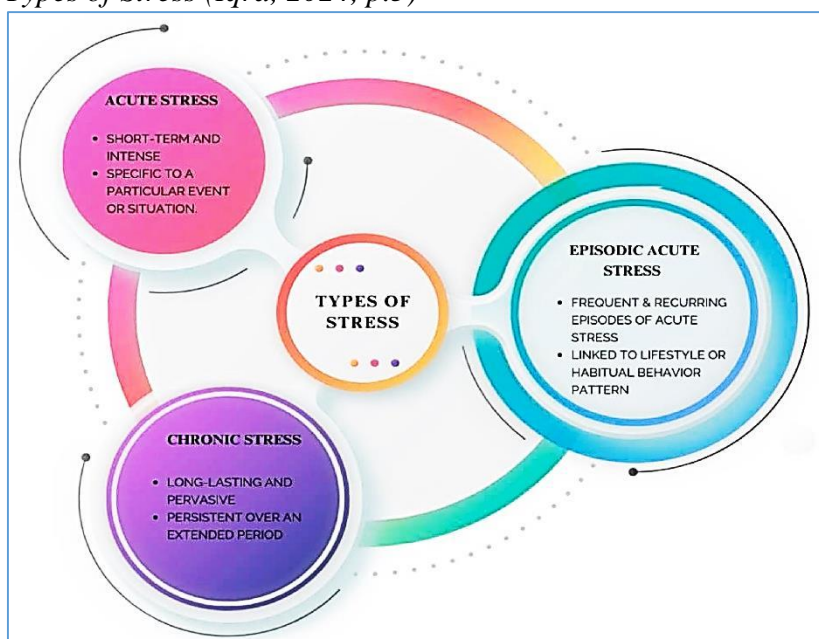
2.2.1 Acute Stress

Acute stress is the most common and short-lived form of stress. It usually arises from sudden pressures or thoughts related to recent or upcoming events. For example, a pupil may feel stressed while studying for or taking an exam. It can be argued that it is a response to

short-term, temporary stressors of specific situations or demands, and it is usually triggered by immediate stressors such as deadlines, exams, traffic, or sudden, unexpected events. Acute stress involves activating the body's "fight or flight" response, releasing adrenaline and cortisol, and it is manageable and may provide a boost of energy and focus to face challenges; thus, it resolves once the stressor is removed or the situation is resolved (Iqra, 2024).

2.2.2 Episodic Acute Stress

Pupils who frequently find themselves in stressful situations may experience episodic acute stress. This often affects individuals who strive for perfection and become easily stressed by minor challenges or setbacks. It can be said that it is a pattern of recurring episodes of acute stress experienced by individuals. It is common in people who are prone to excessive worry, have a pessimistic outlook, or have a lot of responsibilities, and it is often characterized by a sense of constant crisis and dealing with one problem after another. Episodic acute stress in individuals may exhibit symptoms of persistent tension, irritability, anxiety, and stress-related physical health problems, and it involves identifying the root causes of stress, adopting healthy coping strategies, and seeking professional support if necessary (Iqra, 2024).

2.2.3 Chronic Stress

Chronic stress refers to prolonged and persistent stress resulting from on-going inescapable pressure. It is long-term, persistent stress that persists over an extended period, and it arises from on-going life circumstances or chronic stressors such as work pressures, financial problems, relationship issues, or health conditions. Thus, it can have profound effects on physical, emotional, and mental health if left unmanaged. Prolonged exposure to stress hormones such as cortisol can lead to cardiovascular problems, impaired immune function, digestive problems, sleep disturbances, anxiety, and depression. Therefore, managing stress involves making significant lifestyle changes, using stress-reducing

techniques such as relaxation and mindfulness exercises, practicing good time management, seeking support from others, and seeking professional help when needed (Iqra, 2024).

2.3 Sources of Stress in Education

Primary pupils experience stress for several reasons, including the challenges they face due to schoolwork, academic achievement, and the importance passing tests and getting good grades. The fear of failing exams and not getting good grades makes them feel stressed, and what makes matters worse is disappointing their parents and teachers if they fail. It can be said that academic stress is caused by fear of the future affecting the present (Högberg, 2024).

In addition, high ambition among primary pupils is considered one of the causes of stress primary pupils have high expectations for the results they will achieve, which leads to increased pressure on them because they may not achieve the results they dream of. This stress pushes them to take on more schoolwork to avoid failure, which leads to physical and psychological stress (Högberg, 2024).

Moreover, lack of self-confidence in pupils leads to stress, for constant doubt in one's abilities and worry about failing to achieve good grades cause anxiety and stress. The content of the subject being taught can also lead to stress. For example, primary school pupils school' inability to understand the course content, difficulty of reviewing it, a perceived overload of assignments, boring, impatient, or angry teachers, and assignments are all sources of increased stress levels among primary school pupils school, which significantly impacts their mental health (Iqra, 2024)

Furthermore, sources of stress include factors that cause stresses such lack of time and conflict with others including classmates, family and teachers, low performance, and the need to combine work and study. One of the types of academic stress is exam pressure. The exam

preparation period includes intensive mental activities, sleep disturbances, and rush of emotions which all lead to possible changes in the social status of primary school pupils school. Many studies have shown exams affect primary pupils school' nervous system and increases the regulation of the involuntary nervous system and of the cardiovascular system (Dubczak, 2020).

2.4 Effects of Stress on Learning Process

Stress significantly impairs the learning process. It impairs memory performance, making it difficult for primary school pupils to retain information, especially on achievement tests. As stress increases, memory difficulties also increase. High stress levels can also impair cognitive function, attention, and memory recall, making it difficult to concentrate, process information, and retain new knowledge. Therefore, chronic stress can negatively impact primary school pupils physical and mental health and impair their academic performance.During their primary school years,pupils can experience significant stress and anxiety, primarily due to new academic demands and social competition with their peers. Academic stress is also related to personal stressors, such as the demands of family, work, and sports that conflict with the demands of education. There is no doubt that the pressure a learner feels increases their stress and anxiety(Córdova et al. 2023).

While much research on academic stress has focused on older students, the findings are highly relevant for understanding the challenges faced by primary school pupils. For instance, studies show that high levels of anxiety and depression are linked to lower test scores and difficulty concentrating (Pascoe et al., 2019). These negative effects often begin in the primary years, where a child's foundational skills and attitudes toward school are formed. It is therefore critical to recognize that stress can severely hinder a young pupil's ability to learn and succeed academically.

Long-term studies have shown that mental health issues that begin in childhood can have lasting negative consequences on a person's future educational path (Pascoe et al., 2019). This highlights the importance of creating a supportive educational environment from an early age. Research indicates that pupils are less likely to suffer from depression when they feel supported at school and have positive ways to adapt to academic life. For example, a study in Australia found that a game-based therapy program helped reduce depressive symptoms in pupils primary school. This shows that the school environment has the potential to lessen the impact of stress on primary school pupils mental health, a strategy that is especially important for primary school pupils (Pascoe et al., 2019).

2.5 Reducing Stress through Gamified learning

Gamified learning reduces stress in several ways. Firs, by using narratives and quests: Instead of focusing on mistakes or right answers, pupils are immersed in stories where they complete imaginative tasks. This narrative approach diverts attention from failure and allows learners to express themselves freely and creatively, reducing the fear of being wrong (Reinders&Wattana, 2014). For instance, platforms like *Ragnarok Online* or *Minecraft Education* allow learners to explore and experiment without judgment (Zafar, 2011).

Second, by encouraging collaboration: Many gamified learning environments shift away from rankings and grades and promote cooperation. Pupils work together toward shared goals, which create a sense of belonging and lower the pressure to compete whether through in class group work or online platforms; this teamwork helps reduce isolation and stress (Dindar et al., 2020).

Third, by providing positive reinforcement: Gamified learning platforms reward effort and progress rather than perfection. Tools like Quizlet, Duolingo, Memrise, and Kahoot use features such as animations, badges, and encouraging messages to keep pupils engaged. This

light and fun experience helps reduce fear of underperformance and builds self-confidence (Loewen et al., 2019).

Fourth, by creating a safe and enjoyable learning space: The playful nature of gamified learning environments helps pupils feel less intimidated. When mistakes are part of the game, pupils tend to take more risks and participate more freely, which lowers stress levels. Research confirms the benefits of gamified learning in reducing stress. Edwards (2022), in a review of fourty studies, found that gamified learning often leads to lower stress and higher emotional engagement, especially when it includes storytelling and cooperative activities. However, Chen and Hsu (2020) note that overly competitive game elements can increase anxiety for some pupils. This underlines the importance of careful design focused on inclusion and support.

From a theoretical perspective, these observations align with motivational theories emphasizing emotional safety in learning. Pupils who feel supported and intrinsically motivated are more likely to engage actively and less likely to feel overwhelmed (NaserOteir& Al-Otaibi, 2019). Moreover, collaborative gamified learning fosters trust and reduces classroom tension (Roberts, 2006).

For teachers, the key is to implement gamified learning thoughtfully. Using activities that emphasize storytelling, cooperation, and low-pressure rewards can make a big difference. Many studies do not directly measure stress, and cultural differences can shape how pupils experience gamified (Edwards, 2022). The long-term impact of gamified learning on stress reduction also remains an open question. In conclusion, gamified learning appears to be a promising strategy for reducing stress among pupils in language learning. By shifting the focus from pressure to play, and from performance to progress, it helps learners feel more relaxed, confident, and willing to participate.

2.6 Previous studies on the Role of Gamified in reducing Stress

This section summarizes the most prominent studies conducted on the role of gamified learning reducing stress. The related studies are reported with respect to their date of conduction, starting from the older ones to the newer.

Desai et al. (2021) conducted an experimental study about stress-reducing effects of playing a casual video game among undergraduate pupils primary school. In their study, they opted for pre and post intervention through a video game intervention developed by "that game company."

Another study was conducted by Pallavicini et al. (2021) about commercial off the shelf video games for reducing stress and anxiety. In their study, they opted for a Preferred Reporting Items for Systematic Reviews and Meta-Analysis (PRISMA) systematic review to gather the data. In line with the PRISMA guidelines, they included different studies to review them. The majority of these studies were done with children. The finding revealed that 28 studies showed the benefits of commercial off the shelf video games in reducing stress in children.

Edwards (2022) conducted a study on gamified learning, anxiety, and motivation in second language learners. He opted for a PRISMA systematic review, and he aimed to determine which studies that tackled the role of gamified learning in reducing levels of anxiety and boosting confidence. The findings of his study revealed that serious games, narratives, quests, cooperation, and storytelling all participate in reducing stress levels.

Moreover, Fadzillah et al (2024) conducted an experimental study to compare the effects of gamified learning to use engagement in stress management application. They developed two stress management applications; one application includes gamified learning,

and the other one did not include gamified learning. These applications were tested on twenty Malaysian participants. The study findings revealed that gamified learning' stress levels when using stress management application. The findings also showed that there is a significant different between the two applications in terms of engagement.

Furthermore, Pereira et al. (2025) conducted an exploratory study to investigate the role of gamified learning to reduce procrastination. They opted for a systematic literature review using the Software Engineering Guidelines for Reporting Secondary Studies (SEGRESS). The findings showed that among the reviewed studies, twenty four studies showed that procrastination is related to factors such as low levels of motivation and self-control. The results also emphasize the importance of gamified strategies in reducing and combating procrastination.

Conclusion

Stress is a common factor that can significantly affect a person's mood. This happens when primary school pupils cannot control their internal and external emotions. When stress becomes chronic or exceeds a certain level, it affects a person's mental health and can lead to various psychological disorders such as depression. The latter is a common condition characterized by sadness and the inability to feel happiness and satisfaction. Nowadays, it is a common disease and its prevalence is increasing every day. Therefore, this chapter explored the definition of stress, its types, and sources of stress in education. Moreover, this chapter explored the effects of stress on the learning process and the role of gamified in reducing stress, and it concluded with some previous studies that dealt with the role of games on reducing stress levels.

Chapter Three
Data Analysisand Fieldwork

ChapterThree: Data Analysis and Fieldwork

Introduction

This chapter is allocated to the analysis and interpretations of the data gathered from the tools used in thisstudy to investigate the role of gamified learning tools in reducing stress levels among primary school pupils. The quantitative data, gathered from the questionnaires, is analysed using the Statistical Package for Social Sciences(SPSS) program version 20. The qualitative data, which are represented by teachers' interview, will be interpreted thematically. The tools are analysed and interpreted to answer the research questions formulated in the initial stages of this study. Finally, this chapter will end with a general discussion of the findings of the study.

3.1 Research Methodology

The current study opted for an exploratory research design. Its primary concern is to focus on the role of gamified learning tools in reducing stress levels among primary school pupils. Additionally, to fill in the research gap, collect the necessary information, and answer the research questions, two research data collection tools are used:a pupils' questionnaire and a teachers' interview.Thus, the use of both quantitative and qualitative tools provides a better understanding of the research problems; many researchers adopt the mixed method research approach.The latter is used in the current study to meet the aims of the exploratory research, which is exploring the role of gamified learning tools in reducing stress levels among primary school pupils. This study utilizes a mixed-methods research approach, combining quantitative data from a pupil questionnaire with qualitative data from teacher interviews. This approach was chosen to provide a comprehensive understanding of the phenomenon. The quantitative data offers a broad overview of pupils' experiences and feelings, while the qualitative data provides deep, contextual insights into teachers' attitudes and strategies, thereby strengthening the validity of the findings

3.1.1 Research Setting

The current study is conducted at Tbaina Loucif Primary School at Biskra , Algeria during the 2024/2025 academic year. Pupils' questionnaire is distributed during the second semester.Teachers' interview was conducted with teachers of the primary schools of Tbaina Loucif, Al-Ikhwa Manfoukh Al-Aliya, and 17 Octobre Al-Aliya at Biskra , Algeria.

3.1.2 Research Population and Sample

The current study's target population encompasses ninty two pupils primary school. The rationale behind choosing this population is that they are young learners at a critical stage in their cognitive, emotional, and linguistic development, which makes them particularly sensitive to the methods and tools used in the learning process. In addition, as pupils primary school , they often suffer from stress because they are unfamiliar with the language, feel insecure when speaking, and are afraid of making mistakes in front of their classmates.

Because it is impossible to conduct a research with the entire population, the researchers select a small group of participants from the whole target population. A simple random sampling technique was used, where the names of all ninety-two third-year pupils were placed in a container, and thirty five names were drawn to form the sample. Thus, the sample of the current study is thirty five primary pupils primary school, both males and females, who were selected to answer the questionnaire items. In addition, six primary schools teachers of English are also selected to answer teachers' interview because their teaching experience would bring useful insight regarding the role of gamified learning tools in reducing stress levels among primary school pupils. All the participants are selected randomly; the aim behind using the random sampling technique is to avoid bias.

3.1.4 Research Tools

Since the current study aims at investigating the role of gamified learning tools in reducing stress levels among pupils primary school, it included two research instruments: pupils' questionnaire and a teachers' interview. Both quantitative and qualitative research tools are used because exploratory studies need both types of data in order to obtain comprehensive results. Pupils' questionnaire consists of twelve questions, and it is divided into four sections (see appendix I). The first section tackles background information of the participants of the study; the second section tackles pupils' experience with gamified learning tools; and the third questions tackles role of gamified learning tools in reducing stress level. Section one used multiple-choice questions to gather demographic data. Sections two and three used a Likert-style scale (e.g., 'Yes', 'A little', 'No') to measure pupils' experiences and emotional responses; the questionnaire was suitable for pupils because it is anonymous and less intimidating.The questionnaire was translated into Arabic to make it easy for the pupils to answers its items (see appendix II).

In addition, in the current study, a semi-structured interview protocol consisting six open-ended questions was used; this format was chosen to allow for flexibility and to enable the researcher to probe for deeper insights based on the teachers' responses. The interview was conducted to collect information about teachers' attitudes towards the role of gamified learning tools in reducing stress level among primary schools pupils. The interview includes five questions (see appendix III), these questions seek to investigate teachers' experience with games, and how they reduce pupils' levels of stress.

3.1.5 Pilot Study

Before submitting the research tools to the selected participants, the researcher referred to the supervisor for feedback and asked five pupils from the population to review the questions for possible modifications concerning content, wording, and time. The interview questions were close-ended questions, and when the researcher referred to the supervisor, she

suggested making them open-ended question. Thus, the tools were revised based on her

feedback.Finally, the data of the current study are analysed and interpreted thematically.

Quantitative analysis entails the use of descriptive statistics such as percentages, frequencies,

tabulations, and graphic representation using the (SPSS, version 20). Qualitative data, on the

other hand, is interpreted thematically.

3.2 Pupils' Questionnaire Analysis

Section One: General Questions (Understanding the Learner)

Q1. How old are you?

Table 1
Pupils' Age

Option	Frequency	Percentage
9-10 years old	17	48,57%
10-11 years old	16	45,71%
11-12 years old	2	5,71%
Total	35	100%

According to Table 1, the majority of the participants (48.57%) are aged between 9

and 10 years old. In addition, (45.71%) of them are aged between 10 and 11 years old. Yet,

only (5.71%) of the pupils are aged between 11 and 12 years old. the current study showed

that the most of the pupils who answered were around the same age.

Q2. Do you like learning English?

Table 2
Liking English

Option	Frequency	Percentage
Yes	32	91,43%
A little	2	5,71%
No	1	2,86%
Total	35	100%

The obtained data in Table 2 shows that a substantial proportion of the pupils

(91.43%) like to study English. Only (5.71%) like a little to study English, and (2.86%) of

them do not like to study English. The results show that the majority of pupils like to study English language at a young age , and all the pupils enjoy their English classes.

Q3. Is English easy or hard for you?

Table 3
Easiness of English Language

Option	Frequency	Percentage
Easy	24	68,57%
Sometimes hard	8	22,86%
Very hard	3	8,57%
Total	35	100%

Having a quick look at Table 3 above makes it clear that the majority of pupils (68.57%) find English learning easy. Yet, (22.86%) of them find it hard to learn English, and (8.57%) of them find it very hard to learn English. The results show that although the majority of pupils find English learning easy, there is a significant number of pupils who find hard. Thus, teachers are asked to adapt or adopt new teaching strategies (such as games) that may help pupils learn English.

Q.4 What is your favourite way to learn English?

Table 4
Ways of Learning English

Option	Frequency	Percentage
Games	12	34,29%
Songs	4	11,43%
Reading	14	40%
Writing	5	14,29%
Total	35	100%

Pupils were asked about the best way that helps them learn English; thus, (40%) of them said that the best way to learn English is through reading. In addition, (34.29%) of them said that the best way to learn English is through games, (14.29%) of them said that the best way to learn English is through writing, and (14.29%) of them said that the best way to learn English is through songs. This tells us that reading is the most popular way to learn, but playing games is also a favourite choice for many pupils.

Section Two: Gamified Learning Tools (Experience with Educational Games)

Q5. What type of games do you like most in English class?

Table 5
Types of Games Pupils Like

Option	Frequency	Percentage
Word games	3	8,57%
Online games	5	14,29%
Boardgames	1	2,86%
Team games	26	74,29%
Total	35	100%

According to Table 5,the most of the pupils (74.29%) like team games the most when learning English. Additionally, (14.29%) of them like online games the most when learning English, (8.57%) of them like word games the most when learning English, and (2.86%) like board games the most when learning English. The results show that pupils like team games the most; thus, teachers are asked to use team games frequently in their sessions to motivate their pupils learn and enjoy in the same time.

Q6. Do you learn new words better with games?

Table 6
Learning New Words with Games

Option	Frequency	Percentage
Yes	23	65,71%
Sometimes	10	28,57%
No	2	5,71%
Total	35	100%

Table 6 show that most of the pupils (65.71%) said that games help them learn new words better. Moreover, (28.57%) of them pupils said that games sometimes help them learn new words better. Only, (5.71%) of them said that games do not help them learn new words better. The most of pupils feel they remember new English words more easiky when they learn them through games.

Q7. How often does your teacher use games in English class?

Table 7
Frequency of using Games by Teachers

Option	Frequency	Percentage
Everylesson	1	2,86%
Sometimes	34	97,14%

Never	0	0%
Total	35	100%

The obtained results from Table 7 show that most of the pupils (97.14%) said that their teachers sometimes use games when teaching. Additionally, (2.86%) of them said that their teachers use games in every lesson they teach. This shows that nearly all teachers use games in their lessons from time to time, but not in every single class.

Q8. Do games help you speak more in English class?

Table 8
Games help with Speaking

Option	Frequency	Percentage
Yes	16	45,71%
A little	15	42,86%
No	4	11,43%
Total	35	100%

Pupils were asked if games help and encourage them to speak in English classes; thus, the majority of them (45.71%) agree that games help them speak more in English classes. Moreover, (42.86%) of them agree that games help them a little bit to speak more in English classes, and only (11.43%) of the pupils said that games do not help them speak more in English classes. This suggests that games make most pupils feel more comfortable and willing to talk in English during class.

Section Three: Stress and Emotions in Learning (Impact of Gamified Tools on Stress)
Q9. Do you feel nervous or shy when learning English?

Table 9
Feeling Nervous or Shy when Learning English

Option	Frequency	Percentage
Yes	4	11,43%
Sometimes	10	28,57%
No	21	60%
Total	35	100%

According to Table 9, the majority of pupils do feel neither shy nor nervous when learning English. Additionally, (28.57%) of them said they sometimes feel shy and nervous when learning English, and (11.43%) of them said they feel shy and nervous when learning English. The results show that although the majority of pupils do not feel shy or nervous, a significant number of them do feel shy and nervous when learning English. Thus, most pupils are not nevous, a good number of them do feel shy sometimes, wich is why this study looks at how can help.

Q10. Do games make you feel more relaxed in class?

Table 10
Games help with Speaking

Option	Frequency	Percentage
Yes	24	68,57%
A little	4	11,43%
No	6	17,14%
Total	35	100%

The obtained data from Table 10 above reveal that (68.57%) of the pupils said that games make them feel more relaxed in English classes, and (11.43%) of them said that games make them feel a little bit more relaxed in English classes. Only (17.14%) of them said that games do not make them feel more relaxed in English classes. The results show that games are effective in relaxing pupils and enhancing the learning environment.

Q11. Do you feel more confident speaking English when playing games?

Table 11

Games help with Speaking with Confidence

Option	Frequency	Percentage
Yes	25	71,43%
A little	8	22,86%
No	2	5,71%
Total	35	100%

Table 11 above show that the majority of the pupils (71.43%) feel more confident when speaking in English when playing games, and (22.86%) of them feel a little bit more confident when speaking in English when playing games. Only (5.71%) of them do not feel more confident when speaking in English when playing games. This result clearly shows that including games in English lessons makes almost all pupils feel happier and enjoy the class more.

Q12. Do you feel happier during English class when games are included?

Table 12

Feeling happier when Games are included

Option	Frequency	Percentage
Yes	31	88,57%
A little	2	5,71%
No	2	5,71%
Total	35	100%

According to Table 12 above, most of the pupils (88.57%) feel happier during English class when games are included, and (5.71%) of them feel little bit happier during English class when games are included. Only (5.71%) of the pupils do not feel happier during English class when games are included. The results show that games help to make pupils enjoy the learning process, the thing that will affect positively their studies achievements and results.

3.3 Teachers' Interview Interpretation

Teachers' interview is addressed to six teachers at Tbaina Loucif, Al-Ikhwa Manfoukh Al-Alia, and 17 Octobre Al-Alia at Biskra , primary schools to collect information about their attitudes towards the role of gamified learning tools in reducing stress level among primary schools pupils. Teachers' interview is interpreted thematically because, according to Braun and Clarke (2006, p.6), "thematic analysis is a method for identifying, analysing, and reporting patterns (themes) within data. It minimally organises and describes your data set in (rich) detail." Thus, the interview is interpreted thematically because thematic analysis is a

fundamental qualitative analysis methodology that is flexible and can provide a rich and detailed, albeit complex, description of data.

Based on the initial review, the researcher created an initial set of codes and coded the material based on brief descriptions of the interview content. In addition, the researcher began searching for themes in the codes across the data set. Some codes that were unclear or irrelevant to the study were eliminated. Finally, the researcher reviewed and refined the themes by reading the excerpts and ensuring that there were clear differences between the themes. These themes are as follow:

Theme One: Planning and Preparation

According to the interviewees' answers, most of the teachers acknowledge the importance of preparing in advance before using gamified tools. Teachers agreed that they search for different games that have a relationship with the lesson content, and they map the lesson before searching for games. One teacher said: *"I map out lesson plan identifying how each game element will help learning outcomes."* In addition, while some teachers suggested that they consult their pupils about their preferred games to bring them to the classroom; other teachers claimed that they ask colleagues for suggestions on which games to use. Moreover, teachers suggested that they gather only the appropriate games that have relation to my lesson objective to facilitate the lesson delivery.

Theme Two: Learning Objectives

According to the interviewees' replies, all the teachers who participated in this study affirmed that they set specific learning objectives when integrating games into their English lessons.*"Yes, of course."* This unanimous agreement among teachers shows that they are aware of the importance of gamified tools in defining the educational purposes.

Theme Three: Gamified versus Traditional Tools

According to the interview's answers, teachers seem to use games differently and flexibly. Some teachers suggested that they balance game-based learning with traditional methods by using game during lesson only to enhance the lesson. Other teachers claimed that they use games primarily when pupils need motivation. One teacher said: "I use both game and traditional method in each lesson*." This shows that teachers use games as a supplement not replacement for traditional tools. Moreover, it can be said that teachers use games sometimes to consolidate the lesson and to reinforce memorization.

Theme Four: Reducing Stress

According to the interviewees' replies, all teachers agree that games reduce their pupils stress and anxiety. One teacher suggested that: *"whenever I bring games to the classrooms, my pupils start to laugh and even the shy onesraise their hands to answer my questions."* Thus, it can be said that gamified plays an important role in reducing levels of stress and boosting pupils' confidence. Moreover, teachers have mixed and different preferences for allocating time to gamified learning tools. Some teachers suggest allocating equal time for both gamified learning tools and traditional learning tools; *"equal time for both."* Other teachers prefer allocating more time to games; *"more time on games."* And, few teachers suggested that traditional learning tools need more time than gamified learning tools. Gamified appears to be a promising strategy for reducing stress among pupils in language learning. By shifting the focus from pressure to play, and from performance to progress, it helps learners feel more relaxed, confident, and willing to participate.

Theme Five: Recommending Gamified Learning Tools

According to the interviewees' replies, all teachers recommend gamified tools for their peers to help reduce stress levels among pupils, and they suggested number of suggestions. Teachers believe that to reduce pupils stress, teachers should begin with short games and simple games before complex ones. They also suggested that teachers should *"use*

appropriate game which aligns with lesson objectives." Additionally, some teachers suggested that teachers should always complete the lesson with a game to reinforce memorization, and to reduce pupils' stress. They also asked their peers to make the lesson fun by introducing group games related to the lesson.

3. Discussion of the Results

After the interpretation of the data collected through a questionnaire addressed to thirty five pupils at Tbaina Loucif primary schools and an interview conducted with six teachers at the primary schools of Tbaina Loucif, Al-Ikhwa Manfoukh Al-Alia, and 17 Octobre Al-Alia at Biskra Town, Algeria, the researcher arrived at the following results in relation to the research problem and research questions developed in this study

On the one hand, the results obtained from pupils' questionnaire showed that the majority of the participants are aged between nine and ten years old, and the age gap between pupils is not wide which implies that the sample of the current study is homogenous. The results also showed that pupils are motivated, enthusiastic, and find it easy to learn English language. Additionally, a significant number of pupils believe that the best way to learn English is through games because they help them learn new words better, improve their speaking skills, and boost their self-confidence. The results showed that teachers make sure to include games when teaching English. Moreover, the findings revealed that a significant number of pupils feel shy and nervous when learning English, and they find games effective in relaxing them, raising enjoyment, and enhancing the learning environment.

On the other hand, the results obtained from teachers' interview revealed that most of the teachers acknowledge the importance of preparing in advance before using gamified tools. The results showed also that teachers are aware of the importance of gamified learning tools in defining the educational purposes. Teachers use games to enhance the lesson, motivate pupils, to reinforce memorization, and to reduce pupils' stress. Moreover, the results revealed

tha tall teachers agree that games reduce their pupils stress and anxiety. Thus, it can be said that gamified plays an important role in reducing levels of stress, boosting pupils'confidence, and helping pupils to feel more relaxed. Finally, the results showed that teachers suggested that they should integrate games in their lessons to reinforce memorization and to reduce pupils' stress.

After analyzing and interpreting the obtained data from the two research instruments, the answers of the following research questions become apparent:

- *How can gamified learning tools reduce the levels of stress among primary school pupils in English classes?*

- *What are teachers' attitudes of the role of gamified learning tools in reducing the levels of stress among primary school pupils in English classes?*

Therefore, it can be said that gamified learning tools in education reduce primary pupils' levels of stress, and they help them learn new words better, improve their speaking skills, and boost their self-confidence. In addition, teachers have positive attitudes toward the use of gamified learning tools in reducing levels of stress among primary school pupils in English classes.

Conclusion

In this chapter, the researcher attempted to answer the research questions through qualitative interpretation and quantitative analysis of the main research tools. Therefore, this chapter provided analysis for pupils' questionnaire through using SPSS program version 20. Tables and figures were generated to present the data clearly; then, the results were interpreted by the researcher Moreover, teachers' interview was interpreted thematically. Finally, the researcher provided a discussion of the results which brought useful insights regarding the role of game-based learning in reducing levels of stress among primary school pupils.

General Conclusion

General Conclusion

The current exploratory study aimed to investigate the role of gamified learning tools in reducing stress levels among primary school pupils. It also aimed to explore how game-based learning tools can reduce the levels of stress among primary school pupils in English classes, and it aimed at exploring teachers' attitudes of the role of game-based learning tools in reducing the levels of stress among primary school pupils in English classes. To reach its aims, the current study used mixed methods research approach, and the research instruments that were conducted to answer the research questions consisted of pupils' questionnaire and teachers' interview. The questionnaire was distributed to thirty five primary school pupils at Tbaina Loucif and teachers' interview was distributed to six teachers at the primary schools of Tbaina Loucif, Al-Ikhwa Manfoukh Al-Alia, and 17 Octobre Al-Alia at Biskra , Algeria. Both research instruments brought about illuminating results that provided answers to the research questions. The findings of pupils' questionnaire revealed that pupils have positive attitudes towards the role of gamified learning tools in reducing their stress levels, and they find games effective in relaxing them, raising enjoyment, and enhancing the learning environment. Moreover, the findings obtained from teachers' interview showed that most of the teachers acknowledge the importance of using gamified tools, and they are aware of the importance of gamified learning tools in enhancing the lesson, motivating pupils, reinforcing memorization, and to reducing pupils' stress.The finding that team-based games were overwhelmingly preferred by pupils suggests that collaborative play is a powerful tool for mitigating the anxiety often associated with language learning. This challenges traditional, individualistic teaching methods and highlights the importance of social interaction in the primary classroom. Furthermore, the positive attitudes of teachers indicate a readiness for pedagogical change, provided they receive adequate support and resources. Based on the research findings,

it can be concluded that the use of gamified inside the classrooms reduces pupils' levels of stress. Thus, this study suggests a number of recommendations for teachers.

1. Limitations

Although the current study reached its aims, there were unavoidable limitations and difficulties. First, time constraints, since any research is limited to a specific period, the researcher was obliged to handle both processes of data collection and data analysis and interpretation within a precise period. Moreover, this study focused on investigating the role of gamified learning tools in reducing stress levels among primary school pupils. Thus, the results are specific to primary schools levels and not any other levels. Additionally, the sample of the current study is only thirty five pupils and six primary teachers of English, making it a small sample. Furthermore, some teachers were unable to take part in the study because of lack of time, or they were not interested in answering the research tools questions.

2. Pedagogical Recommendations

Based on the results of the current study, some pedagogical recommendations are proposed as follows:

- Primary school teachers of English are asked to encourage the use of game-based learning tools because they are effective in reducing pupils' levels of stress.
- They are asked to provide a leaning environment that is free from stress, fear, and anxiety.
- They are asked to use different games to suite all the learning styles of pupils
- They are asked to treat shy pupils with caution because stressing them may lead to pupils hating the language they are learning.
- They can incorporate gamified leaning tools as a supplement to traditional learning tools to deliver effective lessons.

➕ They can choose games that are specifically made to reduce stress levels; this will help learners achieve better scores in their exams.

3. Implications

Based on the results of the current study, some implications are proposed as follow:

➕ The results of the current study imply that game-based learning tool is effective in reducing pupils' levels of stress; thus, teachers should receive training to incorporate games in their lessons effectively.

➕ In order for pupils to participate in the classroom activities, this study emphasizes a free stress environment.

➕ This study imply that incorporating games frequently in the lesson helps develop pupils' self-confidence, vocabulary repertoire, and speaking skills; thus, teachers should use games more frequently in their lessons.

➕ This study implies that game-based learning tools boost learners ' enthusiasm and reduce stress, therefore, it is advised it incorporate games in leaning curricula.

4. Suggestions for Future Research

Provided that the results showed that game-based learning is effective in reducing pupils' levels of stress, some limitations in this study should be controlled in future research.

➕ Due to the time constraints and a short study period, a longitudinal study is suggested for more accurate and trustworthy results.

➕ Experimental design is proposed as it provides a random selection and assignment of pupils which enables the generalization of the findings to larger population.

➕ Future researchers are advised to explore gamified learning role in enhancing pupils speaking skills to get more comprehensible results; thus, it is worthwhile to consider carrying out more extensive research with middle school and secondary pupils involved in the project.

Although the study was conducted with a small number of participants (thirty five primary school pupils), it provided evidence for gamified effects in reducing stress levels. Nonetheless, if replicated with a larger number of participants, similar future studies can disclose results which can be more representative of the whole population.

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Appendix I: Pupils' Questionnaire

Dearlearner,

This questionnaire is designed to better understand how you learn English at school and how you feel during lessons. There are **no right or wrong answers**.

➕ Please **put (x) behind the answer that best describes you**.

Section One: General Questions (Understanding the Learner)

1. How old are you?
   - o ☐ 9 -10
   - o ☐ 10–11
   - o ☐ 11–12

2. Do you like learning English?
   - o ☐ Yes
   - o ☐ A little
   - o ☐ No

3. Is English easy or hard for you?
   - o ☐ Easy
   - o ☐ Sometimes hard
   - o ☐ Very hard

4. What is your favorite way to learn English?
   - o ☐ Games
   - o ☐ Songs
   - o ☐ Reading
   - o ☐ Writing

Section Two: Gamified Learning Tools (Experience with Educational Games)

5. What type of games do you like most in English class?
   - o ☐ Word games (e.g. crossword, word search)
   - o ☐ Online games
   - o ☐ Board games
   - o ☐ Team games

6. Do you learn new words better with games?
   - ☐ Yes
   - ☐ Sometimes
   - ☐ No

7. How often does your teacher use games in English class?
   - ☐ Every lesson
   - ☐ Sometimes
   - ☐ Never

8. Do games help you speak more in English class?
   - ☐ Yes
   - ☐ A little
   - ☐ No

Section Three: Stress and Emotions in Learning (Impact of Gamified Tools on Stress)

9. Do you feel nervous or shy when learning English?

- ☐ Yes
- ☐ Sometimes
- ☐ No

10. Do games make you feel more relaxed in class?

- ☐ Yes
- ☐ A little

- ☐ No

11. Do you feel more confident speaking English when playing games?

- ☐ Yes
- ☐ A little
- ☐ No

12. Do you feel happier during English class when games are included?

- ☐ Yes
- ☐ A little
- ☐ No

Thank you for helping us!

Appendix II: Arabic Translation of Pupils Questionnaire

عزيزي المتعلم،

صُمم هذا الاستبيان لفهم كيفية تعلمك للغة الإنجليزية في المدرسة بشكل أفضل، وكيف تشعر أثناء الدروس. لا توجد إجابات صحيحة أو خاطئة.

يرجى وضع علامة (x) خلف الإجابة التي تصفك بشكل أفضل.

القسم الأول: أسئلة عامة (فهم المتعلم)

1.كم عمرك ؟

☐ 9-10

☐ 10-11

☐ 11-12

2.هل تستمتع بتعلم اللغة الإنجليزية؟

☐ نعم

☐ قليلاً

☐ لا

3.هل اللغة الإنجليزية سهلة أم صعبة بالنسبة لك؟

☐ سهلة

☐ صعبة أحيانًا

☐ صعبة جدًا

4.ما هي طريقتك المفضلة لتعلم اللغة الإنجليزية؟

☐ ألعاب

☐ أغاني

☐ قراءة

☐ كتابة

القسم الثاني: أدوات التعلم المُلعَّبة (تجربة الألعاب التعليمية)

5.ما نوع الألعاب التي تُفضّلها أكثر في حصة اللغة الإنجليزية؟

☐ ألعاب الكلمات (مثل: الكلمات المتقاطعة، البحث عن الكلمات(

☐ ألعاب الإنترنت

☐ ألعاب الطاولة

☐ ألعاب الفريق

6.هل تتعلم كلمات جديدة بشكل أفضل مع الألعاب؟

☐ نعم

☐ أحيانًا

☐ لا

7.كم مرة يستخدم مُعلّمك الألعاب في حصة اللغة الإنجليزية؟

☐ كل درس

☐ أحيانًا

☐ أبدًا

8.هل تُساعدك الألعاب على التحدث أكثر في حصة اللغة الإنجليزية؟

☐ نعم

☐ قليلاً

☐ لا

القسم الثالث: التوتر والعواطف في التعلم (تأثير أدوات الألعاب على التوتر)

9.هل تشعر بالتوتر أو الخجل عند تعلم اللغة الإنجليزية؟

☐ نعم

☐ أحيانًا

☐ لا

10.هل تجعلك الألعاب تشعر بمزيد من الاسترخاء في الفصل؟

☐ نعم

☐ قليلاً

☐ لا

11.هل تشعر بثقة أكبر عند التحدث باللغة الإنجليزية عند لعب الألعاب؟

☐ نعم

☐ قليلاً

☐ لا

12.هل تشعر بسعادة أكبر أثناء حصة اللغة الإنجليزية عند تضمين الألعاب؟

☐ نعم

☐ قليلاً

☐ لا

Appendix III: Teachers' Interview

1. **As a teacher, how do you prepare for using gamified learning tools in your lesson**

2. **Do you have specific learning objectives when integrating games into your English lessons**

3. **How do you balance game-based learning with traditional methods (e.g., grammar exercises, reading)?** .

4. **How much time do you dedicate to games compared to traditional teaching methods?.**

5. **Do you collaborate with other teachers when using gamified tools in your classroom**.

6. **What recommendations would you give to other teachers who want to use gamified learning tools in their classes?**

Thank you for your participation!

الملخص

تستكشف الدراسة الحالية دور الالعاب التعليمية في تعديل مستويات التوتر لدى تلاميذ المرحلة الابتدائية: حالة تلاميذ السنة الثالثة في مدرسة تبينة لوصيف الابتدائية، بسكرة، الجزائر. لذا، اختارت الدراسة تصميم بحث استكشافي باستخدام منهج متعدد الأساليب، شمل استبيانًا موجهًا إلى خمسة و ثلاثون تلميذًا من السنة الثالثة، ومقابلة أجريت مع ستة معلمون. جُمعت البيانات لإعطاء صورة شاملة عن تصورات التلاميذ والمعلمين للغة الإنجليزية تجاه دور أدوات الألعاب التعليمية في تعديل مستويات التوتر لدى تلاميذ المرحلة الابتدائية. أظهرت النتائج أن أدوات الالعاب التعليمية تُقلل من مستويات التوتر لدى تلاميذ المرحلة الابتدائية، وتُساعدهم على تعلم كلمات جديدة بشكل أفضل، وتحسين مهارات التحدث لديهم، وتعزيز ثقتهم بأنفسهم. بالإضافة إلى ذلك، يظهر معلمو اللغة الانجليزية اتجاهات ايجابية نحو توظيف ادوات الالعاب التعليميةفي تقليل مستويات التوتر لدى تلاميذ المرحلة الابتدائية في فصول اللغة الإنجليزية. لذلك، وبناءً على النتائج، تم اقتراح بعض التوصيات لمعلمي اللغة الإنجليزية لتطبيق ادوات ألالعاب التعليمية بشكل أفضل في فصولهم.

الكلمات المفتاحية: أدوات الالعاب التعليمية، مستويات التوتر، معلمو اللغة الإنجليزية، التلاميذ.