

EFFECTIVENESS OF USING GAME-BASED RESPONSE SYSTEM IN
TEACHING GRAMMAR FOR ENGLISH AS SECOND LANGUAGE
YOUNG LEARNERS.

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DEDICATION

A credit to myself.

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I would like to thank my supervisor, Dr Kew Si Na who constantly guided me and inspired me to complete the thesis. The feedback from my supervisor helped me to enhance my research and directed me through the correct path.

My family has been my support system throughout this journey. As I am away from my family and live alone, there were some circumstances where I was stressed due to the work and study. Luckily, the moral and mental support I obtained from my family members encouraged me to further my study. My mother, Vasakee Rajoo is a strong backbone for me as she always believed me and motivated me.

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ABSTRACT

Integration of ICT in teaching and learning activated gamification. The Game-Based Student Response System has been a novel approach to learn English as a Second Language. In align to it, Kahoot! is becoming the trademark in the educational setting to learn English. Kahoot! creates a fun environment for the learners and motivates the learners for language acquisition. However, the research on Kahoot! is still inadequate to generalize the effectiveness of Kahoot, especially among primary school students. Therefore, this study intended to fill the research gap by examining the effectiveness of Kahoot! as a Game-Based Student Response System in teaching grammar for ESL primary young learners. The research objectives of this research are to examine the effects of Kahoot! as a Game-based Student Response System in **teaching grammar on ESL young learners' grammar performance, to identify the effects of using Kahoot! as a Game-based Student Response System in teaching grammar for ESL young learners on intrinsic motivation in learning grammar and to discover the perceptions of ESL young learners on the use of Kahoot! as a Game-based Student Response System in learning grammar.** This study used a quasi-experimental approach to two groups of ESL learners namely control group and experimental group with the total of 76 ESL learners. The quantitative data obtained from tests and questionnaires. Meanwhile, the qualitative data derived from a semi-structured interview. The findings reveal that the experimental group who experienced Kahoot! in grammar lesson had positive grammar performance and intrinsic motivation compared to the control group. This study ascertains that Kahoot! as a Game-Based Student Response System had positive effects on ESL primary learners' **grammar performance and intrinsic motivation.**

ABSTRAK

Integrasi ICT dalam pengajaran dan pembelajaran menuju ke gamifikasi. Gamifikasi telah menjadi pendekatan baru untuk belajar Bahasa Inggeris sebagai Bahasa Kedua. Seajar dengannya, Kahoot! kaedah baru untuk belajar bahasa Inggeris. Kahoot! mewujudkan persekitaran yang menyeronokkan untuk pelajar dan memotivasi pelajar untuk belajar Bahasa Inggeris. Walau bagaimanapun, penyelidikan mengenai Kahoot! masih tidak mencukupi untuk menggeneralisasikan keberkesanan Kahoot. Oleh itu, kajian ini bertujuan untuk mengisi jurang kajian dengan mengkaji keberkesanan Kahoot! sebagai Sistem Tindak Balas Pelajar Berasaskan Permainan dalam pengajaran tatabahasa untuk pelajar sekolah rendah. Objektif penyelidikan ini adalah untuk mengkaji kesan Kahoot! sebagai Sistem Tindak Balas Pelajar berasaskan Permainan dalam pengajaran tatabahasa mengenai prestasi tatabahasa pelajar sekolah rendah, untuk mengenal pasti kesan penggunaan Kahoot! sebagai Sistem Respons Pelajar Berasaskan Permainan dalam mengajar tatabahasa untuk pelajar muda ESL mengenai motivasi intrinsik dalam mempelajari tatabahasa dan untuk mengetahui persepsi pelajar ESL sekolah rendah terhadap penggunaan Kahoot! sebagai Sistem Respons Pelajar Berasaskan Permainan dalam pembelajaran tatabahasa. Kajian ini menggunakan pendekatan kuasi eksperimen terhadap dua kumpulan pelajar ESL iaitu kumpulan kawalan dan kumpulan eksperimen. Data kuantitatif kajian ini diperoleh daripada ujian dan soal selidik. Sementara itu, data kualitatif diperoleh daripada temu bual separa berstruktur. Hasil kajian mendapati kumpulan eksperimen yang mengalami Kahoot! dalam pelajaran tatabahasa mempunyai prestasi tatabahasa yang luar biasa dan motivasi intrinsik yang tinggi berbanding dengan kumpulan kawalan. Kajian ini memastikan bahawa Kahoot! sebagai Sistem Tindak Balas Pelajar Berasaskan Permainan memberi kesan positif terhadap prestasi tatabahasa dan motivasi intrinsik pelajar ESL sekolah rendah.

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LIST OF ABBREVIATIONS

ESL	-	English as Second Language Learners
ICT	-	Information Communication Technology
EFL	-	English as Foreign Language
GSRS	-	Game-based Student Response System
SDT	-	Self-Determination Theory
CLT	-	Communication Language Teaching
NTNU	-	Norwegian University of Science and Technology
PC	-	Personal Computer
SPSS	-	Statistical Product and Statistical Service
LCD	-	Liquid Crystal Display

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CHAPTER 1

INTRODUCTION

1.1 Introduction

In recent years, debates that have been prolonged on Malaysian English as Second Language (ESL) young learners' achievement in English grammar is continuing alarming (Jamian, Sabil, and Othman,2018). The literature revealed that grammar in the English language needs to pay heed as Alijanian (2012) affirms it is remarkable in productive language skills. Malaysian young ESL learners find it is strenuous to apply grammatical rules in writing due to grammar rules to be challenging to grasp as stated by Baharudin & Yunus (2018). This is due to the ESL young learners experience lack of motivation to learn the prosaic and repetitive grammar rules. In order to motivate the ESL young learners, educators need to discover a way to enable them to acquire grammar competency without pursuing filling empty vessels with grammatical knowledge.

The educators as "digital immigrants" must shift gears to uphold the fast pace of the new generation of students (Prensky,2001) to motivate the ESL young learners in learning grammar. Similarly, Golonka (2014) affirmed that advances in technology become ubiquitous for language learning over the preface of Information Communication Technologies (ICT) literacy in 21st-century learning. Technology in teaching grammar postulates ground-breaking of contemporary pedagogical ways of teaching superseding traditional approaches as Idrus and Salleh (2017) remarked ICT in teaching and learning is inevitable. Besides, the Ministry of Education Malaysia has revised the education system as indicated in the Malaysia Education Blueprint 2013-2025. Notably, the seventh shift emphasis on Leverage ICT to scale up the standard of teaching and learning in Malaysia as ICT has tremendous potential to expedite learners' pace learning (Kementerian Pelajaran Malaysia, 2013). This gives a newer

way to the inclusion of technology to boost the learners' excellence in English grammar in a student-centered pedagogical approach.

The employment of technology pertinently could embrace the learners' learning however, the selection of technology instruments should harmonize to the learning standard and outcomes (Roblyer, 2016). For instance, to sustain learning by means of interactions with content in a problem-based learning context the choice games and quizzes likely empower the learners to motivate in their learning process. Accordingly, the exploitation of game-based student response systems (GSRS) permits learners to answer questions instantaneously, gain immediate statistical indicators according to their responses and gauge their degree of knowledge (Plump and LaRosa, 2017). There are ample applications pursuant to game-based structure that presents interactions among teachers and learners, accelerate eagerness and motivate learners to study (Abdul Jabbar and Felicia, 2015). Those GBRS applications provide opportunities for learners to answer questions in the classroom by using a laptop or computer.

Currently, educators initiated to employ GSRS that are readily available to customize their teaching for their students such as Kahoot!, Socrative (Kim, 2019), Word Wall (Syam, 2015), Scratch (Purgina, Mozgovoy, and Ward (2017), Quizzes (Dewi, Myartawan, Swari, and Sugihartini, 2020). Scientific literature suggests that learning English as Second Language in gamified environments manage to propel **learners' motivation (Hanus and Fox, 2015)**, engagement (Clark, Smith, Hostetler, Fradkin and Polikov, 2018) and cater to the learners' freedom to make mistake without concern during the lesson (Lee and Hammer, 2011).

In conjunction with this, Kahoot! is one of the viable and feasible games that has been applied in the classroom via smartphones, laptops, and simple for instructors to learn. Rodriguez et al. (2017) stated games do not necessarily have to be played statically, but they allow the inclusion of common everyday devices for attracting those acquainted to it. **Thus, it can help enhance learners' motivation in their learning process.** For instance, Kahoot! allows teachers to host formative assessment and learners get instant feedback for their responses. The learners are also able to view the

correct answer as well as the accumulated marks in the scoreboard to know the progression that will make them excited. Kahoot! gives a tumble to make learning fun with competition as a mechanism to hinge on various gamification elements made it consider an enjoyable, engaging, and effective method for ESL (Nahmod, 2017; Perry, 2015). The gamification elements encourage the learners to engross with the grammar contents and strive to accomplish the goal. For instance, getting badges, points, level-up leads to an effective environment compared to a non-game learning environment. Edmonds (2011) argued game elements are associated with learning encounters Edmonds (2011) argued game elements are associated with learning encounters to further advance collaborative skills in knowledge and learning, like problem solving and teamwork. Gamification in teaching is known as one of the eminent approaches to motivate the learners to learn English Language effectively, especially to strengthen their grammatical competence (Sheard and Chambers, 2014).

Presently, Kahoot! is increasingly embedded in a fundamental English lesson to foster their motivation and strengthen knowledge. To solve the motivation problem **in learning grammar and to enhance learners' grammar competency; thus, the present research aspires to scrutinize the efficacy of Kahoot! on ESL young learners' grammar performance and intrinsic motivation. The grammar performance intensifies on ESL learner's grammar test scores based on their grammatical knowledge while intrinsic motivation will indicate through ESL learners' self-autonomy to learn grammar driven by internal reward as ESL young learners find the challenge fun and engaging in playing Kahoot!. Thereupon, this study anticipates presenting intimate knowledge on the implementation of Kahoot! in learning grammar.**

1.2 Background of Research

Traditional grammar teaching approaches focus on direct and deductive teaching where learners learn grammatical form by drilling like activities and an ample amount of exercises in workbooks. This is a common approach where a majority of teachers employ a deductive approach to transmit grammar knowledge passively. It is because Richards and Reppen (2014) affirm teachers believe that they provide

adequate opportunity to practice and help the learners to score well in the examination. When a learner participates or completes an activity to gain a good score as a reward, this recognizes as extrinsic motivation. Bowman (2007) claims that rewards are too controlling, do not cater to learner autonomy and undermine self-determination. Consequently, ESL learners get demotivated as they only respond when the lesson stimulates the opportunity to obtain scores (Erdogan and Tunaz, 2012).

This traditional approach overemphasizes rules impelled to consider grammar as the most burdensome, difficult and obstructing by the learners in English lessons. Educators tend to accentuate on grammar rules because it is critical and took a major part in the English test. In fact, Uysal and Bardakci (2014) affirm it consumes a great deal of time to teach grammar which requires additional activities helping in comprehending the grammatical structure. For instance, activities focus on the pen to paper practice such as exercises from the textbooks and worksheets rise to boredom in learning. The survey Mohamed, Ismail and Eng (2014) revealed **36.5% of ESL learners in Malaysia evaluated themselves Below Standard' in grammar proficiency level**. However, grammar is crucial for ESL learners to understand the rules that regulate the English language and boost grammatical competence. This is because Foppoli (2011) views grammar as the backbone of a language to structure messages and ideas before communicating or delivering. Thus, it is essential to find an alternative way to solve **this problem to accelerate learners' intrinsic motivation for grammar performance and towards the grammar lesson to get out of this dilemma**.

The new wave of Information communication and technology (ICT) in the mid-twentieth century fostered e-learning as an **alternative tool facilitating learners' learning** (Hill, 2008). Traditional approaches such as the deductive approach and the Grammar Translation Method has always been a prominent pedagogy of English teaching. According to Lyanage and Walker (2014), viewpoints rules are taught but learners are still unacquainted with the use of the application of the rules they learn. In this regard, the application of ICT can assist teachers to prepare lessons and materials to conduct lessons that help confront the challenges posed by traditional methods. **Hereby, learners can gain knowledge of 'naturally occurring language' (Gilbert, 2013)**. Recently, the demands of gamification have been amplified. The integration of web-

based games or mobile-assisted language learning is encouraged to make teaching and learning more effective (Moqbel, 2018). The four most desired and utilized gamified quizzes are Quizlet, Edupuzzle, and Quizizz, and Kahoot! (Rahayu and Purnawarman, 2019). Hence, the last platform will be the highlight of this study.

The above mentioned GSRS stipulates the learners to trigger their knowledge on the selected topic and measure their understanding as they learn the content by playing (Mendez and Slisko 2013; Plump and LaRosa 2017). The use of GSRS as a material of the lesson makes the lesson meaningful as it promotes deeper learning. This has been supported by Licorish, Owen, Daniel, and George (2018) as GSRS promotes profound understanding despite rote learning. This is because the learners can reflect and assess their comprehension through instant feedback after each question. It regards Kahoot! as a game-based student response system can encourage learners' grammar performance (Ganesan, Idris and Yunus, 2018) and motivation (Yunus et al., 2019). It induces competition and discussion among a group of peers or teachers which triggers their interpersonal interaction and reducing boredom (Wang, 2015). Playing Kahoot! enables the ESL young learners to acquire the grammatical knowledge subconsciously as they receive instant feedback. This hinders them from repeating a similar grammatical mistake in a different context. Moreover, Plump and LaRosa (2017) who confirmed that Kahoot! encourages learners to recall and strengthen their understanding of grammar rules with practice after the presentation stage of grammar.

Moreover, games-based student responses such as Kahoot! being ubiquitous to integrate into language lessons. Michele Molnar (2017) states in a recent study Kahoot! was listed fifth place out of forty prevalent digital learning tools in schools for learners' assessment. Another report from UK media regulator Ofcom (2017) remarks that a child uses fifteen hours a week to play online games around the world. Online games have been widely used in education, with an existing body of work exploring the correlation between games and education (Yang, Chen, and Jeng, 2010; Chiang, Lin, Cheng, and Liu, 2011). The trends employ as a vehicle to drive learners' motivation in education, especially English (Sundqvist and Sylven, 2014). Therefore, it is essential to incorporate in Kahoot! in Malaysia English Curriculum especially

teaching grammar to foster ESL young learners' motivation and grammar performance.

Furthermore, Kahoot! also examine learners' knowledge for formative assessment after a certain set of lessons. Kahoot! is an educational tool to prepare online quizzes to enable learners to measure their understanding by obtaining instant feedback (Bicen and Kocakoyun,2018). Previous studies report there is an improvement in learners' performance with continuous use of quick quizzes as Iwamoto, Hargis, Taitano, and Vuong (2017) identified low-stakes quizzes improved learners' summative exam scores. Studies show Kahoot! as a tool improved academic results (Bicen et al., 2018; Wang and Tahir, 2020). These studies do not fully articulate how Kahoot! improves the learning compared to the result obtained from the traditional approach. Contrarily, a study by Yunus and Azman (2019) provides evidence that learners' performances enhanced in the post-test after the implementation of Kahoot! in the lesson. However, the existing research still needs more empirical studies in representing generalization of the result as some studies were conducted in a small-scale context. It is therefore a need for additional studies to understand more about learners' performance and motivation using Kahoot!. In this respect, this study will shed light on the effectiveness of using a game-based response system in teaching grammar for ESL young learners.

1.3 Problem Statement

The teaching of grammar for young ESL learners has been a prolonged discussion among the English language teachers. This is because ESL learners responded with such negative statements such as 'tedious monotonous, dry, difficult, confusing, and complicated'(Loewen, 2009). Consequently, different solutions suggested to enhance young ESL learners' interest in grammar lessons. A study by Shima and Rahmah (2012) conducted among 115 TESL foundation program students pointed out that board games facilitate grammar and encourage learners to recall and evoke the grammar rules. Likewise, Phuong and Nguyen (2017) investigated the effects of board games on the grammar retention of English as Foreign Language

(EFL) learners and explored their behaviour toward using board games in grammar lessons. They noted the board game heightened the **twenty-five adult EFL learner's** grammatical knowledge as they demonstrated a positive attitude towards the board game. This shows educators endeavour the new approaches to teach the grammar inductively.

However, despite the new approach the problem of grammar by ESL learners still occurs. For example, Manokaran, Ramalingam and Adriana (2013) stated that errors in the use of past tense auxiliary were found among Malaysian ESL learners in argumentative essays. Moreover, Nair and Hui (2018) also found that ESL learners made the greatest number of grammatical errors as the mean is 16.33. Remarkably, Abdullah, Yunus, and Hashim (2019) in their study discovered 94.8 percent of ESL learners made errors in verbs, 77.9 percent of the pupils misused the prepositions and 24.7 percent of pupils did not employ the articles correctly. These data reflect ESL learners did not acquire the grammatical knowledge precisely in the consequences of "privileging examination" which rule the entire education (Lie, 2007, p.56). This shows **ESL learners' autonomy and usage of grammar knowledge in diverse** circumstances are disregarding as the priority given to examination.

In the direction of rein the problems, there are some studies suggesting Kahoot! assists ESL young learners in learning grammar more effectively. For example, Maesaroh, Faridi, and Bharati, (2020) conducted experimental research among eighth-grade students from Junior High School at SMP Al-Azhar 5 Cirebon. The study compared two multimedia in teaching and learning grammar with the use of Socrative multimedia and Kahoot! multimedia. As a result, Kahoot! multimedia is efficacious to teach grammar as it recorded the highest mean score in the post-test compared to Socrative. Furthermore, Zarzycka-Piskorz (2016) carried out a study with several students at the Pedagogical University in Krakow taking General English courses. The result indicated that Kahoot! and **the element enrich the learners' motivation to learn** and practice grammar. Yunus, et al. (2019) in their research advocates that Kahoot! as a dynamic method in helping the nine years old English language learners to grasp their memory on English irregular verbs. Nevertheless, there needs to have more researchers to be conducted to examine its effectiveness on grammar as the impact of

using Kahoot! in teaching grammar cannot be generalized due to the limited studies focusing on primary school young ESL learners and some were executed on a small scale. Therefore, this study bridges those gaps and aims to implement Kahoot! to **improve young ESL learners' grammar performance and intrinsic motivation** in primary school.

1.4 Research Objective

This current study aims to determine the following objectives:

- (a) To examine the effects of Kahoot! as a Game-based Student Response System **in teaching grammar on ESL young learners' grammar performance.**
- (b) To identify the effects of using Kahoot! as a Game-based Student Response System in teaching grammar for ESL young learners on intrinsic motivation in learning grammar.
- (c) To discover the perceptions of ESL young learners on the use of Kahoot! as a Game-based Student Response System in learning grammar.

1.5 Research Questions

The aim of this current study is to examine and provide understanding into the following research questions:

- (a) What is the effect of Kahoot! as a Game-based Student Response System in teaching grammar on ESL young learners?
- (b) **What is the ESL learners' intrinsic motivation** after using the Kahoot! as a Game-based Student Response System in learning grammar?
- (c) What is the perception of ESL young learners on the use of Kahoot! As a Game-based Student Response System in learning grammar?

1.6 Research Hypothesis

- (a) **What is the effect of Kahoot! as a Game-based Student Response System in teaching grammar on ESL young learners' grammar performance?**

Ho: There is no significant difference in grammar mean scores of experimental group and control group before and after the implementation of Kahoot! as a Game-based Student Response System in teaching grammar.

Ha: There is a significant difference in grammar mean scores of experimental group and control group before and after the implementation of Kahoot! as a Game-based Student Response System in teaching grammar.

- (b) What is the effect of Kahoot! as a Game-based Student Response System in teaching grammar on ESL young learners?

- (c) **What is the ESL learners' intrinsic motivation after using the Kahoot! as a Game-based Student Response System in learning grammar?**

Ho: There is no significant increase in intrinsic motivation to learn grammar among the experimental group of ESL learners compared to the control group.

Ha: There is a significant increase in intrinsic motivation to learn grammar among the experimental group of ESL learners compared to the control group.

1.7 Theoretical Framework

One of the significant insights of research is the bridging of theory into practice. In this study, the efficacy of motivation in grammar achievement needs to distinguish using a theoretical framework to realize the implementation of it in teaching grammar. Therefore, an ideal framework to comprehend the potential of the

Game-based Student Response System in Teaching Grammar on ESL young learners' motivation is self-determination theory (SDT). The idea of this theory is to delineate and achieve goals and simultaneously by regulating the extrinsic and intrinsic needs. In the aggregate, the displayed theoretical framework in Figure 1.0 will be the keystone for this current study.

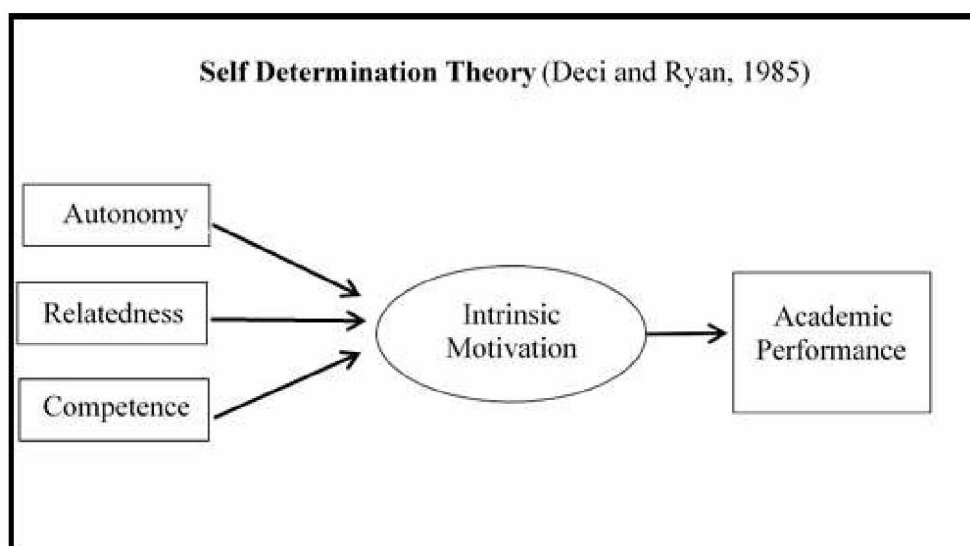


Figure 1.1 The Theoretical Framework

Self-determination theory by Deci and Ryan (1985) expounds the capability of someone to endeavor and attain goals by accentuating the extrinsic and intrinsic needs of humans. SDT is a prevalent motivation theory in the gamification processes and has the base discrepancy between autonomous and controlled motivation (Deci and Ryan 2008). Autonomous motivation constitutes intrinsic motivation embedded in the **integration of learners' self -esteem** in an activity. Controlled motivation comprises extrinsic motivation strengthened by external factors such as rewards. The theory of motivation emphasized autonomy as it was supported by Ryan and Deci (2020) in their **research. Similarly, Erickson and Wharton-McDonald (2019) sustained concern on the prominence of autonomy to encourage intrinsic motivations for learning.** Essentially, the gamification of SDT for language teaching language encourages educators to shift from controlling behaviors to **autonomy-supportive behaviors to the extent “autonomy support” is synonymous with intrinsic-motivation support** (Matos, Reeve, Herrera, and Claux , 2018, pp.579-596).

In regards to motivating the ESL learners to learn grammar enthusiastically, learners should occupy with intrinsic motivation. Intrinsic motivation deepens learning, better performance, and positive well-being, unlike extrinsic motivation. Kowcz (2015) affirms the significance of three intrinsic psychological needs namely competence, autonomy, and relatedness (Deci et al., 2017; Mekler, Brühlmann, Tuch, and Opwis, 2017) to endure self-determination and psychological well-being. In the perspective of Kahoot!, autonomy is the learners' ability to decide and select the correct answer, competence refers to the learners' capability to solve all the given questions with correct answers, and competition and communication represent relation while playing Kahoot!. Thus, Kahoot! will increase ESL learners' intrinsic motivation to learn grammar which signifies long-lasting benefits for the learners in enhancing their English.

1.7.1 Competence:

Competence addresses learners' ability to interact efficiently in an engaging atmosphere (Davies, Coleman and Babkes Stellino, 2016, p.238). Thus, competence reinforces the urge to accomplish challenging tasks despite boring, ordinary, and insignificant activities. Briefly, in game-based learning context competence indicates learners strive to show their proficiency in a specific task. This competency will help the learners to seek acknowledgment for their mastery. Competence also accommodates the expectations of outcome due to the completion of the challenging task. Thus, game elements able to fulfill expectations such as points, level up instant feedback that eventually meet competence.

1.7.2 Autonomy:

The prime psychological need is autonomy. Ryan et al. (2017) affirm autonomy is defined by original behavior and action emerges from self-regulation. This self-regulation leads the learners to be accountable for the completion of a given task as it associates with intrinsic motivation. The accountability to complete the task

gratified through game elements such as the avatar. Avatars are related to intrinsic motivation because the player has the privilege to choose personalised icons that resemble themselves or their group (Annetta,2010; Peng,Lin,Pfeifferand Winn,2012). The appearance of avatar after each question incentive the player to win.Once their autonomy is satisfied, learners shall gain the potential to demonstrate good performance (Adie, Duda, Ntoumanis and Williams, 2016, pp 106-114), feel psychologically well and construct an enduring form and maintain upscale social relationships (Ryan et al, 2017). Besides, Jenö, Adachi, Grytnes, Vandvik, and Deci (2019) declare volunteer participation of learners in a task tends to foster a higher level of well-being. This is due to the involvement made on the learners' impulsive regardless of the external force. Therefore, Self-determination theory asserts the presence of autonomy predicts positive outcomes as learners would experience freedom and independence in their learning.

1.7.3 Relatedness:

Relatedness implies a feeling of solidarity in the learning context since learners are able to interact and stay connected (Ryan et al,2017). Relatedness fosters motivation and describes the need for interpersonal relationships to remain in contact with others. A sense of relatedness triggers **through the players' actions to determine** their group performance as encompassing in-game elements such as game elements such as cooperation and competition which conceptualize interaction among group member(Groh, 2012, p.31; Rigby and Ryan,2011, p.65).**Shortly, individuals'** interaction with others plays a crucial role in nurturing intrinsic motivation by gratifying the psychological needs.

The theory illustrated the three psychological needs explicitly concerning the attainment of intrinsic motivation. Thus, the precise understanding of three intrinsic psychological needs encourages ESL teachers to implement game-based student activities. The game-based activities provoke learners to enhance their intrinsic motivation that influences the effectiveness of their learning. However, empirical research concerning the effect of gamification regarding the effects of psychological

need satisfaction on intrinsic motivation is insufficient (Mekler et al, 2017; Seaborn and Fels, 2015). Thus, the game elements prompt the researcher to turn up the model of gamification in teaching grammar for ESL young learners.

1.8 Conceptual Framework

There is insufficient knowledge and explicit understanding on the underlying motivational processes in teaching and learning in game-based student response teaching. In order to entangle the complex process, the conceptual framework presents as the lens for study. The conceptual framework namely a method framework and a content framework is correlated to each other. A method framework illustrates an explicit stage of pursuing this study straight down the line. Besides that, the content framework also examines the relation among the variables. The content and method framework as shown in Figure 1.2 has been used in the current research.

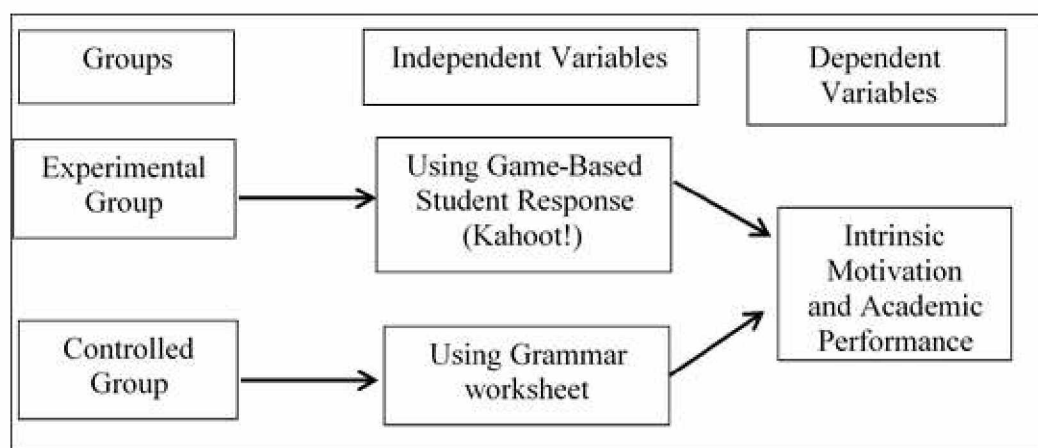


Figure 1.2 Conceptual Framework

The developed conceptual framework of this probe comprises groups, independent variables and dependent variables. The learners will be divided into an experimental and controlled group respectively to clearly define the independent variable. The independent variable for the experimental group comprises the inclusion of Kahoot!, game-based student responses in teaching grammar. The implementation of Kahoot! will realise learners' autonomy with the game, relatedness by promoting

cooperation among the learners can be executed in a gaming team and competence by urging them to win and level up. The gamification elements in Kahoot! helps to attain components of Self-Determination theory. relationships between all the above-mentioned elements are depicted in the table below.

Table 1.1 Intrinsic motivation components and the gamification elements

Self-Determination Theory's components (Deci and Ryan, 2000)	Gamification Elements (Bunchball,2010)
Autonomy	Game
Relatedness	Playing game with teams
Competence	Win the game and level up

As opposed to a control group the researcher will employ traditional methods such as role learning and drilling. Meanwhile, the dependent variables are the learners' motivation and their grammar performance. This framework designates the effectiveness of game-based student learning in teaching grammar for ESL young learners.

1.9 Significance of the Study

According to Malaysian Education Blueprint, integration of technology in education has set a trend that encourages the learners to learn grammar autonomously. Nevertheless, inculcating intrinsic motivation guides the learners to strive for their achievement. Therefore, the significance of this current study implies to teachers and the ESL learners depicted in the subsequent section.

1.9.1 ESL Learners

The game-based student response stimulates the learner's participation in grammar lessons in a captivating 21st-century learning context. Kahoot! game in

English language classrooms can aid to nurture positive attitudes, reinforce intrinsic motivation level of learners, incite better perceptions and expectations of learners towards English classrooms, healthy competition, enjoyable learning environment and energetic interactive learners by governing the required targeted language (Medina and Hurtado, 2017). Additionally, game-based learning also motivates ESL learners to learn and practice grammar in a group and compete with each other learners to win without monotonous activity. Kahoot! also will help the ESL learners to learn and practice the grammar items which expand their grammatical knowledge. Subsequently, this will help to increase their test score as supported by Ranieri, Raffaghelli and Bruni (2018); Wang (2017a, b); Guardia, Del Olmo, Roa, and Berlanga (2019) in their research. Therefore, this study would be prominent for the ESL learners to reform their intrinsic motivation to learn grammar and enrich their grammar performance.

1.9.2 ESL Teacher

Teachers can gauge new ideas and the variation of teaching and learning strategies for grammar in ESL classrooms. Besides, this can give input for the other English teachers to teach grammar dynamically with absence of boring lessons through the practice of Kahoot! in the ESL classroom. This allows teachers to be creative and **enhances learners' learning experiences as Kahoot! is a game-based** platform that encourages learners a sense of competing in real-time. Yapici and Karakoyum (2017) acknowledged that teachers reported that Kahoot!! made their learning engaging and upgraded their learning experiences. Furthermore, the switch to home-based learning is a new ground in this current Covid pandemic. It causes ESL teachers to face difficulties to impart English grammar in a fun mechanism. On that account, this study could be a reference for future undertakings to teach grammar effectively through online learning platforms

1.9.3 Ministry of Education

In 2016, the Ministry of Education in Malaysia implemented the Common European Framework of References (CEFR)-aligned school-based assessment (SBA) in the Malaysian primary ESL classroom. Therefore, integrating Kahoot! in school-based assessment helps teachers to **chart the progress of students' learning. Moreover, teachers can trace learners' progress with the scoreboard which will be recorded automatically.** This provides an opportunity for teachers to encourage self-assessment that has been postulated by the CEFR aligned ESL curriculum for the development of learner autonomy. Based on the above-mentioned points and on the urge to help teachers supplement their knowledge on Kahoot! the Ministry of Education needs to provide a training program or workshop to ESL teachers. The training should provide opportunities for teachers to venture into the Kahoot! application so ESL teachers can lead their grammar lessons joyfully and improve cognitive results.

1.10 Scope of the Study

This study addresses Year 5 ESL learners from a primary school in Pasir Gudang. The data also emphasize heterogeneous groups despite the gender. Besides, this research will be executed for ten weeks to analyse the effectiveness of Kahoot! in teaching grammar. The grammar content in this study is limited to the Year 5 grammar learning standard as illuminated in Dokumen Standard Kurikulum Sekolah Rendah. The topics chosen for the Kahoot! study is retrieved in reference to the initial study conducted at the schools, from questionnaires responded by the students.

1.11 Limitation of Study

In general, this research will heed on the effectiveness of using a Game-based Response System in Teaching Grammar for ESL young learners. One consideration using Kahoot! In teaching, grammar is feasible and accessible to technology in the schools that are used for real research. Particularly the issue of a wi-fi connection in

school might preclude the learners' response in selecting their answers. The unstable internet connection might cause the learners not to play the game.

This research confines to learners in a single primary school and the number of participants was restricted in the specific school. However, the sample size surpasses the required minimum thirty samples in experimental and control group respectively (Gay, Mills, and Airasian, 2012). Thus, the results of this study may exert influence on the validity and generalizability of the outcome. Thus, the outcome of this study may not generalize to all ESL young learners in Malaysia.

Moreover, this study focuses on relations between usage of Kahoot! in teaching **grammar and the learners' academic performance**. Therefore, a novel effect must be considered when evaluating educational technology as it can misrepresent the results. (Clark, 2015). A novelty effect is an **ordinary circumstance where learners' performance is initially enhanced when new technology is enacted not because of any actual improvement in learning or achievement** (Koivisto and Hamari, 2014). Therefore, Kahoot! has the potential to impact the effectiveness of teaching grammar

1.12 Operational Definitions

The following parts are delved into the crucial operational definitions utilised in this research.

1.12.1 Grammar

Crystal (2016) remarks that grammar is the study of how sentences are formed to deliver the purpose meaningfully. It shows the structural basis of grammar enables one to understand and employ it in a productive skill. There are eight parts of speech namely noun, verb, pronoun, adjectives, conjunction and interjection. This study will be conducted with part of speech verbs.

1.12.2 English as Second Language

English as Second Language (ESL) is an abbreviation that refers to English as Second Language. Nesamalar, Saratha and Teh (2001) remarks that a second language is employed by a non-native speaker to effectuate certain ideas and purposes. This means English is taught to the learners who have different mother tongues to learn and practice English to communicate globally. For this study, ESL learners are from a primary school in Pasir Gudang. All of them are non-native speakers where their mother tongue is Malay.

1.12.3 Intrinsic Motivation

Intrinsic motivation is an individual's voluntary behavioral act to perform a task based on internal desires or incentives (Ryan et al., 2020). In this current study, the intrinsic motivation is identified through Self-Determination Theory.

The ESL young learner's degree of intrinsic motivation in this research is a questionnaire and an interview with the experimental group. Six participants from the experimental group who undergo the treatment with Kahoot! will select based on their post-test scores such as high, medium, and low scores. Thus, two participants for each category will be interviewed in order to examine their motivation level to learn grammar using Kahoot!.

1.12.4 Gamification

Gamification is an approach that inculcates game elements such as scores, leaderboard, leveling up in the non-gaming context (Deterding, Dixon, Khaled and Nacke ,2011). For this research, Kahoot!, is incorporated during the grammar classroom activities. In Kahoot!, game elements prevail in points, move on to the next

level, and competition with teams enable them to meet the components of intrinsic motivation.

1.12.5 Game-based Student Response System

The outgrowth of technology prompted Game-based Student Response Systems (GBSR) to be activated. The GSR is generating energy and commitment of the learners by using gamification (Wang,2015). Consequently, it drives the learners' motivation to learn. Apparently, Kahoot! chosen as a game-based response system for this research to enable the grammar learning among ESL learners more enjoyable with the aim of the novel approach would realign their concentration by learning grammar through playing.

1.12.6 Kahoot!

Kahoot! is a game-based response which enables the teachers to create game-based quizzes and assessments that can actuate with a PIN. Moreover, Kahoot! encourage learners to select their preferred answer using digital devices (Johns, 2015). Therefore, this study will share Kahoot! with different grammar questions to the ESL young learners.

1.13 Summary of the chapter

This chapter scrutinizes the problem background, problem statement, theoretical framework, and research questions, the rationale of the study and limitations of the study. Lastly, the operational definitions also discussed in the study. Precisely, the fundamental approach of this study is to explore the effectiveness of using game-based student responses for ESL young learners in grammar teaching. This is done through investigating learners' motivation, and grammar performance.

REFERENCES

- Abunabah, A. (2012). The impact of computer assisted grammar teaching on EFL pupils' performance in Jordan. *International Journal of Education and Development using ICT*, 8(1), 71-90.
- Alawadhi, A. (2019). Students' perceptions of Kahoot!/: An exploratory mixed-method study in EFL undergraduate classrooms in the UAE (Doctoral dissertation, The British University in Dubai (BUiD)).
- Alijanian, E. (2012). An investigation of Iranian EFL teachers' beliefs about grammar. *Journal of Educational and Social Research*, 2(3), 335-335.
- Anderson, A., Huttenlocher, D., Kleinberg, J., & Leskovec, J. (2013, May). Steering user behavior with badges. In *Proceedings of the 22nd international conference on World Wide Web* (pp. 95-106).
- Annetta, L. A. (2010). The "I's" have it: A framework for serious educational game design. *Review of General Psychology*, 14(2), 105-113.
- Annetta, L. A. (2010). The "I's" have it: A framework for serious educational game design. *Review of General Psychology*, 14(2), 105-112. <http://dx.doi.org/10.1037/a0018985>
- Ante, C., Ofelia, N., Espín, U., & David, E. (2016). *The use of educational games as a didactic resource to motivate english learning* (Bachelor's thesis, LATACUNGA/UTC/2016)
- Ashari, D. (2015). Language Interference In Senior High School Students' Writings. *Retain*, 3(2).
- Baharudin, N. A. A., & Yunus, M. M. (2018). GRAMMODO: a platform in learning grammar among ESL learners in Malaysia. *Innovation for Sustainable Growth*, 106-108.
- Baldauf, M., Brandner, A., & Wimmer, C. (2017, November). Mobile and gamified blended learning for language teaching: studying requirements and acceptance by students, parents and teachers in the wild. In *Proceedings of the 16th International Conference on Mobile and Ubiquitous Multimedia* (pp. 13-24)

- Bandulahewa, B. K. M (2015) “Effective project communication for construction project managers in Sri Lanka”. Master thesis, University of Moratuwa Sri Lanka.
- Barjesteh, H. (2018). Navigating The Dark Side Of Motivation In Learning English: Problems And Solutions. *The Online*
- Bastone, R. (1994). Grammar. Oxford: Oxford UP.
- Bawa, P. (2017). Hey, want to play? ‘Kahoot!ing’ to win the learning game. In *The annual convention of the association for educational communications and technology* (pp. 57-66). Jacksonville, FL USA.
- Bazeley, P., & Jackson, K. (Eds.). (2013). *Qualitative data analysis with NVivo*.
- Bicen, H., & Kocakoyun, S. (2018). Perceptions of students for gamification approach: Kahoot! as a case study. *International Journal of Emerging Technologies in Learning (iJET)*, 13(02), 72-93.
- Bicen, H., & Kocakoyun, S. (2018). Perceptions of students for gamification approach: Kahoot! as a case study. *International Journal of Emerging Technologies in Learning (iJET)*, 13(02), 72-93.
- Borg, M. (2001). Teachers’ beliefs. *ELT Journal*, 55(2), 186-188.
- Bullard, S.B. & Anderson, N. (2014). “I’ll Take Commas for \$200”: An Instructional Intervention Using Games to Help Students Master Grammar Skills. *Journalism & Mass Communication Educator*, 1–12.
- Bunchball, I. (2010). Gamification 101: An Introduction to the Use of Game Dynamics to Influence Behavior.
<http://www.csh.rit.edu/~ajman/summer2012/gamification101.pdf>.
- Burguillo, J. C. (2010). Using game theory and competition-based learning to stimulate student motivation and performance. *Computers & education*, 55(2), 566-575.
- Bustillo, J., Rivera, C., Guzmán, J. G., & Acosta, L. R. (2017). Benefits of using a mobile application in learning a foreign language. Cambridge: Cambridge University Press.
- Carbonaro, M., Szafron, D., Cutumisu, M., & Schaeffer, J. (2010). Computer-game construction: A gender-neutral attractor to Computing Science. *Computers & Education*, 55(3), 1098-1111
- Cárdenas-Moncada, C., Véliz-Campos, M., & Véliz, L. (2020). Game-Based Student Response Systems: The Impact of Kahoot! in a Chilean Vocational Higher

- Education EFL Classroom. *Computer-Assisted Language Learning Electronic Journal (CALL-EJ)*, 21(1), 64-78
- Carrera, D.A.; Álvarez, L.A.(2016) Sistemas de Respuesta en Aula de Libre Distribución para uso con Dispositivos Móviles. Actas V Encuentro Conferencias Chilenas en Tecnologías del Aprendizaje. Arica 2015. Available online: http://eudev.uta.cl/cclt2015/pdf/Carrera_Escobar.pdf
- Celce-Murcia, M. (1991). Grammar Pedagogy in Second and Foreign Language Teaching. *TESOL Quarterly*, 25(3), 459-480. doi:10.2307/3586980
- Cheong, C, Cheong, F, & Filippou, J. (2013). Quick Quiz: A Gamified Approach for Enhancing Learning. In PACIS (p. 206). Jeju Island, Korea: AISeL.
- Chiang, H. H. (2020). Kahoot!! In an EFL Reading Class. *Journal of Language Teaching and Research*, 11(1), 33-44.
- Chitravelu, N., Sithamparam, S., & Teh, S. C. (2005). *ELT methodology: Principles and Practice*. Shah Alam: Penerbit Fajar Bakti.
- Ciaramella, K. E. (2017). The effects of Kahoot!! on vocabulary acquisition and retention of students with learning disabilities and other health impairments.
- Clark, D. B., Tanner-Smith, E., Hostetler, A., Fradkin, A., & Polikov, V. (2018). Substantial integration of typical educational games into extended curricula. *Journal of the Learning Sciences*, 27(2), 265-318.
- Cook, V. (2001). Using the First Language in the Classroom. *Canadian Modern Language Review*, 57(3), 402.
- Cristina Poyatos, and Michelle Natolo. "Love Grammar: Student-driven Grammar Learning Games." *International Journal Of Learning* 17, no. 10 (2011).
- Crystal, D. (2016). A defence of grammar. Retrieved from <http://www.davidcrystal.com/books-and-articles>
- Darus, S., and Subramaniam, K. (2009). Error analysis of the written English essays of secondary school students in Malaysia: A case study. *European Journal of Social Sciences*, 8(3), 483-495.
- Darus, Saadiyah. 2009. Error Analysis of the Written Essay of Secondary School Students in Malaysia: A Case Study. *European Journal of Social Sciences*, Volume 8.
- Davies, M. J., Coleman, L., & Babkes Stellino, M. (2016). The relationship between basic psychological need satisfaction, behavioral regulation, and participation in CrossFit. *Journal of Sport Behavior*, 39(3), 239.

- Deci, E. L., & Ryan, R. M. (1985). Self-determination and intrinsic motivation in human behavior. *EL Deci, RM Ryan.-1985*.
- Deci, E. L., & Ryan, R. M. (2008). Self-determination theory: A macrotheory of human motivation, development, and health. *Canadian psychology/Psychologie canadienne*, 49(3), 182.
- Deci, E. L., & Ryan, R. M. (2017). Self-Determination Theory. 2011. Handbook of Theories of Social Psychology. Paul AM Van Lang, Arie W. Kruglanski and E. Tory Higgins (eds.). Sage Publications Inc., Thousand Oaks, CA, USA, 416- 437.
- Deterding, S., Dixon, D., Khaled, R., & Nacke, L. (2011, September). From game design elements to gamefulness: defining "gamification". In *Proceedings of the 15th international academic MindTrek conference: Envisioning future media environments* (pp. 9-15).
- Dewi, K. S., Myartawan, I. P. N. W., Swari, N. K. T. A., & Sugihartini, N. (2020). **Quizizz Effect On Students' grammar Mastery In Higher Efl Classroom Based Mobile Assisted Language Learning (MALL)**. *Language and Education Journal Undiksha*, 3(1), 15-24
- Diallo, A. (2014). *The Use of Technology to Enhance the Learning Experience of ESL Students*. Unpublished master dissertation, Concordia University, Portland.
- Dickey, M. D. (2005). Three-dimensional virtual worlds and distance learning: Two case studies of Active Worlds as a medium for distance education. *British Journal of Educational Technology*, 36(3), 439-451.
- Dominguez, A., Saenz-de-Navarrete, J., De-Marcos, L., Fernandez-Sanz, L., Pages, C., & Martinez-Herraiz, J. J. (2013). Gamifying learning experiences: Practical implications and outcomes. *Computers & Education*, 63, 380-392
- Edmonds, S. (2011). Gamification of learning. *Training & Development In Australia*, 20–23.
- Ellis, R. (2001). Investigating form-focused instruction, *Language Learning*, 51, 1-46.
- Erdogan, E., & Tunaz, M. (2012). Determining External and Internal Demotivating Factors among Young Learners at Pozanti Regional Primary Boarding School. *Online Submission*, 3, 147-160
- Erickson, J. D., & Wharton-McDonald, R. (2019). Fostering autonomous motivation and early literacy skills. *The Reading Teacher*, 72(4), 475-4

- Foppoli, J. (2011). Is grammar really important for a second language learner? Retrieved on May 7, 2012 from <http://www.eslbase.com/articles/grammar>
- Fox, N., Hunn, A., & Mathers, N. (2009). Sampling and sample size calculation. East Midlands/Yorkshire: the National Institutes for Health Research. Research Design Service for the East Midlands/Yorkshire
- Fuertes, A.; García, M.; Castaño, M.A.; López, E.; Zacaes, M.; Cobos, M.; Ferris, R.; Grimaldo, F.(2017) Uso de Herramientas de Respuesta de Audiencia en la Docencia Presencial Universitaria. Un Primer Contacto. Actas de las XXII Jenui. Almería 2016. Available
- Fuster-Guilló, A., Pertegal-Felices, M. L., Jimeno-Morenilla, A., Azorín-López, J., Rico-Soliveres, M. L., & Restrepo-Calle, F. (2019). Evaluating Impact on Motivation and Academic Performance of a Game-Based Learning Experience Using Kahoot!. *Frontiers in Psychology, 10*, 2843.
- Gay, L. R., Mills, G. E., & Airasian, P. (2012). Educational Research: Competencies for Analysis and Applications (10th ed.). Upper Saddle River, NJ: Merrill
- Ghabool, N., Mariadass, M. E., & Kashef, S. H. (2012). Investigating Malaysian ESL students' writing problems on conventions, punctuation, and language use at secondary school level. *Journal of Studies in Education, 2*(3), 130-143.
- Ghavifekr, S., and Rosdy, W.A.W. (2015). Teaching and learning with Technology: Effectiveness of ICT integration in schools. *International Journal of Research in Education and Science (IJRES), 1*(2), 175-191.
- Gilbert, J. (2013). English for academic purposes. In G. Motteram (Ed.)
- Glover, I., Campbell, A., Latif, F., Norris, L., Toner, J., & Tse, C. (2012). A Tale of One City: Intrainstitutional Variations in Migrating VLE Platform. *Research In Learning Technology, 20*. Accessed: 27/11/2012 <http://dx.doi.org/10.3402/rlt.v20i0.19190>
- Godwin-Jones, R. (2014). Games in language learning: opportunities and challenges
- Godwin-Jones, R. (2016). Culture, language learning and technology. *The Routledge Handbook of Language Learning and Technology, 199-210*.
- Golonka, M. (2014, July). Interfirm cooperation and uncertainty: a study in the ICT Industry. In Proceedings of International Academic Conferences (No. 0300971). International Institute of Social and Economic Sciences.
- Gozcu, E., & Caganaga, C. K. (2016). The Importance of Using Games in EFL Classrooms. *Cypriot Journal of Educational Sciences, 11*(3), 126-135.

- Graham, K. (2015). TechMatters: getting into Kahoot!(s): exploring a game-based learning system to enhance student learning. *LOEX Quarterly*, 42(3), 4.
- Groh, F. (2012). Gamification: State of the art definition and utilization. *Institute of Media Informatics Ulm University*, 39, 31.
- Guaqueta, C. A., & Castro-Garces, A. Y. (2018). The Use of Language Learning Apps as a Didactic Tool for EFL Vocabulary Building. *English Language Teaching*, 11(2), 61-71
- Guardia, J. J., Del Olmo, J. L., Roa, I., & Berlanga, V. (2019). Innovation in the teaching-learning process: The case of Kahoot!! On the horizon.
- Hadijah, H., Pratolo, B. W., & Rondiyah, R. (2020). Interactive game “Kahoot!!” as the media of students’ vocabulary assessment. *Journal on English as a Foreign Language*, 10(1), 84-102.
- Hadijah, Hadijah & Pratolo, Bambang & Rondiyah, Rondiyah. (2020). Interactive game “Kahoot!!” as the media of students’ vocabulary assessment. *Journal on English as a Foreign Language*. 10. 87-105. 10.23971/jefl.v10i1.1670.
- Hakami, H. A. O., & Abdelrahman, A. B. (2019). The effects of Using Games in Teaching and Learning English Grammar to EFL Learners.
- Hanus, M. D., & Fox, J. (2015). Assessing the effects of gamification in the classroom: A longitudinal study on intrinsic motivation, social comparison, satisfaction, effort, and academic performance. *Computers & education*, 80, 152-161.
- Hassani, M. T., Rahmani, R., & Fard, J. A. (2014). The Effect Of Songs On Efl Learners’ grammar Recall And Retention. *International*
- Hill, C. (2008). Teaching with e-learning in the Lifelong Learning Sector. Learning Matters.<http://edtheory.blogspot.com/2015/03/self-determinationtheory-supporting.htm>*Language Learning & Technology* 18(2), 9-19.
- Hu, P., & Zhang, J. (2017). A pathway to learner autonomy: A self-determination theory perspective. *Asia Pacific Education Review*, 18(1), 147-157
- Hu, R. J. S. (2011). The Relationship between Demotivation and EFL Learners’ English Language Proficiency. *English Language Teaching*, 4(4): 88-96.
- Hung, C. L. (2019). Innovating and diffusing Internet commerce through user engagement: an empirical study of massively multiplayer online games. *Innovation*, 21(2), 317-335.
- Hung, H. T., Yang, J. C., Hwang, G. J., Chu, H. C., & Wang, C. C. (2018). A
- Hymes, D. H. (1971). On communicative competence. In J. Pride and J.

- Iaremenko, N. V. (2017). Enhancing English language learners' motivation through online games 126-133. *International Journal of Human-Computer Studies*, 74, 14–31.
- Ishtawi, Husam. 2011. The Effects of Game Strategy on the Learning of English Grammar for the Twelfth Grade Students. Thesis. [pdf]. Available at: <http://library.iugaza.edu.ps/thesis/93881.pdf> [2016, May 5]
- Iwamoto, D. H., Hargis, J., Taitano, E. J., & Vuong, K. (2017). Analyzing the Efficacy of the Testing Effect Using Kahoot!™ on Student Performance. *Turkish Online Journal of Distance Education*, 18(2), 80-93.
- Jaber, J. R., Arencibia Espinosa, A., Carrascosa Iruzubieta, C., Ramírez, A. S., Rodríguez-Ponce, E., Melián, C., & Farray, D. (2016). Empleo de Kahoot! como herramienta de gamificación en la docencia universitaria.
- Jamian, A. R., Jaafar, W. N. W., Othman, S., & Sabil, A. M. (2018). High-Order Thinking Skill (HOTS) of the Students in Aspect of Understanding Modern Poetry and Prose of Malay Language. *International Journal of Academic Research in Business and Social Sciences*, 8(12), 1043-1058.
- Jean, G., & Simard, D. (2011). Grammar teaching and learning in L2: Necessary, but boring?. *Foreign language annals*, 44(3), 467-494.
- Jeno, L. M., Adachi, P. J., Grytnes, J. A., Vandvik, V., & Deci, E. L. (2019). The effects of m-learning on motivation, achievement and well-being: A Self-Determination Theory approach. *British Journal of Educational Technology*, 50(2), 669-683.
- Johns, K. (2015). Engaging and Assessing Students with Technology: A Review of Kahoot!! *Delta Kappa Gamma Bulletin*. 81(4): 89. *Journal of Language Learning and Applied Linguistics World*, 5(2), 233-243. *Journal of New Horizons in Education*-April, 8(2).
- Joyce, B., Weil, M., & Calhoun, E. (2015). *Models of teaching* (9th ed.). Boston: Pearson Education Inc
- Kapuler, D. (2015). Top 100 Sites and Apps of 2014. *Tech & Learning*, 35(6), 14- 16.
- Kétyi, A. (2016). From mobile language learning to gamification: An overlook of research results with business management students over a five-year period. *Porta Linguarum: revista internacional de didáctica de las lenguas extranjeras*, (1), 45-59.

- Kikuchi, K. (2009) . *Listening to our learners' voices: What demotivates Japanese high Kingdom*: Oxfam GB, 2012.
- Kim, H. S. (2019). The Use of Socrative and Kahoot! in English Grammar. *Learning*, 22(4), 57-78.
- Kohli, A.L. (1984) *Techniques of Teaching English*. Delhi: Dhanpat Raisons. Print.
- Koivisto, J., & Hamari, J. (2019). The rise of motivational information systems: A review of gamification research. *International Journal of Information Management*, 45, 191-210.
- Kowcz, A. (2015) *Self-Determination Theory: Supporting Students' Intrinsic Motivation* [Web log post]. Retrieved from
- Laremenko, N. V. (2017). Enhancing English language learners' motivation through online games. *Інформаційні технології і засоби навчання*, (59, вип. 3), 126-133
- Larsen-Freeman, D. (2001). Teaching Grammar. In M. Celce-Murcia (ed.), *Teaching English as a Second or Foreign Language* (3rd edn., pp. 251-66). Boston, MA: Thomson/ Heinle
- Larsen-Freeman, D. 2001. *Teaching Language: From Grammar to Gramaring*. Boston, MA: Heinle & Heinle. Argues for a reconceptualization of grammar and the way it is taught, featuring grammar as a complex, nonlinear, dynamic system
- Larsen-Freeman, D., & Long, M. H. (2014). *An introduction to second language acquisition research*. Routledge.
- Lee, J. F., & Collins, P. (2009). English grammar: An investigation of Hong Kong ESL books. *The Hong Kong Journal of Applied Linguistics*, 11(2), 51-70.
- Lee, J., & Hammer, J. (2011). Gamification in education: What, how, why bother? *Academic Exchange Quarterly*, 15(2), 146
- Lestari, A. (2019). *The Effectiveness Of Using Kahoot! Application In Teaching Vocabulary* (Doctoral dissertation, IAIN SALATIGA).
- Lewis, G. (2013). *Bringing technology into the classroom-Into the Classroom*.
- Licorish, S. A., George, J. L., Owen, H. E., & Daniel, B. (2017). "Go Kahoot!!" enriching classroom engagement, motivation and learning experience with games. In *Proceedings of the 25th international conference on computers in education* (pp. 755-764).

- Licorish, S. A., George, J. L., Owen, H. E., & Daniel, B. (2017). **Go Kahoot!!**” enriching classroom engagement, motivation and learning experience with games. In *Proceedings of the 25th international conference on computers in education* (pp. 755-764).
- Licorish, S. A., Owen, H. E., Daniel, B., & George, J. L. (2018). **Students’ perception of Kahoot!!’s influence on teaching and learning.** *Research and Practice in Technology Enhanced Learning*, vol. 13(9), pp. 1–23.
- Lightbown, P. M. (2014). Making the minutes count in L2 teaching. *Language Awareness*, 23, 3-23
- M. Didik, Nuridin, and Mubarak, “**The Undergraduate Student’ Perception toward the Edu-Techno Empowerment in the Class: Voice from Indonesia,**” Semarang, 2018.
- Macedonia, M. (2005). Games and foreign language teaching. *Support for Learning*, 20, 135-140.
- Maesaroh, M., Faridi, A., & Bharati, D. A. L. (2020). The effectiveness of socrative and Kahoot! to teach grammar to students with different interest. *English Education Journal*, 10(1), 366-373.
- Marlyna Maros, Khazriyati Salehuddin & Tan Kim Hua. 2005. "Everyone People Must Have a Best Friend. Interference of Malay Structures in English Written Discourse". Proceedings of the TLEiA Conference. TEaching and Learning of English: Towards an Asian Perspective. Fakultas Komunikasi dan Bahasa Moden: UUM.
- Matas, C. P., & Natolo, M. (2011). Love Grammar: Student-driven Grammar Learning Games. *International Journal Of Learning*, 17(10).
- Matos, L., Reeve, J., Herrera, D., & Claux, M. (2018). Students' agentic engagement predicts longitudinal increases in perceived autonomy-supportive teaching: The squeaky wheel gets the grease. *The Journal of Experimental Education*, 86(4), 579-596.
- McGillicuddy, K. T. (2020). Gaming for a Grade: How Goal Achievement and Causality Orientations Impact the Efficacy of Games for Classroom Engagement, Academic Achievement, and Learner Satisfaction.
- McGonigal, J. (2011). Reality is broken: Why games make us better and how they can change the world. Penguin.

- Md Yunus, M., & Azmanuddin bin Azman, M. (2019). Memory Stay Or Stray?: Irregular Verbs Learning Using Kahoot!!. *Arab World English Journal (AWEJ) Special Issue on CALL*, (5).
- Medina, E. G. L., & Hurtado, C. P. R. (2017). Kahoot!! A digital tool for learning vocabulary in a language classroom. *Revista Publicando*, 4(12 (1)), 441-449.
- Medina, E.G.L., & Hurtado, C.P.R. (2017). Gamification in biology teaching: A sample of Kahoot!! application. *Turkish Online Journal of Qualitative Inquiry*, 8(1), 396-414. Doi: 10.17569/tojqi.335956
- Mekler, E. D., Brühlmann, F., Tuch, A. N., & Opwis, K. (2017). Towards understanding the effects of individual gamification elements on intrinsic motivation and performance. *Computers in Human Behavior*, 71, 525-534.
- Méndez-Coca, D., & Slisko, J. (2013). Software Socrative and smartphones as tools for implementation of Basic Processes of active physics learning in classroom: an initial feasibility study with prospective teachers. *European Journal of Physics Education*, 4(2), 17–24 Retrieve from <http://files.eric.ed.gov/fulltext/EJ1052308.pdf>
- Meshkat, M. and Hassani, M. (2012). Demotivating factors in learning English: the case of Iran. *Procedia - Social and Behavioral Sciences* 31, pp. 745 – 749.
- Michos, M. (2017). Gamification in Foreign Language Teaching Do You Kahoot!? *Modern Technologies in Language Teaching*
- Mohamed, A. R., Ismail, S. A. M. M., & Eng, L. S. (2014). Now everyone can measure grammar ability through the use of grammar assessment system. *International Journal of Teaching and Education*, 2(3), 127.
- Moqbel, M. S. S. (2018). Self–assessment in EFL Grammar Classroom: A Study of EFL learners at the Centre for Languages and Translation, Ibb University. *International Journal for Research in Education*, 42(2), 289-324.
- Muhridza, N. H. M., Rosli, N. A. M., Sirri, A., & Samad, A. A. (2018). Using game-based technology, KAHOOT! for classroom engagement. *LSP International Journal*, 5(2).
- Nabei, T. (1995). Learning grammar in the United States: A case of Japanese students. *University of Pennsylvania Working Papers in Educational Linguistics*, 11(1), 80-91.
- Nahmod, D. (2017). Vocabulary gamification vs traditional learning instruction in an inclusive high school classroom.

- Nazari, A., & Allahyar, N. (2012). Grammar teaching revisited: EFL teachers between grammar abstinence and formal grammar teaching. *Australian Journal of Teacher Education*, 37(2), 5.
- Nesamalar, C., Saratha S. & Teh, S.C., 2001, *ELT methodology: Principles and practice*, Penerbit Fajar Bakti, Selangor.
- Nguyen, T. M. H., & Hudson, P. B. (2010). Preservice EFL teachers' beliefs about teaching writing and learning to teach writing before their practicum: a case study in Vietnam. *Asian EFL Journal*, 12(2), 43-67.
- Nik Safiah Karim (1995). Malay Grammar for Academics and Professionals. Kuala Lumpur: Dewan Bahasa dan Pustaka
- Nunnally, J. C. (1994). *Psychometric theory 3E*. Tata McGraw-Hill Education. Skripsi, A. (2019). *Students' Perception on the Use of Kahoot!! in English Language Learning* (Doctoral dissertation, Universitas Muhammadiyah Yogyakarta).
- Nurhadianti, & Pratolo, B. W. (2020). Students' Perception toward the Application of Kahoot! as an Assessment Tool in EFL Class. *Universal Journal of Educational Research*, 8(5): 2150-2155.
- Peng, W., Lin, J.-H., Pfeiffer, K. A., & Winn, B. (2012). Need Satisfaction Supportive Game Features as Motivational Determinants: An Experimental Study of a Self-Determination Theory Guided Exergame. *Media Psychology*, 15(2), 175-196. <http://dx.doi.org/10.1080/15213269.2012.673850>
- Perry, B. (2015). Gamifying French Language Learning: a case study examining a quest-based, augmented reality mobile learning-tool.
- Phuong, H. Y., & Nguyen, T. N. P. (2017). The impact of board games on EFL learners' grammar retention. *IOSR Journal of Research & Method in Education*, 7(3), 61-66.
- Plump, C. M., & LaRosa, J. (2017). Using Kahoot!! in the classroom to create engagement and active learning: A game-based technology solution for eLearning novices. *Management Teaching Review*, 2(2), 151-158.
- Poondej, C. & Lerdpornkulrat, T. (2016). The Development of Gamified Learning Activities to Increase Student Engagement in Learning. *Australian Education Computing*, 31, (2)
- Prensky, M. (2001). Fun, play and games: What makes games engaging. *Digital game-based learning*, 5(1), 5-31.

- Purgina, M., Mozgovoy, M., & Ward, M. (2017). MALL with WordBricks—building correct sentences brick by brick. *CALL in a climate of change: adapting to turbulent global conditions—short papers from EUROCALL*, 254-259.
- Rahayu, I. S. D., & Purnawarman, P. (2019). The Use of Quizizz in Improving Rahman, Ahmad, & Hashim, 2018; Sawang, O'Connor, Ali, 2017; Cárdenas-Moncada, Véliz-Campos, (2020).
- Rahman, R. A., Ahmad, S., & Hashim, U. R. (2018). The effectiveness of gamification technique for higher education students engagement in polytechnic Muadzam Shah Pahang, Malaysia. *International Journal of Educational Technology in Higher Education*, 15(1), 41.
- Ranieri, M., Raffaghelli, J. E., & Bruni, I. (2018). Game-based student response system: Revisiting its potentials and criticalities in large-size classes. *Active Learning in Higher Education*, 1–14.
- Richards, J. C., & Reppen, R. (2014). Towards a pedagogy of grammar instruction. *RELC Journal*, 45(1), 5-25.
- Rigby, S., & Ryan, R. M. (2011). Glued to games: How video games draw us in and hold us spellbound: How video games draw us in and hold us spellbound. AbC-CLIo.
- Rodriguez-Fernandez, A., Sánchez, J. S., Rodriguez-Marroyo, J. A., Casamichana, D., & Villa, J. G. (2017). Effects of 5-week pre-season small-sided-game- based training on repeat sprint ability. *The Journal of sports medicine and physical fitness*, 57(5), 529-536.
- Roehl, A, Reddy, SL, Shannon, GJ. (2013). The flipped classroom: an opportunity to engage millennial students through active learning. *Journal of Family and Consumer Sciences*, 105(2),44.
- Rouse, P. C., Duda, J. L., Ntoumanis, N., Jolly, K., & Williams, G. C. (2016). The development and validation of the interpersonal support in physical activity consultations observational tool. *European journal of sport science*, 16(1), 106-114.
- Ryan, R. M., & Deci, E. L. (2020). Intrinsic and extrinsic motivation from a self-determination theory perspective: Definitions, theory, practices, and future directions. *Contemporary Educational Psychology*, 101860. SAGE publications limited.

- Sailer, M., Hense, J. U., Mayr, S. K., & Mandl, H. (2017). How gamification motivates: An experimental study of the effects of specific game design elements on psychological need satisfaction. *Computers in Human Behavior*, 69, 371-380.
- Salazar, D. (2016). Introducing game based learning to develop grammar skills in elementary students (Doctoral dissertation, Universidad Tecnológica de Pereira).
- Sato K & Kleinsasser R 1999. Multiple data sources: Converging and diverging conceptualizations of rote teaching. *The Australian Journal of Teacher Education*, 24(1):17-34. doi: 10.14221/ajte.1999v24n1.2
- Sawang, S., O'Connor, P. J., & Ali, M. (2017). Engage: Using technology to enhance students' engagement in a large classroom. *Journal of Learning Design*, 10(1), 11-19.
- Schunk, D. H., Meece, J. R., & Pintrich, P. R. (2012). *Motivation in education: Theory, research, and applications*. Pearson Higher Ed.
- Seaborn, K., & Fels, D. I. (2014). Gamification in theory and action: A survey.
- Sheard, M. K., & Chambers, B. (2014). A case of technology-enhanced formative assessment and achievement in primary grammar: How is quality assurance of formative assessment assured?. *Studies in Educational Evaluation*, 43, 14-23.
- Shima, T. N. TP, & Rahmah, LY (2012). Enhancing Grammar Using Board Game. *Procedia-Social and Behavioral Sciences*, 68, 213-221.
- Sierens, E., Vansteenkiste, M., Goossens, L., Soenens, B., & Dochy, F. (2009). The synergistic relationship of perceived autonomy support and structure in the prediction of self-regulated learning. *British Journal of Educational Psychology*, 79(1), 57-68.
- Siska, S. (2017). The Consciousness of Learning Grammar Communicatively Through Role Play in EFL Classroom. *Polingua*, 6(1), 1-7.
- Sophin, G. (2015). Students' Perceptions of Grammar Teaching and Learning in English Language Classrooms in Libya. *Journal of Research & Method in Education*, 5(2), 67-72
- Sowbaakawathy Ganesan, Mohd Iskandar Idris, Melor Md Yunus. (2018). Kahoot!: Learn Grammar, Together We Be Glamour. - Eduinnovation 2018 - Inovasi Pendidikan Dalam Era Revolusi Industri 4.0.

- Swanto, S., & Din, W. A. (2014). Employing drilling technique in teaching English writing skills to a group of rural Malaysian students. *Developing Country Studies*, 4(14), 73-82.
- Syam, R. (2015). The Effectiveness of Using Word Wall in Teaching Simple Present Tense at The First Year Students of Junior High School 1 Parigi. *ETERNAL (English, Teaching, Learning, and Research Journal)*, 1(2), 285-298.
- Syed Agil, S., Omar (2007). The prolegomena: Social science and the economic analysis of Ibn Khaldun. Unpublished master's thesis, University Tun Abdul Razak, Malaysia.
- Takala, A. (2016). Grammar Teaching Methods in EFL Lessons: Factors to consider when making instructional decisions.
- Tan Ai Lin, D., Ganapathy, M., & Kaur, M. (2018). Kahoot!! It: Gamification in Higher Education. *Pertanika Journal of Social Sciences & Humanities*, 26(1).
- Thornbury, Scott. (1999). *How to Teach Grammar*. Essex: Pearson Education Limited.
- Tivaraju, J., Yunus, M. M., & Badusah, J. (2017). Learning English is fun via Kahoot!: students' attitude, motivation and perceptions. In *Proceedings on Seminar on Transdisiplin Education (STEd2017)* (pp. 218-229).
- Toh, Y. K., Hashim, H., Aziz, Y. A., & Ng, S. I. (2019). Effects of Game-Product Congruence on Game-Players' Brand Attitude in Mobile Games: A Review. *International Journal Of Academic Research In Business And Social Sciences*, 9(4).
- Ur, P. (1988). *Grammar Practice Activities: A Practice Guide for Teachers*.
- Uysal, H. H., & Bardakci, M. (2014). Teacher beliefs and practices of grammar teaching: focusing on meaning, form, or forms?. *South African Journal of Education*, 34(1).
- Wang, A. I. (2015). The wear out effect of a game-based student response system. *Computers & Education*, 82, 217-227.
- Wang, A. I., & Tahir, R. (2020). The effect of using Kahoot!! for learning—A literature review. *Computers & Education*, 149, 103818.
- Wang, A. I., et al. (2007). Lecture Quiz - A Mobile Game Concept for Lectures. *IASTED International Conference on Software Engineering and Application (SEA 2007)*. Cambridge, MA, USA, Acta Press: 6.

- Wang, A. I., et al. (2008). An Evaluation of a Mobile Game Concept for Lectures. Proceedings of the 2008 21st Conference on Software Engineering Education and Training - Volume 00, IEEE Computer Society.
- Wang, A., Zhu, M. and Saetre, R. (2016) 'The Effect of Digitizing and Gamifying Quizzing in Classrooms.' Available at: [http:// web.a. ebscohost. com/ehost/pdfviewer/pdfviewer?vid=23&sid=ba51a26f-6467-44ffac77-a9dda 4fafa01%40sessionmgr4006](http://web.a.ebscohost.com/ehost/pdfviewer/pdfviewer?vid=23&sid=ba51a26f-6467-44ffac77-a9dda4fafa01%40sessionmgr4006)
- Wang, A., Zhu, M. and Saetre, R. (2016) 'The Effect of Digitizing and Gamifying Quizzing in classrooms. Available at: [http://web. a.ebscohost. com/ehost/pdfviewer/pdfviewer?vid=23&sid=ba51a26f-6467-44ffac77-a9dda4fafa01%40sessionmgr4006](http://web.a.ebscohost.com/ehost/pdfviewer/pdfviewer?vid=23&sid=ba51a26f-6467-44ffac77-a9dda4fafa01%40sessionmgr4006)
- Wang, Y. H. (2017b). The effectiveness of integrating teaching strategies into IRS activities to facilitate learning. *Journal of Computer Assisted Learning*, 33(1), 35–50.
- Wang, Y.-H. (2017a). The effectiveness of using cloud-based cross-device IRS to support classical Chinese learning. *Journal of Educational Technology & Society*, 20(2), 127–141.
- Werbach and Hunter, 2015 K. Werbach, D. HunterThe gamification toolkit - dynamics, mechanics, and components for the win Wharton Digital Press, Philadelphia
- Wichadee, S., & Pattanapichet, F. (2018). Enhancement of performance and motivation through application of digital games in an English language class. *Teaching English with Technology*, 18(1), 77-92.
- Widdowson, H. G. (1978). Teaching Language as Communication. Oxford: Oxford University Press.
- Wilder, H. and Mongillo, G. (2007). Improving expository writing skills of preservice teachers in an online environment. *Contemporary Issues in Technology and Teacher Education*, 7 (1), 476-489.
- Yacob, N. S., & Yunus, M. M. (2019). Language Games in Teaching and Learning English Grammar: A Literature Review.
- Yapici, U., & Karakoyun, F. (2017). Gamification in Biology teaching: A sample of Kahoot!! application. *Turkish Online Journal of Qualitative Inquiry*, 8(4), 396-414.doi: 10.17569/tojqi.33595

- Yu, S. Y. (2005). The effects of games on the acquisition of some grammatical features of L2 German on students' motivation and on classroom atmosphere.
- Yu, Y. -J. (2008). A cross-language study in perception of lexical stress in English.
- Zarzycka-Piskorz, E. (2016). Kahoot! it or not? Can games be motivating in learning grammar?. *Teaching English with Technology*, 16(3), 17-36.
- Zhou, L., Yu, J., & Shi, Y. (2017). Learning as adventure: An app designed with gamification elements to facilitate language learning. In *International Conference on HCI in Business, Government, and Organizations* (pp. 266-275). Springer