



**EXPLORING SECONDARY SCHOOL STUDENTS' ATTITUDES AND
PERCEPTIONS TOWARDS GAMIFICATION IN ONLINE ENGLISH LESSONS**

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PARTIAL FULFILMENT OF THE REQUIREMENTS
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APPROVAL SHEET

This research paper attached hereto, entitled Exploring Secondary School Students' Attitudes and Perceptions towards Gamification in Online English Lessons prepared and submitted by Ng Man Yi in partial fulfilment of the requirements for the Bachelor of Arts (Hons) English Education is hereby accepted.



Supervisor

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ABSTRACT

This paper presents findings of Perak secondary school students' attitudes towards gamification and the perceptions of the perceived psychological impacts of gamification in affecting engagement rate in online English lessons. A total of 79 Perak secondary school students were gathered as the participants. Based on the responses obtained through an online questionnaire, the findings displayed a positive attitude towards gamification in online English lessons among the participants. Gamification is believed to be fun, interesting, full of creative learning content, and sparks the students' interest. The participants also showed a favourable view of the psychological impacts of gamification. In line with this finding, the participants believed these psychological impacts could positively enhance their engagement rate in online English lessons. Some of the encouraging outcomes include a high response rate and motivation to ask question. Future researchers are suggested to consider a different data collection method such as interviews to obtain in-depth responses with a detailed explanation. In conclusion, gamification is favoured and highly accepted by Perak secondary school students. Its positive psychological impacts on the students are believed to increase their engagement rate, making it a teaching method worth considering by the educators to produce effective lessons.

Keywords: Gamification, Online English lessons, Attitudes, Perceptions, Engagement

DECLARATION

I declare that the material contained in this paper is the end result of my own work and that due acknowledgement has been given in the bibliography and references to ALL sources be they printed, electronic or personal.

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DATE: 15 APRIL 2022

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LIST OF ABBREVIATIONS

COVID-19	Coronavirus disease 2019
ESL	English as a secondary language
MMOE	Malaysian Ministry of Education
SPSS	Statistical Package for the Social Sciences
SWOT	Strengths, Weaknesses, Opportunities, Threats
UTAR	Universiti Tunku Abdul Rahman

CHAPTER I

INTRODUCTION

1.0 Background of Study

It is true that learners are very much connected to technology today. Learners are given the nickname “digital natives” because they are well-versed with technology literacy in this modern world (Yanes & Bououd, 2019). According to Rahmani (2020), games are the most commonly utilised technological product among learners. Various unique games are associated with the learners’ lives, leaving a significant influence on their lifestyle (Nieto-Escamez & Roldán-Tapia, 2021). This can be proven by Basler and Dostal’s study (2015), where teenage learners spent eight to ten hours on average per day indulging themselves in the world of online and offline games. The findings reflected the intimate relationship between young learners and games. The authors added that it has resulted in positive impacts on their educational lives, such as providing greater motivation for learning. With that in view, educators strive to embrace games while preparing the classroom activities, and one best way of doing it is through gamification (Garland, 2015; Rahmani, 2020).

Academics define gamification as the application of game features and design concepts into non-game settings (Healey, 2018; Kriyakova, Yordanova, & Angelova, 2014; Nah, Zeng, Telaprolu, Ayyappa, & Eschenbrenner, 2014). The core concept of gamification is to adapt key elements of games to real-life situations to promote specific desired behaviour (Phung, 2020). According to Loos and Crosby (2017), gamification has the potential to supplant educators’ conventional approach in the traditional face-to-face classrooms. Phung (2020) further mentioned that this technique is highly regarded in online learning, which is compatible with the new education system in the COVID-19 pandemic. Nieto-Escamez and Roldán-Tapia (2021) claimed that quizzes are the most accessible and popular strategies to execute

gamification in the classroom settings. A series of digitized quizzes such as Kahoot!, Quizlet, and Quizizz were developed by educators to aid students to learn comprehensively.

Gamification, being a student-centered approach, not only helps to produce independent and active learners but also equips them with considerable skills needed in 21st-century learning, such as critical thinking skills, collaboration, and digital literacy (Ismail, Sa'adan, Samsudin, Hamzah, Razali, & Mahazir, 2018). This technique is popular in education because it promotes good mental health, enhances social relationships, cultivates imaginative skills, and encourages the desire for knowledge (Cruea, 2020; Toh & Kirschner, 2020). In essence, it is even beneficial for second language learning as Brown (2007) claimed that motivation enhances one's academic performance by learning more effectively.

In Hakulinen and Auvinen's study (2014), the results highlighted that learners show high willingness to engage in the learning process when various gamification techniques were incorporated in the classroom. Its 'play nature' turns dull lessons into a joyful learning environment. Another encouraging finding comes from Wang and Lieberoth's study (2016), which revealed the benefits of Kahoot! in establishing a pleasant classroom dynamic, especially with its audio and uplifting music features. Given the abundance of existing research demonstrating the significant impacts of gamification on student engagement and learning performance, it is easy to see why it has become extensively used across different levels of education in recent years (Davis, Sridharan, Koepke, Singh & Boiko, 2018; Kovisto & Hamari, 2019; Yanes & Bououd, 2019).

According to Ismail et al. (2018), students' attitude has a direct relationship with their learning achievements. When a student adopts a positive attitude, he or she is more likely to gain knowledge quickly and effectively in a gamified learning setting (Roll, Butler, Yee, Welsh, Perez, Briseno, Perkins, & Bonn, 2018). Meanwhile, numerous studies were carried out to investigate university students' perceptions towards gamification, and varied views have been

recorded (Soundrarajan & Veerappan, 2020; Tan, Ganapathy, & Kaur, 2018). Chen and Hoshower (2003) stated that it is crucial to examine learners' perceptions as it allows researchers to know the effectiveness of implementing specific strategies for learning.

Knowing students' familiarity with the technology and that gamification fits the movement of our current education system, it is critical to assess its compatibility with students at various education levels. This research aims to take the unique perspective of accessing secondary school students' attitudes and perceptions towards gamification in online English lessons. It is believed that the findings will allow a better understanding of the suitability of adopting this method and reveal the impacts of secondary school students' perceptions towards the level of engagement in an online gamified environment.

1.1 Problem Statement

Despite English is being acknowledged for its importance as the national second language and a powerful medium to communication across nations, studies have proven that Malaysian students are lack interest and motivation in learning the language, and it often seems like a boring subject (Nor, Razali, Talib, Ahmad, Sakarji, Saferdin & Nor, 2019; Puay, 2020). According to Tan et al. (2018), the lesson content to be mastered by the students is generally monotonous and uninspiring. Consequently, students often adopt a negative attitude towards English as a Second Language (ESL) learning (Ganapathy, 2016; Zukiflei & Said, 2020).

Meanwhile, this is accompanied by another worrying issue where the conventional teaching approach is no longer favoured by learners nowadays. Existing research indicated that the traditional lecture method could not deliver a lesson effectively and was deemed the least preferred teaching method for the lecturers and students from University Putra Malaysia (Ismail et al., 2010). In another study by Yap (2016), similar findings were obtained where the teaching approach used was under-satisfactory. The students were bored of the lesson being

delivered in the conventional way that they even performed undesirable behaviour such as sleeping and daydreaming in the classroom (Yap, 2016).

Regarding the issues mentioned earlier, the students' engagement rate in the English classroom was found degrading (Ganapathy, 2016). Consequently, it has contributed to the deficiency level in the students' English performance as they are unable to learn and retain the knowledge learnt effectively (Tan et al., 2018). According to Martin and Bolliger (2018), maintaining a good engagement rate is even challenging in the online learning context, especially for students who lack self-discipline. They would most likely be distracted by the surroundings and drift away from the lesson's content. More importantly, students tend to feel alienated and are less likely to involve themselves in online interaction with peers and teachers when they do not see each other in person (Gillett-Swan, 2017).

With that in view, previous researchers spent great efforts in identifying appropriate teaching methods which ensure effective learning, and gamification stands out as a popular choice among others for it sustains learners' attention and fosters long-term learning (Thang, Lee, Murugaiah, Jaafar, Tan & Bukhari, 2016). Recently, numerous studies have demonstrated the positive attitudes and perceptions of different parties as well as the effectiveness of gamification in education (Bicen & Kocakoyun, 2018; Ismail et al., 2018; Phung, 2020), yet most of the findings are only applicable for traditional face-to-face classroom instead of online learning. Besides, gamification is also widely applied in tertiary institutions. There exists an apparent scarcity of studies examining gamification among other levels of education, especially secondary education (Ab. Rahman, Ahmad & Hashim, 2018; Sulong, Ibrahim & Abas, 2020).

Hence, this research is conducted to fill in the research gaps by investigating secondary school students' attitudes towards gamification in the online English education setting. Furthermore, it aims to explore the impacts of perceived psychological effects of gamification on the secondary school students' engagement rate in online English lessons.

1.2 Research Objectives

The objectives of this research are:

1. To examine Perak secondary school students' attitudes towards the use of gamification in online English lessons.
2. To examine Perak secondary school students' perceived psychological effects of gamification on their engagement rate in online English lessons.

1.3 Research Questions

This research is carried out to answer the following questions:

1. What are the Perak secondary school students' attitudes towards the use of gamification in online English lessons?
2. How do Perak secondary school students' perceived psychological effects of gamification affect their engagement rate in online English lessons?

1.4 Significance of Research

This study is structured for the fundamental goals of exploring Perak secondary school students' attitudes towards gamification, and the impact of perceived psychological effects of gamification on their engagement rate in online English classrooms. The results of this study are believed to contribute significant insights to the different stakeholders in the field of education, primarily the secondary school English teachers.

Being an educator, one has the responsibility to continuously develop new and innovative strategies to deliver effective lessons. The findings would benefit the secondary school English teachers since gamification is only widely implemented in tertiary education. Hence, understanding secondary school students' attitudes allow teachers to know whether they favour this technique before incorporating it directly into online English lessons. If

positive results are obtained, teachers may consider applying this technique to remedy the common phenomenon of low student participation and engagement for future online lessons and vice versa.

In essence, gathering secondary school students' perceptions of the psychological effects of gamification and its impact on engagement rate offers further insights for secondary school English teachers to have a comprehensive understanding of how the students feel about this approach. Apart from addressing their psychological views, secondary school English teachers could also make appropriate adjustments to engage students in the learning process effectively. For instance, teachers may remove the total scores to reduce the feeling of embarrassment for students who obtain lower scores at the end of a quiz. It is crucial to consider their preferences before deciding on the teaching strategy for a particular group of students.

Additionally, the outcomes of this study would also be beneficial for the syllabus designers and the Ministry of Education in Malaysia. This is because it gives them an overview of the secondary school students' attitudes and perceptions towards gamification in an online English education setting. Therefore, they can design and revise the existing syllabus or even curriculum to be in line with 21st-century learning and enhance the achievements of learning outcomes with the help of gamification over the online platforms.

1.5 Limitations

The main limitation of this research is centred on the nature of the sample. The research only focuses on secondary schools students in Perak, and the findings cannot represent entire Malaysia, let alone Asia or even the globe. Another limitation to the data collection process could affect the validity of the results. Due to the COVID-19 outbreak, surveys are advised to conduct online to reduce the physical contact and virus spread. Hence, it is difficult for

researchers to determine whether the respondents' identity matches the desired sample, which can lead to false information.

1.6 Operational Definition of Terms

1.6.1 Gamification

Gamification is the application of game features and design concepts into non-game settings (Healey, 2018; Kriyakova et al., 2014; Nah et al., 2014). In this research, gamification will be defined as a type of teaching approach which aims to promote students' engagement by utilizing a variety of game elements and game design concepts to deliver the contents of the lesson in an educational setting (Dichev & Dicheva, 2017).

1.6.2 Attitudes

According to Ajzen (1991), attitudes refer to an individual's evaluation of the degree of positive or negative feelings towards a specific item, activity, people, situation, or organization. This research defines attitudes as the students' preference towards an item, specifically a teaching approach known as gamification.

1.6.3 Perceptions

According to Collins Essential English Dictionary (2006), perception is the point of view of a person and the way individuals understand or think about something. This study will define perception based on Hornby's (2006) explanations, which are the feelings or thoughts individuals have as they perceive or comprehend things.

1.6.4 Engagement

Student engagement refers to the degree of interest, willingness, and desire demonstrated by the learners to involve themselves in the process of learning, including their interaction with other individuals in the class and their eagerness to explore the topics involved (Bomia, Beluzo, Demeester, Elander, Johnson & Sheldon, 1997; Briggs, 2015). Thus, this study will define engagement as the students' willingness to participate and play an active role in classroom activities.

CHAPTER II

LITERATURE REVIEW

2.0 Introduction

This literature review mainly discusses and reviews existing literature in correlation to gamification. The topics covered in this chapter include Gamification, Game Elements in Education, Gamification in Education, Gamification in ESL Classroom, Factors Influencing Students' Engagement in Online English Lessons, Impacts of Students' Attitudes in Education, and Students' Perceptions on Using Games as Instructional Activity.

2.1 Gamification

Zarzycka-Piskorz (2016) defined gamification as the application of game components and game design mechanisms in non-game environments. It was credited with the development of technological advancements in gaming, social media, and ongoing research into humanistic psychology, which laid the groundwork for gamification (Werbach & Hunter, 2012). According to Figueroa-Flores (2016), its primary objective is to encourage the participation of individuals who are often referred to as "users" and to incentivise them through the incorporation of game aspects and mechanisms. The author also believed that the users would experience a sense of autonomy and involvement while carrying out or accomplishing a task. However, it is essential to review the four key components of the definition, namely games, elements, design, and non-game contexts, before considering the motivational features of this notion. Taking gamification as the focus of this study, hence thorough comprehension of its concepts is necessary. Each of the key components mentioned will be accompanied with its detailed definition as cited in the work of Sailer, Hense, Mandl, and Klevers (2013) in the following table:

Table 1

Definitions of Gamification Related Key Elements

Key Element	Definition
Game	Game is commonly believed to enfold aspects depending on various conditions. It encompasses a goal to be attained by the users, rules, and regulations that drive the player to achieve the goal, an assessment system that acts as a form of evaluation, along with the fact that participants must be involved in the game of their own free will.
Element	The feature serves as a measure in differentiating gamification from serious games.
Design	The term ‘design’ is discussed in relation to the use of game-related designs.
Non-game contexts	The area of application that is not limited by selective considerations.

2.1.1 Game Elements in Education

Nowadays, it is common to notice game elements, which are also often known as game components, in almost every modern game. Video games are one popular example that integrates various game elements (Sailer et al., 2013). Werbach and Hunter (2012) described game elements as the ‘main ingredients’ for gamification, which explain the distinctive and characteristic features of the game. Typical game elements are points, levels, progress charts, leaderboards, avatars, and rewards (Figuerola-Flores, 2015). These elements each contain unique and distinctive functions and could be accommodated in virtually any job, commercial

or educational setting (Figuerola-Flores, 2016). This literature review will present twelve game elements extensively employed in the educational setting, including the definitions and how different researchers explain them. These game elements are considered an essential aspect of this study as they will be adopted in the survey questions to gather the respondents' attitudes and perceptions towards gamification.

Points

Points refer to the accumulation of numeric scores that a participant gained for particular activities (Figuerola-Flores, 2016). They are used to determine the players' performance or success. Points can also be utilised as a reward for motivating one towards the target achievement. In an educational setting, points are often referred to as credits (Kumar & Khurana, 2012).

Badges

A form of visual representation of the participants' accomplishments (Figuerola-Flores, 2016). Badges are acknowledged as a signal of gratitude or task completion. Educators view badges as a beneficial tool for motivating students to strive towards their long-term goals and engage in the learning process (O'Donovan et al., 2013).

Leaderboards

The listing of players' positions determined by their performance throughout the game (Sailer et al., 2013). It instils a sense of competitiveness that drives the desire among the learners to see their names progress as a result of their accomplishments. Generally, a leaderboard presents only the top 5 or top 10 scores to prevent demotivating those players in the lower ranks. This

element was found to be the most effective way of encouraging the students (O'Donovan et al., 2013).

Progress Bars

Bars which display a player's current status of moving towards a specific goal (Sailer et al., 2013). Its function is to inspire and motivate learners who are almost reaching the goal or sub-goals if they struggle to keep up with the other players in a game (Berkling & Thomas, 2013).

Performance graphs

A graph that displays the player's performance in a game (Figueroa-Flores, 2016).

Quests

Little chores that must be completed by the player in a game (Sailer et al., 2013).

Levels

Multiple stages of a game with an increasing degree of difficulty (Figueroa-Flores, 2016). This element offers a sense of progression as they go through different stages from time to time. Players are expected to make an increasing effort as the game progress from beginner levels to more advanced levels. However, Goeh (2013) claimed that the level system has no significant relationship with the students' performance.

Avatars

A visual representation of a character that the player can select as an alter ego in a game (Figueroa-Flores, 2016).

Meaningful Stories

Made-up tales that the players live in in a game (Sailer et al., 2013). According to Kapp (2012), meaningful stories ensure an optimum interest curve in which the learners' interest remains at its peak throughout the learning process. Additionally, a good storyline also serves as a foundation for knowledge acquisition and problem-solving and demonstrates the applicability of concepts in real-world situations (O'Donovan et al., 2013).

Profile Development

The creation of characters and attitudes associated with them (Sailer et al., 2013).

Social Elements

Relationships formed with other players or characters in a game (Figuerola-Flores, 2016).

Reward System

A strategy that encourages a player to complete a mission (Figuerola-Flores, 2016). Raymer (2011) claimed that several modest prizes are preferable to a single large reward as the learners' motivation could be affected by the size of the reward. In-game rewards include character developments, it is a method of motivating students by showcasing their development as characters. The continuous character upgrade enables the students to apprehend the amount of commitment that they have put in to reach their current position (Raymer, 2011).

2.1.2 Gamification in Education

With the advent of new technology, the educational system in the 21st century has evolved tremendously (Figueroa-Flores, 2016). The incorporation of technology into education has become a vital step to improve the teaching and learning experience. Figueroa-Flores (2016) stated that the students desire to be challenged and driven as part of a learning process that introduces them to a new learning experience. Hence, it becomes a formidable challenge for educators to develop appropriate teaching strategies to attain the learning objectives required for the twenty-first century, which explains the reason for significant shifts in educational interests and teaching methods throughout generations (Figueroa-Flores, 2016).

Dichev and Dicheva (2017) stated that gamification is gaining popularity in the 21st-century education system. Zirawaga, Olusanya, and Maduku (2017) perceived games as an essential element in the teaching and learning process. Gamification assists instructors and learners in attaining the desired learning outcomes. Furthermore, learners not only study in a pleasant atmosphere, but have the opportunity to sharpen their creativity, critical thinking, and problem-solving skills while learning unconsciously, these are essential skills that one should master in the current education system (Mee Mee, Tengku Shadan, Ismail, Abd Ghani, Pek, Von, Woo & Rao, 2020; Mikasyte, 2018). By the same token, Tan et al. (2018) claimed that gamification is built on an immersive game, allowing students to engage in the learning process actively. Fundamentally, its play-oriented nature is a prominent factor in capturing learners' utmost attention and enhancing information retention (Tan et al., 2018). In Kalogiannakis, Papadakis, and Zourmpakis's (2021) study, students are given a chance to learn in a fun way, which indirectly impacts their performance in a gamified classroom.

Apart from that, educators found gamification as a promising approach for it effectively generates creativity and promotes productivity (Aljraiwi, 2019). Brull, Finlayson, Kostelec, MacDonald, and Krenzischek (2017) stated that gamification provides a supportive

atmosphere that enhances knowledge retention and comprehension of subject matter. A past study has proven that students can retain information twice as much as what they see than what they read (Raiyn, 2016). Since gamification involves heavy visual representations, it is believed that combining this method could produce better learning outcomes among the students (Azzouz Boudadi & Gutiérrez-Colón, 2020).

However, gamification is only widely implemented in tertiary institutions compared to other educational levels (Alomari, Al-Samarraie, & Yousef, 2019). Díaz-Ramírez's (2020) study examined the use of gamification among engineering undergraduates and concluded that it effectively improved the students' performance during the final examination. Similar findings were obtained in Tsay, Kofinas, and Luo's (2018) study, which focused on gamification among undergraduates. Besides, existing studies proved that students from higher education value gamification more than the conventional methods (Alabbasi, 2018), it helps to motivate the learners, keep them satisfied, and develop skills such as leadership, teamwork, and communication skills (Fuster-Guilló, Pertegal-Felices, Jimeno-Morenilla, Azorín-López, Rico-Soliveres & Restrepo-Calle, 2019; Guardia, Del Olmo, Roa & Berlanga, 2019; Jurgelaitis, Čeponienė, Čeponis & Drungilas, 2018).

Providing the advantages gathered in the literature above, they serve as a groundwork towards adopting and recognising the usage of gamification in the educational field. However, it should be noted that gamification is considered a less popular strategy among Malaysian secondary school students based on the fact that existing research mainly concentrated its usage among tertiary institutions (Alomari et al., 2019). Therefore, investigating students' attitudes and perceptions before the implementation is a fundamental step to consider, which could potentially benefit the current and future educators to acknowledge its appropriateness and effectiveness.

2.1.3 Gamification in ESL Classroom

Figueroa-Flores (2016) claimed that second language learning is deemed more challenging than the first language. An individual's second language competency will be primarily determined by the experiences obtained in the classroom or via other learning opportunities. With that being said, language teachers are required to evaluate and improvise the methods of delivery constantly. This showed a need to transform conventional teaching methods to more modern ones, like gamification (Dehghanzadeh, Salimi, Dehghanzadeh & Azizi, 2016; Renandya & Widodo, 2016). According to Figueroa-Flores (2016), one prominent aspect of gamification is that it conceptualises the educational objectives, the students will then regard these as the challenges to overcome throughout the learning process. To illustrate that, it enables second language learners to imagine themselves as players who eagerly strive to achieve certain goals as the lesson progresses.

Lam (2016) stated that gamification fosters 21st-century skills and improves cognitive achievements in ESL learning. It is believed that these skills will lead to improved grades and performance in different aspects of English, including speaking, reading, writing, vocabulary, and grammar with the help of technology (Alfulaih, 2018; Boyinbode, 2018; Dehghanzadeh et al., 2019; Tan et al., 2018). Concerning that, a SWOT analysis was conducted by Yanes and Bououd (2019), examining the use of gamification in English language learning in the classroom setting. Promising results were obtained in which students feel highly motivated when gamification is applied, it also resulted in increased confidence to speak in English.

Apart from that, gamification is the one that promotes continuous engagement among all the other strategies (Figueroa-Flores, 2016). Hence, educators, especially second language teachers, are embracing the emergence of this new trend by incorporating gamification into the classroom setting (Figueroa-Flores, 2016). Elena Peresada, an ESL teacher, wrote an article about her experience of applying gamification to deal with hyperactive and misbehaved

teenagers (Peresada, 2017). A drastic change was found in the students' behaviour, where they have shown great initiative in completing the English task and even requested extra assessments after the lesson (Peresada, 2017). According to Scheiner, Haas, Bretschneider, Blohm, and Leimeister (2016), the increased engagement rate results from the challenging nature of gamification, which sparks the curiosity and attention of the ESL learners.

As most of the learners are struggling in learning English as a second language (Chandran & Shah, 2019; Nor et al., 2019), the studies mentioned above have given further affirmation to gamification as a foundational stepping stone for encouraging students' engagement in ESL classrooms and an effective strategy for instilling 21st-century skills among learners (Hwang, Hsu, Lai & Hsueh, 2017). Meanwhile, Gunawan and Jupiter's (2018) study reflected a growing tendency of gamification in online learning. The researchers claimed this as a 'logical extension' since gamification utilizes various technology elements such as computer games that are highly applicable in online English education. However, as online learning differs from traditional classroom learning in many ways, the existing literature may not be applicable to the current education trend since gamification is often limited to the traditional ESL classrooms only. Hence, conducting this research is expedient and significant. It is necessary to explore ESL learners' views to determine whether gamification is beneficial in the online classroom setting. Thus, this study will be examining the secondary school students' attitudes towards the implementation of gamification in online English lessons.

2.2 Factors Influencing Student Engagement in Online English Lessons

The education system has been highly affected in light of the global outbreak of coronavirus disease 2019 (COVID-19). The Malaysian government enforced a complete shutdown of educational institutions at all stages, resulting in the transformation of conventional classrooms into online education (Malaysian Ministry of Education [MMOE], 2020). Md Nawī, Mohd Yusof, Kamaludin, and Sian (2021) acknowledged the real-world problem, stating that there is a major concern for students to stay engaged and motivated, especially in an e-learning environment.

According to Durón-Ramos, Garcíá Vázquez, and Lagares (2018), student engagement is affected by psychological factors which could influence their character development and judgement ability. In Chung, Subramaniam, and Christ Dass's (2020) study, students are undermotivated to engage themselves in the online teaching and learning process as they feel a sense of isolation due to no face-to-face interaction between one another. Similarly, a study conducted by Nassr, Aborujilah, Aldossary, and Aldosarry (2020) also identified the factors such as boring, lack of interaction, and loneliness are closely associated with online learning during the COVID-19 pandemic, and subsequently causing Malaysian students to have a hard time in engaging in the lesson.

Additionally, findings from a few past research indicated that students often perceive online education to be boring and less encouraging in which they are unable to learn as effectively as in the face-to-face classroom setting (Dhawan, 2020; Ismail, Bakar & Wafa, 2020). Consequently, students are inclined to show a low level of engagement in classroom activities. This phenomenon should be given great emphasis by the responsible stakeholders as many researchers claimed that students' engagement rate has a direct impact on their knowledge retention and academic performance (Alrashidi, Phan & Ngu, 2016; Bergdahl, Nouri, Fors & Knutsson, 2020; Bond, 2020; Fraysier, Reschly & Appleton, 2020; Tan et al., 2018). Besides,

previous findings have highlighted the significance of engagement in reducing dropout rates and student isolation, particularly in the online environment (Ansong, Okumu, Bowen, Walker & Eisensmith, 2017; Martin & Bolliger, 2018).

In light of the impacts mentioned above, it is evident that fostering a high rate of student engagement is critical to guarantee a successful online education (Martin & Bolliger, 2018). Research on the use of gamification to promote students' engagement rate has been extensively carried out in recent years. According to Sitra, Katsigiannakis, Karagiannidis, and Mavropoulou (2017), who conducted a study to examine the effect of game elements on the engagement rate of students with special educational needs, it has been found out that the use of badges is accompanied with positive results on the level of engagement. In contrast, the findings from a study conducted by Kyewski and Krämer (2018) show that the use of badges did not improve tertiary students' engagement in the online learning environment. The study reflected contradictory results where students are more active compared to the times they are told to earn badges in the gamified lesson (Kyewski & Krämer, 2018).

In sum, students' engagement rate in online learning is highly influenced by psychological factors such as the feeling of boredom, isolation, and loneliness (Chung et al., 2020; Durón-Ramos et al., 2018; Nassr et al., 2020). Apart from knowing the need for enhancing student engagement in online education, it is also crucial for educators to examine its association with the psychological aspects when applying new teaching approaches, such as gamification. However, the effectiveness of gamification on students' engagement might vary from different individuals based on the inconsistent findings obtained from the above literature. Therefore, this research plays a significant role in investigating the secondary school students' perceived psychological effects of gamification and their impacts on their level of engagement in online English classrooms. The findings will be beneficial for the secondary school English

teachers to acknowledge the students' perceptions and to make necessary modifications while using gamification to hasten the delivery of an effective lesson (Davis & McPartland, 2012).

2.3 Impacts of Students' Attitudes in Education

Mensah, Okyere, and Kuranchie (2013) conceptualised attitudes as a form of psychological disposition built up by an individual based on personal encounter, which shapes distinctive perceptions of events, objects, and people, along with the way of responding, either favourably or unfavourably. Second language researchers have shown much interest in investigating students' attitudes throughout the years, many results ascertain attitude as a fundamental aspect that could influence second language learning (Dincer, 2017; Getie, 2020).

In fact, the relationship between students' attitudes and language teaching and learning is known as a crucial aspect for research due to several reasons. Cherry (2021) claimed that attitude could have a powerful influence over an individual's behaviours, such as the willingness to speak in another language. Ismail et al. (2018) claimed that students' attitude directly relates to their learning achievements. According to Schibeci and Riley (1986, as cited in Weinburgh, 1998), there is evidence that attitude impacts accomplishment rather than accomplishment affects the attitude. This is because one's attitude has an impact on one's behaviour, emotions, which hence affects learning. In a gamified learning environment, a learner with a positive attitude is more likely to obtain knowledge quickly and efficiently (Roll et al., 2018).

According to Abolfazli and Sadeghi (2018), teaching strategies and tools adopted by the teacher are one of the prominent factors which influence students' attitudes towards language acquisition. In a study by Mistar and Embi (2016), which examined the use of WhatsApp as a learning tool in online lessons, the researchers looked into the pre-university students' attitudes to understand the extent to which they accept this method. Furthermore,

there exist many studies focused on the undergraduates' attitude towards gamification to ensure that future lecturers are able to prepare teaching materials that suit the students' needs (Bovermann, Weidlich & Bastiaens, 2018; Dawood & Mohammadlutfi, 2019).

In general, students' attitude towards the intended teaching approach is an aspect worth noting by the educators and researchers. However, the literature portrayed the fact of limited research that emphasised the secondary school students' attitudes towards gamification in recent years. Hence, this reflects the significance of discovering secondary school students' attitudes towards gamification in this research. Since gamification is considered a new technique among the secondary schools, the results obtained can contribute to the knowledge of secondary school English teachers towards the effectiveness of this teaching approach in the online lessons, which in turn has a close relation to their behaviour and successfulness in academic performance (Cherry, 2021).

2.4 Students' Perceptions on Using Games as Instructional Activity

Continuous efforts were shown by the educators in transforming the education to be aligned with the 21st-century paradigm (Hasim, Rafiq & Yunus, 2019). A vital step is the teachers' ability to modify traditional teaching approaches to more digitized and student-centred manners (Renandya & Widodo, 2016). However, it is crucial to consider Govender's (2019) words prior to this initiative. Govender (2019) emphasised the notion that students are exceptional individuals who perceive and react to diverse teaching styles differently, teachers must employ the most constructive methods to fulfill the ultimate goals of teaching. This has given further insights into why students' perception of the gamification technique has been extensively researched in recent years.

Bicen and Kocakoyun (2018) investigated the Preschool Teaching students' perceptions of gamification and noted that students highly value gamification. This technique

is helpful for students who face difficulty in learning because the respondents perceived its effectiveness to assist students in learning efficiently while having fun and enhance their self-confidence through social interaction with other classmates (Bicen & Kocakoyun, 2018). Besides, Alabbasi's study (2017) which examined university graduates' perspectives towards gamification techniques in the online learning environment revealed that the majority of the students perceived gamification positively. The university students believed that gamification allows the formation of good learning habits, increased sense of belonging, and succeed in their studies (Alabbasi, 2017). Researchers have been continuously exploring these studies since they serve a critical purpose. By considering students' perceptions, researchers can collect the viewpoints of undergraduate students about specific teaching method to ascertain their perception of its attractiveness and effectiveness. Meanwhile, teachers could make adjustments to improve the teaching quality (Govender, 2019).

Additionally, Alabbasi (2017) believed gamification has an impact on the learners' psychological well-being through the way they perceive its usefulness. Referring to Lander and Callan's (2011) study, the researchers looked at the psychological impact that gamification brings to undergraduate students. It has been discovered that students preferred to attend the questions or exercises where gamification was included. The researchers believed that this behaviour was triggered by students' perception of gamified quizzes as entertaining and rewarding. Furthermore, Lee's (2019) study contradicts the previous researchers where it concluded that gamification has a negative impact on the enjoyment of undergraduates.

Based on the literature, limited studies concentrated on secondary school students' perception of gamification into the online learning platforms despite there exists plenty of research about undergraduates' perception of gamification in education (Alabbasi, 2017; Bicen & Kocakoyun, 2018). Based on Govender's (2019) statement mentioned above, it is necessary to explore students' perceptions while applying gamification to different education levels to

explore its effectiveness since every individual responds differently to distinctive teaching approaches. Additionally, there is a relative scarcity of studies focused on the association of gamification with psychological impacts. It is also important to highlight that the findings of the related studies, such as the one conducted by Lander and Callan (2011), is outdated and might not be helpful for the current educators. Based on these reasons, this study will fill the existing literature gaps by exploring the secondary students' perceived psychological effects of gamification and their influences on the engagement rate in online English classrooms.

2.5 Summary

In short, this chapter discussed the topic of Gamification along with a few subtopics. The literature gap has been identified, along with justification of how this research will contribute further insights to the existing literature.

CHAPTER III

METHODOLOGY

3.0 Introduction

This chapter discusses the methodology used for conducting this research. Hence, this chapter includes the topics: Research Design, Sampling Technique, Research Participants, Instrumentation, Data Collection Procedure, Data Analysis, and Summary of the overall research procedure.

3.1 Research Design

In this study, a quantitative research design was employed to answer the two research questions. The quantitative method shortens the time taken for data analysis (Connolly, 2007), and generalization of findings to a population could be obtained since it involves a large scale of samples (Carr, 1994). Since this study involves a large group of respondents, the survey was used as the data collection technique by gathering quantitative data from the Perak secondary school students. The data collected is believed to offer in-depth insights and generalized information towards the implementation of gamification. Additionally, a questionnaire was adhered to as the instrument of this research. It was used to gather information about the participants; attitudes towards gamification and the impact of perceived psychological effects on their level of engagement.

3.2 Sampling Technique

This research was conducted based on a non-probability sample, with respondents being gathered using the snowball sampling method. Snowball sampling method is the act of approaching participants where the researchers typically begin with a small number of people who gradually contact other qualified potential respondents (Parker, Scott & Geddes, 2019).

Consequently, the participants can be gathered and appear like rolling a snowball that reaches out to a larger population (Sharma, 2017).

The adaptation of the snowball sampling method is favourable because it is convenient and less time-consuming (Naderifar, Goli & Ghaljaei, 2017). This method is generally applied in circumstances that is challenging to approach participants who possess desired characteristics (Naderifar et al., 2017). In this research, finding targeted participants will be a daunting task due to the COVID-19 pandemic. There is no physical encounter for researchers to approach the participants and deliver the survey. Thus, snowball sampling was employed to ensure the effective data collection procedure of this research.

3.3 Research Participants

By referring to the objectives of this research, this research enrolled students from Perak secondary schools as the participants. The number of research participants was initially based on Krejcie and Morgan's (1970) Sample Size Determination Table, in which a 10% (n: 384) of Perak secondary school students of the overall population will be chosen to participate in this research. However, due to the difficulty of obtaining response through an online questionnaire, this study only managed to gather the response from 79 Perak secondary school students. Despite that, Suhr (2006) suggested the general sample-to-item ratio, where the ratio used to determine the sample size should be at least 5-to-1 based on the number of items involved. Therefore, 79 participants are considered sufficient in a quantitative study, as there are only 15 items included in the online questionnaire. Since English is a compulsory subject to be taken by every secondary school student (Darmi & Albion, 2013; Nor et al., 2019), the Perak secondary school students, ranging from Form 1 until Form 5, were chosen as the participants without any restrictions. A good reason for such selection is to ensure a complete result can be obtained from different levels of secondary school students.

3.4 Instrumentation

Questionnaire was employed as the instrument for data collection in this research. The questionnaire involved questions revolving around attitudes, perceptions of the psychological effects of gamification and their impacts on the engagement rate in online learning. Questions in the questionnaire were carefully chosen and adapted from four (4) research papers. These four adapted research papers are from studies conducted by Ab. Rahman et al. (2018), Alabbasi (2017), Ismail et al. (2018), and Tan et al. (2018). Necessary modifications were made to meet the requirements and suitability for answering the two research questions.

The questionnaire contained an information sheet about the study and a total of four (4) sections, which are Section A, B, C, and D. At the beginning, an information sheet was provided to notify the respondents of the research objectives, their rights, confidentiality assurance, researcher's contact information, and informed consent. Assurance of confidentiality was emphasised by informing the respondents that they will answer with an anonymous identity. This is to ensure genuine responses could be given without fear or worries. The respondents' demographic information, such as age, gender, year of study, and personal email, was collected in Section A. In Section B, there was a total of five (5) questions examining secondary school students' attitudes towards the use of gamification in online English lessons.

Following that, Section C involved five (5) questions about secondary school students' perceptions of the psychological effects of using gamification in online English lessons. Next, Section D is a continuous segment from Section C. It was consisted of five (5) questions mapped directly to each question in Section C to explore the impact of perceived psychological effects on the secondary school students' engagement rate in online English lessons. Questions from all the sections were answered based on a 4-point Likert scale, in which '1' stands for 'Strongly Disagree,' '2' stands for 'Disagree,' '3' stands for 'Agree'; and '4' stands for

‘Strongly Agree’. This questionnaire departs from the conventional 5-option Likert scale to discourage respondents from having a neutral stance. Due to the unavailability to approach the respondents on a face-to-face basis, the questionnaire was generated through Google Forms, and a link was given to every respondent to collect the research data.

3.5 Data Collection Procedure

It is critical for a researcher to conceptualise the procedures that must be performed to collect data in a research project. The preliminary step of data collection was approaching Perak pre-service and in-service secondary school English teachers. The purpose of contacting these English teachers is because they have the most direct contact with the Perak secondary school students, which helps ease the data collection procedure. The pre-service secondary school English teachers were contacted by looking for undergraduate students from UTAR English Education Programme who have conducted or is currently conducting their teaching practice at different districts in Perak. As for the pre-service teachers who have completed their teaching practice but lost contact with their students, they were requested to approach the in-service English teachers from the secondary schools that they went to before.

The next step was to request Perak secondary school English teachers to distribute the questionnaire to their students. This is helpful in getting a comprehensive result by having respondents from different forms. Following that, a hyperlink for the online questionnaire in Google Form was generated and sent out to the Perak secondary school English teachers contacted previously. The hyperlink was sent along with a brief explanation and objectives of this research. They were also be informed that participation is not restricted to any forms. Hence, the teachers were only be required to directly forward the message to their students from different classes. Meanwhile, continuous follow-up was done every two weeks with the pre-service and in-service teachers to ensure the link for the online questionnaire is being

shared and passed to the participants. The following flowchart clearly outlines the data collection procedure to ensure this research is conducted smoothly.

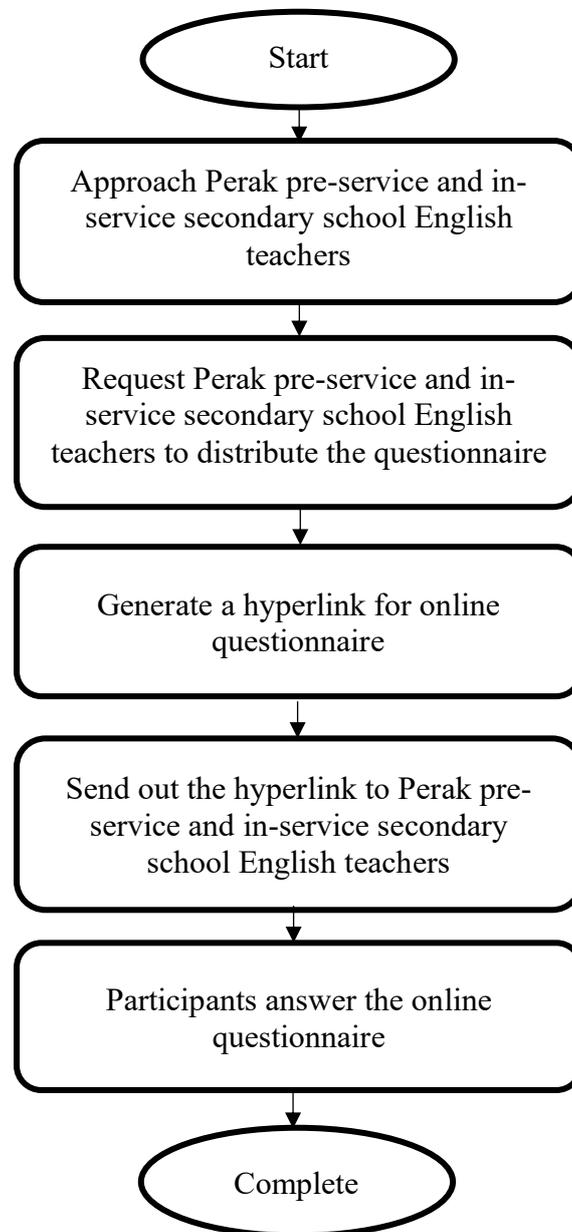


Figure 1. Flowchart for data collection procedure

3.6 Data Analysis

After gathering the data from the online questionnaire, there were analysed using the Statistical Package for the Social Sciences (SPSS) software. The data obtained were tabulated and encoded into statistics based on the frequency and percentage. Presentation of research data in the tabulated form puts the researcher at ease for result observation. Detailed analysis was then performed by sections to answer the research questions as mentioned.

3.7 Summary

In this research, a quantitative research design was adopted by utilising questionnaires as the instrument for data collection. Due to the unforeseen challenges of this pandemic, the recruitment of participants was carried out using the snowball sampling method. A total of 79 Perak secondary school students enrolled as the participants based on the 5-to-1 sample ratio as suggested by Suhr (2006). A set of online questionnaires consists of an information sheet, and four main sections was created using Google Form and sent to the participants through the link generated. When all the data is collected, they were converted into statistical form and analysed using the SPSS software. A list of tables was used to present the findings along with the detailed data analysis, thus guiding the researcher to answer the research questions accordingly.

CHAPTER IV

FINDINGS AND ANALYSIS

4.0 Introduction

This chapter highlights the findings by explaining the data gathered from an online questionnaire. The data concerns the participants' attitudes towards gamification, their perceptions of the psychological impacts of gamification and their perceptions of these effects on their engagement rate in online English lessons. The analysis is performed over the data using SPSS (version 26) and the findings are presented in tabulated form for better understanding.

4.1 Section A: Respondents' Demographic Background

The demographic profile of the respondents was acquired as part of the survey to ensure the diversity of participants and ascertain if the people in the research are representative of the target population for this research (Hammer, 2011). The respondents consist of 79 Perak secondary school students, and their demographic information in terms of age, gender, and year of study are listed in the table below.

4.1.1 Age, Gender and Year of Study

Table 2

Frequency and percentage of respondents' age, gender and year of study

Age

		Frequency (n)	Percent (p)	Valid Percent (%)	Cumulative Percent (%)
Valid	13	10	12.7	12.7	12.7
	14	17	21.5	21.5	34.2
	15	14	17.7	17.7	51.9
	16	15	19	19	70.9
	17	19	24.1	24.1	94.9
	18	4	5.1	5.1	100
	Total	79	100	100	

Gender

Valid	Female	48	60.8	60.8	60.8
	Male	31	39.2	39.2	100
	Total	79	100	100	

Year of Study

Valid	Form 1	12	15.2	15.2	15.2
	Form 2	15	19	19	34.2
	Form 3	15	19	19	53.2
	Form 4	16	20.3	20.3	73.4
	Form 5	21	26.6	26.6	100
	Total	79	100	100	

Age

As the research mainly targets secondary school students, the age range is found to be between 13 to 18 years old. Table 2 indicates that majority of the respondents are 17 years old. There are 19 of them, which made up 24.1% of the overall percentage. Next, 21.5% of the respondents fall under the age of 14 (n: 17), followed by 19% at the age of 16 (n: 15). The fourth majority group of respondents consists of 17.7% from the age of 15 (n:14), followed by 12.7% of respondents under the age of 13 (n:10). The smallest group of respondents come from the age of 18, as they only made up 5.1% of the overall percentage (n: 4).

Gender

Out of 79 secondary school students who took part in this survey, 48 are females, constituting a more significant percentage of 60.8%. On the other hand, 31 male respondents represent 39.2%, as illustrated in Table 2.

Year of Study

Table 2 presents the respondents' year of study distribution, ranging from Form 1 to Form 5. It is noted that the upper secondary school students constitute the two highest percentages. From the data collected, up to 21 out of 79 respondents are from Form 5 (26.6%), whereas the second large group consists of 16 respondents from Form 4 (20.3%). A similar number of respondents was found for Form 3 and Form 2, where each of them consisted of 15 students (19%). Lastly, the remaining 12 respondents from Form 1 represent the smallest group of participants in this research (15.2%).

4.2 Section B: Secondary School Students' Attitudes Towards Gamification in Online English Lessons

The first set of questions aimed to answer the first research question by collecting the participants' attitudes towards the implementation of gamification in online English lessons. There are five (5) questions in this section and the responses were analysed using descriptive statistics and presented in Table 3 below.

Table 3

Descriptive statistics of secondary school students' attitudes towards gamification in online English lessons

Descriptive Statistics

	Std.		
	N	Mean	Deviation
I find gamification fun and interesting.	79	3.43	0.673
I like the competitiveness in gamification.	79	3.14	0.843
I am interested in attending online English lessons that use gamification in the teaching and learning process.	79	3.37	0.803
I am excited to practice gamification in online English lessons because of its creative learning content.	79	3.27	0.763
I am looking forward to those aspects of online English lessons that involve the use of gamification.	79	3.29	0.787
Valid N (listwise)	79		

Item B1

Table 4

Frequency and percentage distribution for B1

I find gamification fun and interesting.

	Frequency	Percent	Valid Percent (%)	Cumulative Percent (%)
Valid Strongly Disagree	1	1.3	1.3	1.3
Disagree	5	6.3	6.3	7.6
Agree	32	40.5	40.5	48.1
Strongly Agree	41	51.9	51.9	100
Total	79	100	100	

When assessing Perak secondary school students' attitudes towards gamification in online English lessons, it is apparent that majority of the respondents believed gamification is fun and interesting ($m=3.43$, $SD=.673$). The responses given upon a 4-point Likert scale for Question 1 are further shown in the form of frequency and percentage in Table 4 above. A remarkable result of 51.9% was recorded for 41 respondents who strongly agreed that they find gamification fun and interesting. This is followed by a relatively high percentage of 40.5% of respondents who agreed with this statement ($n: 32$). However, a minority of 6.3% of respondents demonstrated a different view as they disagreed with the statement ($n: 5$), while 1.3% of respondents strongly disagreed ($n: 1$) that they find gamification fun and interesting.

Item B2

Table 5

Frequency and percentage distribution for B2

I like the competitiveness in gamification.

	Frequency	Percent	Valid Percent (%)	Cumulative Percent (%)
Valid Strongly Disagree	2	2.5	2.5	2.5
Disagree	17	21.5	21.5	24.1
Agree	28	35.4	35.4	59.5
Strongly Agree	32	40.5	40.5	100
Total	79	100	100	

Examination of data reflects that most Perak secondary school students like the competitiveness in gamification ($m=3.14$, $SD=.843$). As shown in Table 5, the majority of those who responded to this item strongly agreed that they like the competitiveness in gamification (40.5%). A less significant percentage of 35.4% was recorded for 28 of them who opted for 'Agree'. Interestingly, there are more opposite responses gathered for this item than B1. Seventeen (17) respondents were found to disagree with this statement (21.5%), whereas the remaining two (2) respondents considered that they strongly dislike the competitiveness found in gamification (2.5%).

Item B3

Table 6

Frequency and percentage distribution for B3

I am interested in attending online English lessons that use gamification in the teaching and learning process.

	Frequency	Percent	Valid Percent (%)	Cumulative Percent (%)
Valid Strongly Disagree	3	3.8	3.8	3.8
Disagree	7	8.9	8.9	12.7
Agree	27	34.2	34.2	46.8
Strongly Agree	42	53.2	53.2	100
Total	79	100	100	

Results from Table 6 above reported that majority of the Perak secondary school students were interested in attending online English lessons that use gamification in the teaching and learning process ($m=3.37$, $SD=.803$). The data prominently highlights that over half of the respondents (53.2%) strongly agreed that they are interested in attending online English lessons with gamification ($n: 42$). This is followed by 34.2% of respondents who agreed with the statement mentioned ($n: 27$). However, some opposing views to this statement were noted as 8.9% of the respondents disagreed ($n: 7$). The remaining minority of 3.8% of respondents strongly disagreed that they are interested in attending online English lessons that use gamification in the teaching and learning process ($n: 3$).

Item B4

Table 7

Frequency and percentage distribution for B4

I am excited to practice gamification in online English lessons because of its creative learning content.

	Frequency	Percent	Valid Percent (%)	Cumulative Percent (%)
Valid Strongly Disagree	3	3.8	3.8	3.8
Disagree	6	7.6	7.6	11.4
Agree	37	46.8	46.8	58.2
Strongly Agree	33	41.8	41.8	100
Total	79	100	100	

Closer inspection of the table shows a surprising result as the highest percentage was recorded for 'Agree' as compared to the previous statement in Section B. Table 7 highlights that 46.8% of respondents agreed that they are excited for the implementation of gamification in online English classrooms for its creative learning content (n: 37). A slight difference was noted for 41.8% of respondents who have chosen 'Strongly Agree' with this statement (n: 33). On the contrary, 7.6% of respondents who had the opposite choice disagreed (n: 6), whereas a minority of 3.8% of respondents were strongly not excited to practice gamification in online English lessons because of its creative learning content (n: 3). The data collected for B4 indicated that the majority of Perak secondary school students were excited to practice gamification in online English lessons because of its creative learning content despite there being some minorities with an opposite view (m=3.27 SD=.763).

Item B5

Table 8

Frequency and percentage distribution for B5

I am looking forward to those aspects of online English lessons that involve the use of gamification.

	Frequency	Percent	Valid Percent (%)	Cumulative Percent (%)
Valid Strongly Disagree	3	3.8	3.8	3.8
Disagree	7	8.9	8.9	12.7
Agree	33	41.8	41.8	54.4
Strongly Agree	36	45.6	45.6	100
Total	79	100	100	

While assessing Perak secondary school students' attitudes towards gamification, the data obtained from 79 respondents for B5 showed that most of them are looking forward to those aspects of online English lessons that involve gamification (m: 3.29, SD: .787). Once again, the option of 'Strongly Agree' was the most chosen response by 36 respondents (45.6%). There is only a slight difference in which 33 respondents agreed that they are looking forward to online English lessons that involve the use of gamification (41.8%). However, seven (7) respondents chose to disagree with this statement (8.9%), whereas there were three (3) respondents who were found to strongly disagree (3.8%).

4.3 Section C: Secondary School Students' Perceptions of the Psychological Effects of Gamification

In order to assess the impacts of secondary school students' perceived psychological effects on their engagement rate, this section was prepared prior to that to first gather the respondents' perceptions of the psychological effects of gamification. The responses were analysed using descriptive statistics and reported in Table 9 below.

Table 9

Descriptive statistics of secondary school students' perceptions of the psychological effects of gamification

Descriptive Statistics

	N	Std.	
		Mean	Deviation
Game elements convey to me the notion of a risk-free environment where I felt less stressed while studying English online because of the playful feeling associated with game elements.	79	3.22	0.827
The points accumulated through games instead of exercises reduce the anxiety feeling I used to experience in traditional English lessons.	79	2.94	0.882
The utilization of levels in gamification reduces the feeling of boredom I used to feel in traditional English lessons.	79	3.47	0.657
The display of performance graphs in gamification increases my sense of belonging and connectedness by seeing the involvement of the online community as a whole.	79	3.18	0.828
The social elements and interaction between avatars in gamification reduce the loneliness I used to experience in online English learning.	79	3.05	0.959
Valid N (listwise)	79		

Item C1

Table 10

Frequency and percentage distribution for C1

Game elements convey to me the notion of a risk-free environment where I felt less stressed while studying English online because of the playful feeling associated with game elements.

	Frequency	Percent	Valid Percent (%)	Cumulative Percent (%)
Valid Strongly Disagree	2	2.5	2.5	2.5
Disagree	14	17.7	17.7	20.3
Agree	28	35.4	35.4	55.7
Strongly Agree	35	44.3	44.3	100
Total	79	100	100	

The findings from Table 10 clearly illustrate that majority of the respondents perceived that game elements provide a risk-free environment while studying English online (m:3.22, SD:.827). It can be seen that the highest response was reflected by a total of 35 respondents who strongly agreed with this statement (44.3%). Meanwhile, 28 respondents agreed that they feel less stressed studying English online with gamification (35.4%). However, 14 respondents chose to disagree (17.7%). The remaining two (2) respondents strongly disagreed that game elements convey a risk-free environment where their stress level is reduced in online English lessons because of the playful feeling gamification provides (2.5%).

Item C2

Table 11

Frequency and percentage distribution for C2

The points accumulated through games instead of exercises reduce the anxiety feeling I used to experience in traditional English lessons.

	Frequency	Percent	Valid Percent (%)	Cumulative Percent (%)
Valid Strongly Disagree	5	6.3	6.3	6.3
Disagree	18	22.8	22.8	29.1
Agree	33	41.8	41.8	70.9
Strongly Agree	23	29.1	29.1	100
Total	79	100	100	

When asked whether the points accumulated through games reduce anxiety in learning English, the data indicated that a high percentage of respondents agreed with this psychological effect that gamification brings ($m:2.94$, $SD:.882$). The highest percentage falls under the category of 'Agree', as there were 41.8% of respondents have chosen this option ($n: 33$). This is followed by 29.1% of respondents who strongly agreed with this statement ($n: 23$). In comparison to the previous statement, C2 has recorded a higher percentage of respondents who have an opposite view. There were 18 of them who disagreed, which constitutes the percentage of 22.8%. Lastly, 6.3% of respondents strongly disagreed that the points accumulated through games reduce the feeling of anxiety that they used to experience in traditional English lessons ($n:5$).

Item C3

Table 12

Frequency and percentage distribution for C3

The utilization of levels in gamification reduce the feeling of boredom I used to feel in traditional English lessons.

	Frequency	Percent	Valid Percent (%)	Cumulative Percent (%)
Valid Strongly Disagree	1	1.3	1.3	1.3
Disagree	4	5.1	5.1	6.3
Agree	31	39.2	39.2	45.6
Strongly Agree	43	54.4	54.4	100
Total	79	100	100	

The data showed that more than half of those surveyed, 43 of the respondents, strongly agreed that boredom in learning English is reduced with the utilization of levels in gamification (54.4%). There was also a relatively high frequency recorded for those who agreed, which constitutes 31 respondents (39.2%). On the contrary, there is a minority of four (4) respondents disagreed (5.1%), while surprisingly, only one (1) respondent strongly disagreed with this psychological effect of gamification (1.3%). Overall, these results illustrate that majority of the respondents believed the utilization of levels in gamification reduces the feeling of boredom (m:3.47, SD:.657).

Item C4

Table 13

Frequency and percentage distribution for C4

The display of performance graphs in gamification increase my sense of belonging and connectedness by seeing the involvement of the online community as a whole.

	Frequency	Percent	Valid Percent(%)	Cumulative Percent (%)
Valid Strongly Disagree	3	3.8	3.8	3.8
Disagree	12	15.2	15.2	19
Agree	32	40.5	40.5	59.5
Strongly Agree	32	40.5	40.5	100
Total	79	100	100	

As the data reflects, it is prominent to know that a significant number of respondents believed that the performance graphs in gamification increase a sense of belonging and connectedness with the online community as a whole ($m:3.18$, $SD:.828$). An interesting trend was found as a similar frequency of 32 was recorded for the respondents who strongly agreed and agreed with this statement (40.5%). However, 12 respondents opted for an opposing view as they disagreed that performance graphs could increase the sense of belonging and connectedness in online learning (15.2%), whereas the remaining three (3) respondents were found to strongly disagree with this statement (3.8%).

Item C5

Table 14

Frequency and percentage distribution for C5

The social elements and interaction between avatars in gamification reduce the loneliness I used to experience in online English learning.

		Frequency	Percent	Valid Percent (%)	Cumulative Percent (%)
Valid	Strongly Disagree	6	7.6	7.6	7.6
	Disagree	16	20.3	20.3	27.8
	Agree	25	31.6	31.6	59.5
	Strongly Agree	32	40.5	40.5	100
	Total	79	100	100	

Based on the analysis of the responses collected, the results demonstrate that the majority of the respondents perceived that the social elements and interaction between avatars in gamification reduce the loneliness in online English learning ($m:3.05$, $SD: .959$). As shown in Table 14, the highest response was recorded for 40.5% of respondents who chose to strongly agree ($n: 32$), followed by 31.6% of respondents who agreed with this effect resulting from gamification ($n: 25$). However, 20.3% of respondents had gone for the option of 'Disagree' ($n: 16$), while a minority of 7.6% of respondents perceived a failure of gamification to reduce the feeling of loneliness in online English learning ($n:6$).

4.4 Section D: Impacts of Secondary School Students' Perceived Psychological Effects on Their Engagement Rate

As a continuation of Section C, Section D of the questionnaire collects and explores the impacts of perceived psychological effects on the engagement rate among 79 Perak secondary school students. Table 15 presents the responses collected and analysed in the form of descriptive statistics.

Table 15

Descriptive statistics of impacts of secondary school students' perceived psychological effects on their engagement rate

Descriptive Statistics

	N	Std.	
		Mean	Deviation
I am willing to respond positively and actively in online English lessons because I feel less stress to learn with gamification.	79	3.25	0.854
I am motivated to actively ask questions in online English lessons because I feel less anxious to learn with gamification.	79	2.68	1.057
I am motivated to work hard on the tasks given as it gives me a feeling of joy when gamification is used in online English lessons.	79	3.27	0.796
I have a better interaction between my classmates and my teacher in online English lessons because I feel a sense of belonging to learn with gamification.	79	3.27	0.843
I am motivated to eagerly offer input in small-group discussions as I feel socially connected to my classmates in online English lessons.	79	3.09	0.88
Valid N (listwise)	79		

Item D1

Table 16

Frequency and percentage distribution for D1

I am willing to respond positively and actively in online English lessons because I feel less stress to learn with gamification.

	Frequency	Percent	Valid Percent (%)	Cumulative Percent (%)
Valid Strongly Disagree	4	5.1	5.1	5.1
Disagree	9	11.4	11.4	16.5
Agree	29	36.7	36.7	53.2
Strongly Agree	37	46.8	46.8	100
Total	79	100	100	

Data gathered above represented an increased engagement rate. Most respondents are willing to respond positively and actively in online English lessons because they feel less stressed learning with gamification (m:3.25, SD:.854). Based on Table 16, 37 respondents strongly agreed with this psychological impact of gamification on their engagement rate in online English lessons (46.8%). Following that, 29 respondents chose 'Agree' (36.7%). For the remaining 13 respondents, it is apparent that nine (9) of them are not willing to respond positively and actively in online English lessons (11.4%); whereas four (4) of them are found to strongly disagree with this statement (5.1%).

Item D2

Table 17

Frequency and percentage distribution for D2

I am motivated to actively ask questions in online English lessons because I feel less anxious to learn with gamification.

	Frequency	Percent	Valid Percent (%)	Cumulative Percent (%)
Valid Strongly Disagree	14	17.7	17.7	17.7
Disagree	18	22.8	22.8	40.5
Agree	26	32.9	32.9	73.4
Strongly Agree	21	26.6	26.6	100
Total	79	100	100	

Examination of the data above indicates that the majority of the respondents are motivated to actively ask questions in online English lessons as they feel less anxious when gamification is being implemented (m:2.68, SD:1.057). Results from Table 17 suggested that the data distribution for this statement is more even than the previous. Out of 79 respondents, 26 agreed with this psychological impact of gamification on the level of engagement in online English lessons (32.9%). This is followed by 21 respondents who strongly agreed with this statement (26.6%). This result indicated only a slight difference for the number of respondents who have chosen the option of 'Disagree', which are 18 of them as presented in the table above (22.8%). Besides, 14 responses were recorded that they strongly disagreed with the impact of gamification on the engagement rate in online English lessons (17.7%).

Item D3

Table 18

Frequency and percentage distribution for D3

I am motivated to work hard on the tasks given as it gives me a feeling of joy when gamification is used in online English lessons.

		Frequency	Percent	Valid Percent (%)	Cumulative Percent (%)
Valid	Strongly Disagree	3	3.8	3.8	3.8
	Disagree	8	10.1	10.1	13.9
	Agree	33	41.8	41.8	55.7
	Strongly Agree	35	44.3	44.3	100
	Total	79	100	100	

Next, the findings reflect the positive psychological impact gamification had on the respondents' engagement rate in online English lessons as in being motivated to work hard on the task assigned (m:3.27, SD:.796). Table 18 indicates the most common response falls under the category of 'Strongly Agree', which is represented by 44.3% of respondents (n: 35). The second common response has only a slight difference from the previous, where 41.8% of respondents are found to agree with this statement (n: 33). However, 10.1% of respondents have chosen to disagree (n:8), whereas a minority of 3.8% of respondents strongly disagreed. They are not motivated to work hard on the given tasks since gamification does not provide them a feeling of joy in online English lessons (n:3).

Item D4

Table 19

Frequency and percentage distribution for D4

I have a better interaction between my classmates and my teacher in online English lessons because I feel a sense of belonging to learn with gamification.

	Frequency	Percent	Valid Percent(%)	Cumulative Percent (%)
Valid Strongly Disagree	4	5.1	5.1	5.1
Disagree	8	10.1	10.1	15.2
Agree	30	38	38	53.2
Strongly Agree	37	46.8	46.8	100
Total	79	100	100	

Data obtained from the survey also suggested that most respondents have better interaction with the members in online English lessons as they feel a sense of belonging learning with gamification (m:3.27, SD:.843). Table 19 represents a significant result of 37 respondents who strongly agreed to this impact of gamification on their engagement rate in online English lessons (46.8%), while there are also 30 of them who chose to agree with this statement (38%). In comparison, it was found that a minority of eight (8) respondents disagreed that they have better interaction with the members of online English lessons (10.1%). The remaining four (4) respondents strongly disagreed with this impact gamification has on their engagement rate (5.1%).

Item D5

Table 20

Frequency and percentage distribution for D5

I am motivated to eagerly offer input in small-group discussions as I feel socially connected to my classmates in online English lessons.

	Frequency	Percent	Valid Percent (%)	Cumulative Percent (%)
Valid Strongly Disagree	4	5.1	5.1	5.1
Disagree	15	19	19	24.1
Agree	30	38	38	62
Strongly Agree	30	38	38	100
Total	79	100	100	

Based on the analysis of the responses collected, social connectedness has motivated the majority of the respondents to eagerly offer input in small-group discussions during online English lessons (m:3.09, SD:.88). It is noteworthy that Table 20 indicates a similar percentage of 38% for respondents who agreed and strongly agreed with this statement (n:30). In contrast, the option of 'Disagree' has recorded with a total percentage of 19%, which is half of the percentage recorded for 'Agree' and 'Strongly Agree' (n: 15); whereas a minority of 5.1% of respondents are found to strongly disagree with this impact of gamification on their engagement rate in online English lessons (n: 4).

4.5 Summary

In a nutshell, the findings collected from the questionnaire showed that the majority of the Perak secondary school students adopt a positive attitude towards gamification in online English lessons. Besides, it is evident that most of the participants perceived the psychological impacts provided by the game elements of gamification in a positive manner. Majority of the participants also responded that these psychological impacts help enhance their engagement rate in the online English lessons.

CHAPTER V

DISCUSSION AND CONCLUSION

5.0 Introduction

This chapter comprises discussion for the findings gathered upon 79 Perak secondary school students' responses collected from a questionnaire. It is also accompanied by the research implications, recommendations to benefit different stakeholders, and a conclusion for the current research.

5.1 Discussion on Attitudes towards Gamification

This study aimed to examine Perak secondary school students' attitudes towards gamification in online English lessons and the perceived psychological effects of gamification in affecting their engagement rate in online English lessons. Upon collecting data from 79 Perak secondary school students, the results of the present study showcased evidence of a positive attitude towards gamification in online English lessons. These positive results are in line with Tan et al.'s study (2018), which provided noteworthy evidence of 100% of Malaysian higher education students expressing a positive attitude towards Kahoot! in learning English.

From the results gathered, 92.4% of the Perak secondary school students find gamification interesting. Similar findings were indicated in a recent study by Soundrarajan and Veerappan (2020), which concluded that 80% of University Tunku Abdul Rahman (UTAR) English Education undergraduates are highly motivated by interest when gamification is implemented. More remarkably, Mee Mee et al. (2020) claimed that gamification enables teachers to attract learners by turning a lesson fun and lively through the creation of inspiring content. In fact, 88.6% of the participants in this study indicated that they are excited to practice gamification in online English lessons because of its creative learning

content, ascertaining the students' positive attitudes towards gamification structured upon the inspiring learning content offers as compared to the traditional teaching method.

However, in this study, a surprising finding was highlighted by 24% of the participants who do not favour competitiveness in gamification. This item has gained the highest negative response from the participants. These opposing responses can be explained by referring to Alomari et al.'s study (2019). Their findings show that learners are more likely to feel frustrated and adopt low self-confidence once they fail to accomplish the desired outcomes. Consequently, learners are demotivated and start to lose interest due to the fear of failure they associate with the competitiveness in gamification (Alomari et al., 2019). Despite that, the remaining 76% of participants from the present study who favour the competitiveness of gamification is in line with Ismail et al.'s findings (2018) which highlighted that students love the challenging aspect of gamification as it promotes eagerness to learn in order to win.

5.2 Discussion on Perceived Psychological Impacts of Gamification

Smiderle, Rigo, Marques, Peçanha de Miranda Coelho, and Jaques's study (2020) concluded that game elements would affect the students' learning. This affirms the importance to examine the participants' perception of the psychological effects and the impacts on their engagement rate in learning English online for this study. Close inspection of the findings has proven that the participants in this study perceived the psychological impacts provided by the game elements in a positive manner. In Alabbasi's study (2017), the results demonstrated the effectiveness of game elements in reducing online learning stress. Indeed, 83.5% of the participants in this study indicated that they perceived learning English online to be less stressful due to the playful feeling associated with the game elements. These positive findings are also in tandem with the past studies by Tan et al. (2018) and Kalogiannakis et al. (2021).

Both studies revealed the ability of gamification to provide a risk-free learning environment concerning its fun, relaxing and enjoyable nature.

Another key finding of this study supports the notion that the points accumulated through games help reduce the students' anxiousness while learning English. This aspect is reflected in Pitoyo, Sumardi, and Asib's study (2019), which found a significant reduction in anxiety among students when Quizizz was used to gather points for an exam. The potential of this point-based system has also been addressed in other previous studies. In the works of Davis et al. (2018), the use of points enables learners to feel relaxed and enjoy. This, in turn, stimulates great interaction between the students to learn in a secure learning environment. Unfortunately, these results failed to correspond to the findings of Soundrarajan and Veerappan (2020) because an unexpected fact revealed that 70% of the participants claimed an increase in anxiety while using gamification. The underlying cause was found to be the feeling of insecurity and embarrassment that developed once the accumulation of points was revealed to the entire class. Students tend to feel uncomfortable as they do not want their performance to be recognised by their classmates, not to mention the situation where they failed to score well. A participant from Turan, Avinc, Kara, and Goktas's study (2016) also reported that gamification is not only causing anxiety but also promotes jealousy among students.

Khalil, Ebner, and Admiraal's paper (2017) explicated how levels-based gamification could encourage students' participation by providing a fun and challenging experience. Positive reactions to the use of levels in minimising boredom while learning English online were also addressed in this study. Similarly, students in Alabbasi's (2017) and Ismail et al.'s study (2018) acknowledged that gamification could stimulate interest in learning. The idea behind this is for the student to unlock new levels through continuous achievement, making the instructional activity less dull.

Besides, the results obtained in this study also highlighted that the display of performance graphs could increase the students' sense of belonging and connectedness by seeing the involvement of the online community as a whole. Alomari et al. (2019) discovered that online learning often puts forward the feeling of loneliness and social isolation. More importantly, Baber (2021) postulated that social interaction is among the significant factors which could hinder the delivery of effective online lessons. Hence, these findings have reported that performance graphs used in gamification have an influential role in enhancing students' sense of community and belonging in an online setting. Many other researchers also found that performance graphs allow students to monitor their peers' performance, thus establishing a social comparison that pushes an individual to engage in the learning process to be part of the community (Aldemir, Celik, & Kaplan, 2018; Ding, Er, & Orey, 2018; Suh, Wagner, & Liu, 2018). Despite that, these findings failed to correspond to Çakıroğlu, Başıbüyük, Güler, Atabay, and Yılmaz Memiş's study (2017), whose participants expressed a negative viewpoint that they would rather not have gamification in the learning process as the students feel bad when the performance graphs are not in line with their expectations.

Another significant finding of the current study is that the participants have contributed 27.9% of negative views to the statement that the social elements and interaction between avatars in gamification reduce loneliness in online English learning. Several previous studies have revealed similar findings as well. Lukosch, Broekhans, and Gordijn (2019) indicated that social elements and avatars are intended to promote involvement and interaction between the students. However, the researchers revealed that these elements have failed to receive acceptance from the students. Similar results were reflected in Hauge, Barenbrock, and Thoben's study (2017), which focused on avatars in games. Unfortunately, it was found that the introduction of avatars had only a slight effect in terms of the students' interest, enjoyment, pressure, and perceived choice to practice gamification. Nevertheless, only limited studies

involved avatars and social elements of gamification (Rincon-Flores, Gallardo, & Fuente, 2018). Students might be more inclined to neutral or negative responses due to a lack of exposure to such elements when gamification is implemented.

5.3 Discussion on Perceived Psychological Impacts of Gamification on Affecting Engagement Rate

The current study also revealed significant insights into the favourable perception of the perceived psychological impacts of enhancing engagement rate in online English lessons. 83.5% of the participants indicated that they have a high willingness to respond positively and actively in online English lessons because gamification lowers the stress level that they constantly associate with learning. These findings are consistent with Ismail et al.'s (2018) and Yanes and Bououd's study (2019) as the results recorded increasing responsiveness among the students when gamification was implemented. Mee Mee et al. (2018) explained that gamification generates a pleasant competitive environment in which students feel secure. Consequently, they will be active in responding or eager to participate without worrying about others' judgement (Licorish, Owen, Daniel, & George, 2018). Another interesting finding is that while the majority of participants in Soundrarajan and Veerappan's study (2020) admitted to experiencing stress, a relatively high percentage of 30% said they do not because gamification provides anonymity and, more importantly, they perceive it as merely a relaxing educational game.

Ab. Rahman et al. (2018) reported in their study that 96% of the participants believed in the effectiveness of gamification in enhancing their engagement rate. One of the outcomes is that the students are eager to ask questions if they have any doubts. It aligns with the findings of the current study as most of the participants agree with this impact on their engagement rate. However, it is also prominent to highlight a surprising result that 40.5% of participants

disagreed, which is nearly half of the total respondents. Budiati (2017) conducted a study focused on the students' feelings before and after the implementation of Kahoot!. The findings revealed an even higher percentage of 92.11% of the students who are still afraid to ask questions during the English lessons after being introduced to Kahoot!. This could be attributed to the factor of anxiety, as mentioned in Wang and Tahir's study (2020).

Apart from that, Yanes and Bououd (2019) performed a SWOT analysis on gamification and found out one of the opportunities suggested is that gamification incorporates more joy and pleasure into the classroom. The result from this study is parallel with the previous study, as 86.1% of the participants agreed that they are motivated to work hard on the tasks given as it offers a feeling of joy when gamification is used in online English lessons. Another research by Brewer, Anthony, Brown, Irwin, Nias, and Tate (2013) also revealed interesting findings. As a result of the increased willingness and motivation, students' task completion rate increased from 73% to 97% after using gamification to establish a pleasant learning environment.

The favourable perception about the perceived psychological impacts of enhancing engagement rate is also reflected by 84.8% of participants who agreed they interact more with their classmates and teacher in online English lessons because gamification provides a sense of belonging. The findings are consistent with Alabbasi's study (2018), which found that students prefer gamification because it allows them to be more interactive. This also agrees with Boyinbode's study (2018) results where gamification encourages students' interaction and communication while having fun during the lesson. Interestingly, it was revealed as one of the strengths of gamification by Yanes and Bououd (2019). The research findings also support the notion that students are willing to offer input in small-group discussions due to social connectedness. This is consistent with Alabbasi's (2018) and Ab. Rahman et al.'s study (2018) stated a positive outcome of active participation in small-group discussion with the

online gamification system. Hence, classroom engagement is promoted because social connectedness motivates the students to be willing to devote more effort to work with others as a whole (Alomari et al., 2019).

5.4 Summary

Overall, gamification has successfully obtained a positive attitude from the Perak secondary school students for its usage in online English lessons. Participants claimed that they feel gamification is fun and interesting. They like the creative learning content it brings and are looking forward to its implementation in the teaching and learning process. Besides, participants also expressed their positive feedback on the psychological impacts brought by various game elements, such as being less stressed, anxious, bored, lonely and an increased sense of belonging. These psychological impacts serve an influential role to increase students' engagement in online English lessons. However, there are also a few areas that received a great amount of negative feedback from the students that the teachers should notify if they wish to implement gamification in their lessons one day.

5.5 Implications of study

One of the most crucial implications of this study is that it would benefit those interested in the field of gamification in English education, especially the ones who wish to see its incorporation within the online learning setting. The results obtained provide a clear understanding for different stakeholders about the secondary school students' attitudes towards gamification and their perceived psychological impacts of gamification on the learning experience. As the results indicated that these perceived psychological impacts significantly affect the students' engagement rate in the online English lessons, it simply implies that the use

of gamification instead of conventional teaching and learning approaches for the English lessons has been validated.

Hence, these findings could serve as a reference for future researchers while conducting studies about gamification. A comparison of results could be made to highlight the significant similarities and differences in the upcoming studies. Not only that, education policymakers could consider the incorporation of game elements while framing and developing future education plans. Great emphasis on the usage of gamification should be highlighted and well-incorporated into different levels of English lessons to support the students' learning. Peeking into the students' positive attitudes and perceptions of gamification, it implies that future and in-service teachers could modify or improvise the traditional way of teaching into something fresh and exciting for the students, just like gamification. Instead of preparing normal worksheets or handouts, teachers can try presenting the task or information through gamified activities or platforms that are easily accessible online, such as Quizizz, Quizlet, Padlet and so on. In essence, students' engagement rate in the English lessons is believed to be greatly enhanced, especially when online classes are becoming more prominent due to the COVID-19 pandemic.

5.6 Recommendations

This research has reflected a few aspects in need of improvement for future investigation. Firstly, it is recommended for future studies to expand the focus on the target participants. Instead of focusing on Perak secondary school students, it would be interesting if the researchers could consider gathering the participants from different or multiple states. They can also select a different target group, such as primary school students since there is only limited research found to implement gamification within this level of education. Therefore, researchers can explore or assess the different levels of students' attitudes and the effectiveness

gamification could have on their learning process; this would then provide further insights into gamification in education.

In addition, it is recommended that the researchers could perform a deeper examination and analysis of the students' attitudes and perceptions towards the use of gamification. From the quantitative approach used in this study, it can be noted that the responses collected are very limited and are pre-determined by the researcher. Hence, future researchers are suggested to consider using a qualitative approach such as conducting interviews with the participants.

5.7 Conclusion

This research is undertaken to assess Perak secondary school students' attitudes and perceptions towards gamification while examining the effect of perceived psychological impacts on the students' engagement rate in the online English classroom setting. Investigation of the first research question has shown that secondary school students favour the implementation of gamification in the online teaching and learning process for the English language. The study also highlights a significant positive perception of the psychological impacts brought by gamification and reflects an increased engagement rate when gamification is adopted for online English lessons in general. Therefore, it can be concluded that gamification is highly accepted by the Perak secondary school students.

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APPENDIX A
QUESTIONNAIRE

**Exploring Secondary School Students' Attitudes and Perceptions Towards the Use of
Gamification in Online English Lessons**

Dear respondents,

I am Ng Man Yi, an undergraduate student from the Faculty of Arts and Social Science who are currently pursuing Bachelor of Arts (Hons) English Education in Universiti Tunku Abdul Rahman (UTAR), Kampar. I am conducting a study on Exploring Secondary School Students' Attitudes and Perceptions Towards the Use of Gamification in Online English Lessons for my final year project.

This survey is conducted to examine secondary school students' attitudes towards gamification and the impacts of perceived psychological effects on the level of engagement in online English lessons. There is a total of 4 sections which will take up 8 to 10 minutes of your time to complete. Please answer each section with complete thoughtfulness. Your responses and personal details will be kept private and confidential only for the use of this research. If you have any further inquiries about this study, do not hesitate to contact frances724@utar.my. Thank you for taking your time to complete this questionnaire and your response is highly appreciated.

By completing this survey, you are consenting that your participation in this study is voluntary. You have the right to withdraw from this survey at any time without penalty. Your anonymity will be protected as the personal data and responses collected will be kept confidential from the access of other parties or institutions.

Agree ()

SECTION A

Demographic Information

Age _____**Gender** Male () Female ()**Year of study** Form 1() Form 2() Form 3() Form 4() Form 5()**Personal email** _____**SECTION B**

This section contains five questions about secondary school students' attitudes towards gamification in online English lessons. Answer all the questions based on the following scale:

1	2	3	4
Strongly Disagree	Disagree	Agree	Strongly Agree

Secondary School Students' Attitudes Towards Gamification in Online English Lessons

No.	Statement	Response			
		1	2	3	4
1.	I find gamification fun and interesting.				
2.	I like the competitiveness in gamification.				
3.	I am interested in attending online English lessons that use gamification in the teaching and learning process.				
4.	I am excited to practice gamification in online English lessons because of its creative learning content.				
5.	I am looking forward to those aspects of online English lessons that involve the use of gamification.				

SECTION C

This section contains five questions about secondary school students' perceptions of the psychological effects of gamification in online English lessons. Answer all the questions based on the following scale:

1	2	3	4
Strongly Disagree	Disagree	Agree	Strongly Agree

**Secondary School Students' Perceptions of the
Psychological Effects of Gamification**

No.	Statement	Response			
		1	2	3	4
1.	Game elements convey to me the notion of a risk-free environment where I felt less stressed while studying English online because of the playful feeling associated with game elements.				
2.	The points accumulated through games instead of exercises reduce the anxiety feeling I used to experience in traditional English learning.				
3.	The utilization levels in gamification reduce the feeling of boredom I used to feel in traditional English lessons.				
4.	The display of performance graphs in gamification increases my sense of belonging and connectedness by seeing the involvement of the online community as a whole.				
5.	The social elements and interaction between avatars in gamification reduce the loneliness I used to experience in online English learning.				

SECTION D

This section contains five questions about the impacts of secondary school students' perceived psychological effects on their engagement rate in online English lessons. Answer all the questions based on the following scale:

1	2	3	4
Strongly Disagree	Disagree	Agree	Strongly Agree

**Impacts of Secondary School Students' Perceived Psychological Effects
on Their Engagement Rate**

No.	Statement	Response			
		1	2	3	4
1.	I am willing to respond positively and actively in online English lessons because I feel less stress to learn with gamification.				
2.	I am motivated to actively ask questions in online English lessons because I feel less anxious to learn with gamification.				
3.	I am motivated to work hard on the tasks given as it gives me a feeling of joy when gamification is used in online English lessons.				
4.	I have a better interaction between my classmates and my teacher in online English lessons because I feel a sense of belonging to learn with gamification.				
5.	I am motivated to eagerly offer input in small-group discussions as I feel socially connected to my classmates in online English lessons.				

End of Survey

Thank you for your time and participation.