Memory Stay Or Stray?: Irregular Verbs Learning Using *Kahoot!*

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Abstract

Even though gamification has been lingering for years now, its popularity has been rising ever since. In fact, across disciplines and contexts, the amplification of 21st century learning has been giving gamification a special place in education. There are numerous studies conducted on the use of gamification among school children, university students or even trainee teachers. Coincidentally, all of these studies have shown that gamification does impact their learning. Hence, as harmless as it seems, any teachers who are not equipped with such knowledge on the benefits of gamification may hinder their learners and themselves from reaching their utmost teaching and learning experience especially when it comes to grammar learning among the younger pupils. Considering this thought in mind, this research was conducted to prove that the use of *Kahoot!* helps the Year 3 pupils in retaining the English Irregular verbs. This quasi – experimental designed research gathered data from a sample of 35 Year 3 pupils using the pre-test and post-test results. The findings which were analysed descriptively using sample t-test showed that pupils' performances in the post-test improved over the use of *Kahoot!* in classroom. In conclusion, this research provides an insight on number of ways that gamification can actually impacted the pupils' learning; especially in terms of memory retention. It also works as a stepping stone for more researches to study on the effectiveness of using *Kahoot!* in tackling any part of learning especially among the younger learners.

Keywords: Game-based student response system, gamification, irregular verbs, *kahoot!*, memory retention

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Introduction

For the past decades, the world was not that reliable on the technology. However, as 4th Industrial Revolution is kicking in, the use of technology has been blooming and spreading like wildfire to all aspects of lives in the current days. As a matter of fact, statistics showed that there were over 40% of online transactions are done as compared to the past years. This is the simplest evidence to show the influence of ever growing technology towards mankind's daily lives including shopping! On top of that, Perry (2015) reiterates that three billion hours were spent on gaming all across the world and with the presence of mobile technologies, gaming is now mobile. Besides influencing mankind's current lifestyle, the domination of Information and Communication Technologies (ICT) seemed to play an integral part in the current education world especially with the emphases on 21st Century Learning.

In fact, according to Yunus (2018), teachers these days are 'forced' to shift their pedagogy practises as it is very much influenced by the ever-updated technology. Consequently, the notion of gamification which was introduced by Nick Pelling in 2002 has resulted to the birth of interactive applications namely known as *Kahoot!*, *Socrative*, *Quizziz*, *Quizlet* and *Plickers*. This concept is idealised with the application of parts of game mechanics into other web properties to enhance engagement. Over the recent years, researchers proved that gamification have shown worthy in assisting learners' motivation and engagement in learning. Even though, there are a number of researches on the use of *Kahoot!* to enhance English grammar learning, unfortunately, there aren't as much when it comes to local research on how *Kahoot!* impacted the Irregular verbs learning particularly among the nine year old school pupils. As one might know, Irregular verbs learning is viewed as one of the toughest grammar elements to be mastered especially among those who learn English as their second, third or foreign language. As a matter of fact, the researcher also found out that this issue affected his pupils at school too.

An average Malaysian students would have roughly about 11 – 12 years of English language education before starting the tertiary level which means that they should at least possess a satisfactory level of English by then. However, a research carried out by Singh et al. (2017) have proven otherwise. Almost thirty percent of the grammatical errors made by the Diploma students in Malaysia is contributed from verb tense including the Irregular verbs. From this finding, it is more apparent as to how significant it is to curb this issue as early as possible. Traditionalist believed that memorisation is the only way to retain information on Irregular verbs. To certain extent, this belief is somewhat true considering that "one rule doesn't apply to all" concept of Irregular verb. However, this technique only turns the whole learning experience dreadful and mundane, which in the end contradicts to Malaysian's Ministry of Education vision of "fun learning in classroom". Since the growing population of educational applications has been taking a lot of attention lately, it only makes more sense if current teaching and learning employs any of these applications in making even mundane and complicated part of grammar more fun and relatable to the learners especially the young ones.

Among the reason to resistance towards English practise is using the right grammar. To top that of, irregular verbs in particular seems to be very confusing with the inconsistent and ever changing rules. This led to low mastery on Irregular verbs among them. Meanwhile, to some others, they chose to simply use the same concept on everything; in other word, they

overgeneralised. According to Richards (1974), overgeneralisation happens when one deviant structure is used against two regular structures. Dörnyei (2009) inferred to this by stating that, fewer attentional resources are necessitated when rules have been highly automatized. This resulted to larger portion of rules functioned on auto pilot. Sadly, with limited knowledge of past tense form, inflections such as ‘*ed*’ is added after action words (verbs); “*She cutted the fruits last night*” (Wee, Sim & Jusoff, 2010). Another cause to this would be the influence of the first language or mother tongue such. Let’s take the Malay language for an example. Ideally, Malaysian Malays do not have any irregular forms or additional suffixes to indicate the action that has taken place in fact, they use the word ***telah*** or expression of time such as ***semalam*** (Suppiramaniam, 2012).

Another issue pertaining this topic is the low memory retention among pupils in learning Irregular verbs. Up until now, there are no specific style in teaching irregular verbs. Even so, we could somehow agree that the option is to go with rote learning, in which pupils are given a list of irregular verbs and asked to memorise them. It could work on some of them with some of the words. However, in most cases pupils tend to get it mixed up especially when the words are grouped together with the past participle form. Therefore, before deciding on the correct method to teach irregular verbs, teachers must know that there are two types of memory; declarative memory and procedural memory. According to O’Grady (2006), declarative memory deals with the “leaning and storage of facts and events including arbitrary information” (p.2). This type of memory is often associated to lexicon or mental dictionary, in which the memory works when the learner is able to relate to the new knowledge obtained including its meaning, pronunciation and use. Nevertheless, the information stored in this memory required ones’ conscious awareness upon retrieving it. As for the procedural memory, it centres on the use of broad range of motor and cognitive skills particularly the ones involving sequencing (Pinker & Ullman, 2002). It is believed that this type of memory assists the computations and symbol manipulation in regards to grammar components such as syntax, non – lexical semantics, morphology, and phonology. Unlike its counterpart, this memory operates through unconsciousness, in other words, the learners may not be aware of what enable them to form or interpret sentences especially in first language acquisition. Often, whenever learning second language is discussed, the memory involved would be declarative. So the question at hand would be, how to ensure that the lesson employed hits this part of their memory in learning about irregular verbs? Therefore, the aim of this paper is to scrutinize the use of *Kahoot!* in developing English Irregular verbs among the young English language learners.

Literature Review

In this world of technology, everything is possible. In the olden days, teaching and learning only requires a simple tool as a blackboard and a chalk. However, these days, even social media platforms can be transferred into a learning experience. A research conducted by Jalaludin, Abas and Yunus (2019), resulted that the function of “askme” in Instagram can provide a conducive learning to the pupils besides improving their English writing skill and parent-child interaction at home. If one might wonder, what are the reason behind all these possibilities, the answer would be “the computer technologies”. According to Yunus, Salehi and Amini (2016), there are many ways computer technologies can be corporate into language learning. Among of this contribution would be the existence of the computer facilities such as graphics, videos, text, audio, animations

and above all, interactivity. The idea of computer technologies has been given pathways to other ideologies to surface such as gamification and game-based student response system.

Gamification and Game-based Student Response System (GSRS)

Khaleel et. al (2016) define gamification as an integration of game elements in a non-game to solve task at hand effectively. Why is gamification a huge deal among the educators around the globe? As agreed by many, gamification has effectively improved learners' learning experience in comparison to the traditional teaching and learning. Yolageldili & Arikan (2011) concluded in their study that *gamification* encourages grammar learning to be more enjoyable and permanent because the game successfully provides a meaningful context for communicative grammar practice. In fact, 63.33% of the participants of the aforementioned study disagreed when learners' knowledge of grammar is claimed not to be measurable when games are used in classroom. This testimony indicates that *gamification* has great potential to be used in aiding grammar learning. In fact, through games, teachers could create contexts which allows for unconscious learning to take place because learners' attention is on the message, not on the language (Cross, 2000). As a result, once learners are paying attention to the game as an activity, they are acquiring the language in the same way they acquired their mother tongue which is by not being aware of it. This element of unconscious learning would be very fitting with this study especially in applying the irregular verbs learning which is said to be prompted even before than the regular verbs. Hussein (2015) highlights four key domains on how gamification benefitted the learners. Among the two domains involved learners especially the young ones see this approach rather more entertaining and fun hence lowering their affective filter and keep the engagement level at bay. Secondly, gamification allows learners to reflect upon their own learning.

As similar it is to the traditional quizzes, gamification reaches another level on its own as it encourages the learners to compete with each other to be placed among the upper ranks. Hence making the experience more fun and meaningful to the learners particularly those nine year olds. Coincidentally, apart from making the learning more fun to the learners, this approach comes very handy to the teachers as it allows them to assess their pupils' learning formatively. The data can be retrieved right away and enables future intervention to be made. Finally, gamification-based such as *Kahoot!* allows learners to keep on trying to get themselves onboard with the lessons without feeling intimidated or fear of making themselves seemed foolish. An example of this practise is exemplified from the display of only the three top places in the final leaderboard. This way, those who didn't score well won't be at any risk of exposing their performance to the others. Hence, enable them to work at their own pace without feeling any pressure or embarrassment from it, which eventually contributed to *meaningful learning*; a form of learning resulted from a well organised and relevant structures as well as its association to emotional commitment tangled between the new and existing knowledge. Normally, this form of learning takes place once all of the following prerequisites must be met by the learners; (1) the material learned must be potentially meaningful (2) the learner must have relevant concepts and propositions in their mind (3) the learner opted to relate and integrate the new ideas with the existing ones.

In earlier discussion, when the writer mentioned 'game elements', this refers to game mechanics, game design and game techniques. 'Leaderboard' as the one instilled in *Kahoot!* is one of the core game elements which shows rankings of game players based on their accomplishment

levels. During a semi-structured interview carried out with the respondents, the writer found out that the pupils found the marks display as a drive to compete with not only others but their own selves. This situation clearly evident the presence of intrinsic motivation among the pupils. Just when there's leaderboard, there will be points or scores and *Kahoot!* is all about that. According to a study carried out by Flores (2015), for each of the *Kahoot!* quizzes, learners are awarded with points based on their performance. The basic calculations offer 1,000 points for any correct responses answered under 0.05 seconds. From this feature, a trace of extrinsic motivation is made more visible particularly when the pupils tried to answer the questions all by themselves. Besides the leaderboard and scoring system, other features which help maintain its acceptance among its users are the integration of technical features such as music, graphics, and colours as well as feedback and problem solving or challenge with uncertain outcomes.

Above all, *Kahoot!* can be perceived as a resurrection of the clicker in the modern day. The evolution of the older Student Response System (SRS) to Game-based Student Response System (GSRS) is historically drawn during the reign of "iClicker" and "Poll Everywhere" to the current user-friendly application such as *Kahoot!* Licorish, Owen, Daniel & George (2018). Besides replacing SRS, GSRS is relatable to Novak's meaningful learning model, which differentiate learners' deep and surface learning approaches. The whole learning experience began with teachers' selecting meaningful materials according to the learners' existing knowledge followed with their initiative to engage the learners with a deeper learning instead of rote memorising. Ironically, this ideology is well reflected in *Kahoot!* as learners experiment, reflect and evaluate their knowledge (when answering the questions) and receives immediate feedback from the game. On top of that, Licorish, Owen, Daniel & George (2018) added that learners who were practised with deep learning strategies such as GSRS are highly engaged which resulted to them to be able to "apply their deep learning strategies to their study practises".

Gamification and language

Earlier, the discussion wasn't emphasising much on how gamification is used in learning particularly language learning. Zakaria, et. all (2018) conducted a research among the pre-service teachers enrolling in Academic Writing course in Universiti Kebangsaan Malaysia (UKM). The research focussed on implementing *Kahoot!* as an assessment for the course. The student's achievement was evaluated after 14 weeks using descriptive analyses based on how well they did in *Kahoot!* quizzes. The highlight of the research was seen when the students in the extremely improved learners obtained 40 – 55% of improvement rates. Apart from the that, the result also proved that gamification can be used as an alternative to formative assessment in language learning. From this analysis, it is noted that the use of gamification do have impact on learning especially language learning. Interestingly, the findings also prove that even the adults can benefit from this approach.

Kahoot! : Features and Past Studies

Kahoot! is ranked 36th on the list of apps related for educational trends besides being one of the top 100 current apps which has been used in the classroom (Kapuler, 2015). The compliment continues as Ciaramella (2017) adds that *Kahoot!* benefits the educational trends with the integration of gamification approach which impacted positive pupils' engagement. So, what is *Kahoot!* and what's with the uproar and its coronation as the most hip teaching styles? By

definition, *Kahoot!* is a “free assessment program that can be used at any time of the lesson to increase the participation of the students to the lesson by the teachers and it can be used as a formative assessment as well” (Barnes, 2017). Not only that, this program requires limited instructor or student training, making it very user-friendly besides easily accessible using smartphones, computers or tablets (Wichadee & Pattanapichet, 2018). The steps in using *Kahoot!* begins with the teachers creating their own *Kahoot!* account. Once they are done, they can proceed with the material preparation based on any one of the three modes provided which according to Chotimah & Rafi (2018) involve; quiz, jumble, discussion and survey. Being the most popular among the users, quiz mode allows teachers to create unlimited questions accompanied with or without pictures or videos this include giving teachers the full authority in creating the quizzes as they can choose to restrict the answer choices to 2, 3 or 4 as well as setting the time limit for each question from 5 seconds to 2 minutes. The assessment is based on how fast the pupils can answer the questions displayed on the main screen. Even so, the pupils can only join in once they have keyed in the pin number as shared by their teacher on the main screen.

As flexible as it sounds, *Kahoot!* can be used in various ways; either (1) at the beginning of the class with the intention to identify gaps in the learners’ existing knowledge (2) during mid – class session to reinforce the concepts taught (3) at the end of the class to review and practise the concepts learnt and finally (4) as assessment either formative or summative. This visual cues in *Kahoot!* is reported to be a positive influence to the learners with learning disabilities and special education. In addition, according to Inclusive Design (2010) the visual cues with different shapes and colours combined with simple easy-to-read questions and answer format is beneficial to both group or individuals with the different learning needs. Being aligned with the 4c’s concept in 21st Century Learning, collaborative learning is visible in this apps through the player options; Player VS Player (classic) and Team VS Team (team mode). Besides that, just as explained by Flores (2015), *Kahoot!* is flowing with the elements of *gamification* such as leaderboards, points, feedbacks, performance graphs, and social elements/community collaboration.

The findings from a research carried out by Zarzycka-Piskorz (2016) entitled *Kahoot it or Not? Can games be motivating in learning grammar?* showed that 70% of the respondents feel motivated to learn grammar after they have played *Kahoot!*. The statistics is convinced to be driven from the four common reasons behind the motivation; desire to win, to master own knowledge, playing with the others and knowing the purpose of the game which include revising, checking and consolidating knowledge. Besides that, 80% of the respondents believed that this application impacted their learning motivation because they are well aware of its purpose, which is to check, consolidate and revise their knowledge on the content.

Another research carried out by Ganesan, Idris, Yunus (2018) showed that almost 66% of the overall sample improved in a grammar test which focussed on the Simple Present Tense, while another 78% showed significance improvement on Simple Past Tense and 61% was proven to improve themselves in a test on conjunction.

Irregular verbs learning

Often times, the notion of ‘overgeneralisation’ has always been synonymous with irregular verbs learning. As most ESL learners are aware of, any verbs in past tense form must be added with

either *-d*, *-ed*, *-ied* inflections to show that the actions have taken place in the past. Hence, mistakes such as *goed*, *eated*, *wented* and *felled* keep recurring in ESL learners' writing. The ignorance on irregular verbs form often caused ESL learners to repeat the same mistakes either in their writing or speaking attempts. According to Prapobaratnakul & Pongpairaj (2016) there are four sub-types of irregular verbs; (1) ablaut (vowel change; eg **run** becomes **ran**), (2) pseudo-inflection (from a long vowel to short vowel; eg **feed** becomes **fed**), (3) suppletive (completely different; eg **go** becomes **went**) and (4) identical forms (does not change; eg **put** becomes **put**). Steven & Alan (1994) add that, the inquisition of irregular inflection (e.g., sing – sang) is made easier with the presence of brute - force memory due to its varying degrees of unpredictability. For this reason, a child who heard of the word *sang* being mentioned repetitively by his parents would soon grow to be familiar of the form as the brute memory was working.

On top of that, Brown (1973) states that, unlike ESL learners, an English-speaking child, acquired irregular past tense inflection before the regular counterpart *-ed*. Therefore, for a non-English speaking learners, learning irregular verb form may be a bit difficult due to the non-existent of both environments. Another scenario which is related to the difficulty in irregular verbs acquisition is the interference of the dominant rules. As explained by Kuczaj (1977), once a child has achieved sufficient amount of control of the regular past tense form, he will start to make two types of errors with the irregular past tense form. He either adds the *-ed* suffix to an irregular generic verb form (*eated*) or attaches the suffix to the past tense form itself (*ated*). Apart from the rule confusion, mother tongue's interference also contributed to the lack of English Irregular verbs mastery. Based on the the studies by Ashari and Munir (2015) and Watcharapunyawong and Usaha (2013) as cited by Denizer (2017), mother tongue's acquisition has been proven to affect at least sixteen parts of English grammar which includes both regular and irregular verbs in past tense. Besides that, the findings with more than 100 verb tense errors in each scripts collected also proves the influence of the mother tongue towards the learner's writing. Due to the aforementioned issues, this study is aimed to unravel the following research question; Does the use of *Kahoot!* helps young language learners in learning English Irregular verbs?

Methodology

Since the data from this research were derived solely from the comparison of pre - test and post - test data, this research is indeed a quasi - experimental research involving manipulating an independent variable without random assignment of conditions or conditions orders to participants. On top of that, this design was chosen by the researcher since the participants for this research was a class of 35 Year 3 pupils; without any controlled group. The data collection is done quantitatively instead of qualitative because the aim of this research is to examine the impact of *Kahoot!* towards the pupils' memory retention of irregular verbs (Creswell & Poth, 2017). The use of *Kahoot!* quiz was the independent variable (X) of the research meanwhile the final score on Irregular verb quiz was the dependant variable (Y). This score, which signifies the memory retention was used as the yardstick to prove the impact of *Kahoot!* towards the Year 3 pupils' irregular verbs learning. The only instrument used for this research was the Irregular verbs test which were given before and after the treatment (*Kahoot!* quiz sessions).

Table 1. *Pretest-posttest design*

	Pre-test	Treatment	Post-test
Participants	A	O	X

Information of table 1:

- A : Irregular Verbs Pretest
 O : Class treatment with *Kahoot!*
 X : Irregular Verbs Posttest

Research Procedure

The researcher started by listing down 46 common irregular verbs, which were then translated into *Kahoot!*, together with appropriate picture to aid the learning process. These 46 words are chosen due to their common frequencies in English language learning. Not only that, the researcher also believed that exposing more than 46 irregular verbs may cause the participants to burn out. Hence, selecting only 46 irregular verbs are well suited to accommodate to the research aim which is to investigate the impact of *Kahoot!* towards memory retention of the subject matter. Before the teaching and learning process began, the pupils were asked to answer the pre-test questions, which covered the selected 46 irregular verbs in a form of 22 multiple choice questions. Once the pre-test was completed, the researcher continued on with the first lesson by explaining about irregular verbs as well as introducing the pupils to all 46 targeted irregular verbs. They were asked to copy the wordlist in their exercise book for future reference.

Immediately after the introduction, the pupils were introduced to *Kahoot!* Since none of them were exposed to this application before, the researcher had to demonstrate how the application works; from key-in the game pin, to creating nickname and answering the quiz questions. Once the pupils were well versed with the idea, the quiz on irregular verbs was launched and the pupils were asked to answer it in a smaller group. This practise went on every day for the whole one week, with at least 5 minutes allocated during each interaction. On the last day of the experiment periods, the researcher handed out the same questions as the pre-test for the participants to be completed.

Figure 1. Example of pupils' Irregular verbs notes.

Data Analysis

The process began with the researcher marking all of the scripts by the participants. Once the marking process was completed, the researcher viewed the results (marks) in two ways. The first one is by listing out the marks scored by each participants in pretest and posttest. These marks were then translated into percentages. In order to verify any improvements made from both tests, the percentage from the posttest were deducted with the one from the pretest. And then, the document analysis was continued by scanning through any items from the quiz that showed remarkable differences in both pre and posttest. The second step was by recording the participants' achievement in both test into statistical software known as IBM SPSS Statistics Version 20. Paired sample t-test was run to describe the difference in the mean before and after the use of *Kahoot!*. The result from the data was very significant in proving the effectiveness of *Kahoot!* in retaining the participants' memory and understanding of English Irregular verbs.

Findings and Discussions

Figure 2. (1) Individually, pupils answered the Irregular verbs quiz before they used *Kahoot!*
(2) In smaller groups, pupils were taking turns to use *Kahoot!*

As previously stated in the methodology section, there were 22 multiple choice questions total in both of the tests. Before proceeding with the statistical analysis, the data from the tests were translated from the document analysis. This analysis were done by transferring all of the scores for both tests into a table form using Microsoft Excel. Percentage was counted for both pretest and posttest. Since the intention of this study is to explore the impact of *Kahoot!* in Irregular verbs learning, the researcher needed to see there's improvement in posttest score in comparison to the pretest scores. Therefore, the percentage from the posttest was minused with the pretest percentage.

Table 2. An excerpt Comparison of results in pretest and posttest.

Pretest Scores	Percentage	Posttest Scores	Percentage	Improvement Percentage
1/22	4.5%	22/22	100%	95.5%
0/22	0.0%	21/22	95.5%	95.5%
3/22	13.6%	19/22	86.4%	72.7%
6/22	27.3%	14/22	63.6%	36.4%
0/22	0.0%	5/22	22.7%	22.7%
18/22	81.8%	20/22	90.9%	9.1%

From this data, it shows that all of the participants showed an improvement in terms of their quiz scores before and after the use of *Kahoot!* Some of the participants even showed a tremendous improvement by scoring almost 96% improvement score. This was evident from those who scored either 0 or 1 out of 22 questions during the pretest. With regards to the percentage, we could also see from the excerpt that there's a participant who only improved 9% from the initial pretest. This could be perceived as a very low improvement percentage indeed, however it is fair to conclude that this only happened because this participant has already possessed a well range schemata on Irregular verbs, which was further evident from her capability to use words that other don't know yet. Therefore, it only made sense that she didn't show much improvement as compared to others.

An analysis according to each items was also conducted to conclude if there's any particular significance to the intervention. The most striking result was perceived in item number 17.

Table 3. Item number 17 in the pretest and posttest

17. What is the past tense of “*CUT*”?
- A cutted
 - B cuts
 - C cutting
 - D cut

Based on the document analysis, during pretest, only 2 out of 35 participants managed to answer this question correctly. Ten out of 35 participants chose *cutted*, while 16 out of 35 answered *cuts* and the remaining 7 answered *cutting*. This confusion might occur due to fact that some irregular words normally undergo changes such as in terms of vowels or additional inflections such as *-ed*. To top that off, there are not many words who shares the same formula as this word; *cut*. Therefore, it is either they know about it or they don't. However, tremendous change was obtained from the posttest when 29 out of 35 participants answered *cut* as the past tense of *cut*. Meanwhile, only 1/35 chose *cutted*, leaving 5/35 answered *cuts* and 0/35 answered *cutting*. Another item that showed massive improvement would be item number 18. During the pretest, only 5 out of 35 participants manage to answer this item correctly, however the table turned during the posttest screening when 25 out of 35 participants managed to remember the correct past tense form of the irregular verb; *choose*. With no other exercise but *Kahoot!* practises, the link between the use of this application and memory retention is more apparent and obvious. This achievement could be

related to Steven & Alan's (1994) ideology that the inquisition of irregular inflection (e.g., sing – sang) is made easier with the presence of brute - force memory. In this very situation, the participants who were repetitively exposed to the word *cut* during *Kahoot!* sessions were evident to find retaining the information a lot easier as their brute memory was working well throughout the process.

Table 4. *Item number 18 in the pretest and posttest*

18. What is the past tense of “**CHOOSE**”?
- A choose
 - B choosing
 - C chosen
 - D chose

In order to further supported the data from the document analysis, the researcher keyed in the result of pre-test and post-test into SPSS to get the mean value, standard deviation value, t-value and significance value. The result for the aforementioned statistics are as follows:

Table 5. *Comparison of results in pretest and posttest.*

	N	Mean	Std. Dev	t-value	Sig.
Pretest Score Section A	35	5.57	5.089	-12.708	.000
Posttest Score Section B	35	17.29	5.039		

A paired sample t-test was conducted to compare the pretest and posttest result on the Irregular verb quizzes. There was a significant difference in the scores between pre-test (mean=5.57, s.d=5.089) and post-test (mean=17.29, s.d = 5.039); ($t = -12.708$, $p = .000$).

The result from this table showed greater difference in terms of means for the post-test. This statistic proved that the pupils' performance was improving over the treatment given during the experimental period. From the result displayed in Table 3, the value of sig (p) paired sample t test is 0.000 which is less than 0.05. Therefore, it can be concluded that H_0 is rejected, which indicated that there was significant difference after the pupils were exposed to the use of *Kahoot!* in learning (to remember) about English Irregular verbs.

The effectiveness of *Kahoot!* in retaining the participants' memory of the Irregular verbs could be related to the features embedded in the application and its relevance to the younger learners. Apart from the aforementioned significant features, another element which made this application stood out is its capability to maximise the users' engagement as agreed by Ciaramella (2017). On top of that, Zarzycka-Piskorz (2016) reiterates that *Kahoot!* helps to heighten ones' motivation to learn as well. The researcher found these two claims to be true based on his observation of the participants' behaviour throughout the process in which they were observed to be very engaged and motivated. This experience also proved Hussein's (2015) statements on gamification domains that there is a high chance that this achievement is also driven from the

lowered affective filter resulted from the concept of gamification. Traditionally, learning grammar is mostly terrifying to any second language learners.

Conclusion

To sum up, the results from this research advocates that *Kahoot!* can be very impactful in helping the younger English language learners especially the nine year olds to retain their memory on English irregular verbs. Furthermore, the findings from this research also suggest that gamification is among the current teaching tool which can be very effective in enhancing the teaching and learning experience.

Apart from the aforementioned strength of this research, this research could be the start of implementing gamification in handling other parts of English grammar. Therefore, it is recommended that the future replication of this research to be conducted in a larger scale context. Among other concerns would be the existence of stable internet connection as well as sufficient netbooks or mobile devices for the process to take place.

However, there are a few suggestions which could be taken into considerations to make the result of this research more reliable. Firstly, a larger scale approach can be adapted in ensuring that the reliability and validity of the research. This could be done by having a few classes involved at once in the similar research, instead of just a class of 30 – 40 pupils. Secondly, there should be a record of observations for each *Kahoot!* sessions conducted instead of just the comparison between pretest and posttest. Another modification which can be looked into is the nature of the research itself. As this one involved mostly the subject teacher taking both roles as the teacher as well as the researcher, it would be great to have another researches which separates the teachers and the researchers, which could be very helpful in making sure that the data collected are not tainted with personal view or attachments to the participants. Regardless of the shortcomings, this research has done justice in proving the potential of *Kahoot!* in aiding learning, especially when it comes to retaining the information.

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