

MOBILE ASSISTED LANGUAGE LEARNING (MALL) IN DEVELOPING SECOND LANGUAGE LEARNERS' UNDERSTANDING OF GRAMMAR

Rozina, A. G.^{1*}, Tengku Nazatul Shima, T. P.², Mohamed Ismail Ahamad Shah³
Rahmah, L. Y.⁴ and Hafiza, A.⁵

¹Department of English Language & Literature (DELL), Kulliyah of Islamic Revealed Knowledge & Human Sciences (KIRKHS), International Islamic University of Malaysia (IIUM).

²Faculty of Language Studies, Universiti Teknologi MARA Pahang.

³Department of English Language & Literature (DELL), Kulliyah of Islamic Revealed Knowledge & Human Sciences (KIRKHS), International Islamic University of Malaysia (IIUM).

⁴Faculty of Computer Science & Mathematics, Universiti Teknologi MARA Pahang.

⁵Advanced Informatics School, Universiti Teknologi Malaysia, Kuala Lumpur.

Email: shimaparis@gmail.com

Abstract

This paper presents findings to a case study on the use of 'Throw Back Time' (TBT), a digital game aimed at teaching grammar tenses and aspects via Mobile Assisted Language Learning (MALL). A quantitative study by means of a time series pre-test/post-tests single group design and survey were used as to see whether the game could improve learners' understanding and knowledge of grammar tenses and aspects and also at gauging the learners' perceptions towards MALL in learning grammar. The game is specially designed according to the Theory of Variation (Marton & Booth, 1997) that emphasizes that students understand, experience and think differently in a specific aspect of the world. As variations in the learning outcome are necessary, the game provides a variety of combinations and structures of grammatical aspects to expose students to different aspects from the object of learning. The application of this strategy in the digital game is part of a major research which aims at presenting empirical evidence of an innovative way to teach grammar. A digital board game suited to the students' level of English can be an intriguing practice in the process of learning as the teaching and learning of grammar can be a daunting experience for learners and teachers alike. Thus, traditional methods must inevitably be on par with the advent of technology to complement the teaching of grammar and enhance the development of students' knowledge of grammar.

Keywords: Grammar, mobile-assisted language learning, enhancement, game, fun.

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1. Introduction

Learners generally need to be technologically savvy in order to remain competitive in the global community. One of the objectives of the Malaysia Education Blueprint (2015-2025) is to reinforce and incorporate the use of information and communication technology (ICT) into the teaching and learning process in order to meet global standards. Aside from being technology savvy, the current demand of the global workforce requires that students are also proficient in the English Language as it is the prime business language (Ganapathy, 2014; Abdullah. & Shah, 2015; Hsiao et al., 2016). Proficiency entails mastering grammar rules, a crucial component in being skilled users of the language (Larsen-Freeman, 1991; Harmer, 1991; Chomsky & Halle, 1991; Ur, 1996; Mystkowska-Wiertelak & Pawlak, 2012; Paris & Yussuf, 2013; Abdullah. & Shah, 2015; Larsen-Freeman, 2015; Suwantarathip &

Orawiwanakul, 2015; Matsumoto & Dobs, 2017). Hence, there is an immediate need to stress on the teaching and learning of grammar via technology, in order to enhance learners' English language proficiency.

Mobile technologies are rapidly attracting new users, providing increasing capacity, and allowing more sophisticated use. This influences cultural practices and enables new contexts for learning (Pachler, Bachmar, & Cook, 2010). The integration of such technologies into teaching and learning has been more gradual, as educators need to understand how they can be effectively used to support various kinds of learning (Kukulska-Hulme., Agnes & Shield, & Lesley, 2008) and develop effective methods and materials for mobile-assisted language learning (MALL), a specialization of mobile learning (mLearning). One such tool that could play a vital role in students' growth is the mobile phone (Ni & Yu, 2015). It is very handy, relatively cheap and its mobility enables ongoing learning beyond the confines of the classroom. Many educational applications could be installed in the mobile phones which could be engaging to the students and enhance their language growth, analytical skill, passion, intellectualism and creativity (Ni & Yu, 2015). With the advantages of mobile features that consist of audio, animation, interactive scenes of images and projection, learning can be manipulated in a variety of approaches that will make it more fun, interesting and successful for learners.

Most importantly, interesting language activities can help eliminate learning anxiety in students (Ma et al., 2012; Shima & Rahmah, 2012; Ongoro & Mwangoka, 2014; Virvou & Papadimitriou, 2014; Wu, Chen, & Huang, 2014b; Tsung-Chih Hsiao, Alyssa Cheung, Gloria Jiang, 2016). The right approach in eliminating fear and anxiety in the use of language among students will prove beneficial for students in many ways as the excitement of participating in playing games will invariably promote both conscious and unconscious support for students to learn and acquire the language. Hence, it is important for educators to devise meaningful and beneficial activities to help students to master the language.

According to (Marton & Booth (1997), the fundamental aspect of learning is for students to notice the critical aspect through variation and not common features. Different sequences of variation can be formed through a variety of combinations and structures. Students will then be able to concentrate on the different aspects from the object of learning. It can be materialized by varying one or a few aspects and keep certain aspects unchanged. The principle is the essence of the theory of variation that acts as a direction in the preparation of a digital board game as a teaching methodology in this study. The researcher developed her own digital board game called 'Throw Back Time' (TBT) and uploaded it into a mobile application based on the traditional board game from her previous studies, and is designed specifically to cater to her students' needs in the understanding of grammar tenses. Another contributing factor for such innovation is that the most vital commitment of research, demands that educators be innovative, analytical and creative with their new method of teaching, and be confident in promoting the new method (Borg, 2010; Pedrazinni & Nava., 2012; Larsen-Freeman, 2015). The design of the online board game is to accept the challenge of designing one's own teaching materials, experimenting and improvising them to ensure the success in teaching grammar.

2. Statement of the problems

Some of the reasons for the lack of mastery of English grammar are students' apprehension toward grammar classes (Samad & Hussein, 2010; Shima & Rahmah, 2012; Larsen-Freeman, 2015) and the difficulty in understanding grammar tenses (Jean & Simard, 2011; Larsen-Freeman, 2015). This is an important concern as knowledge of grammar can enhance language proficiency. Generally, students are anxious about mastering the metalanguage aspects such as grammar rules and complicated vocabulary (Chitravelu, 2005; Azar, 2007; Jalali & Dousti, 2012; Collentine & Collentine, 2015). Hence, to allay this fear and to trigger interest in learning grammar, there is a need to incorporate technology, which has become a

popular fad amongst learners of all ages. Technology advancement in language teaching and learning highlights a need for change in traditional methodology and pedagogy of teaching and learning to support the use of technology in the classroom (Brown, 2014). The classroom environment therefore has to be sufficiently conducive for the students to have meaningful and significant learning experiences.

One technology-based device that is handy and of significant importance to students is the mobile phones. Roughly 78% of 12 to 17 year olds and 91% of adults use mobile phones (K. M. Thomas, Bannon, & Britt, 2014). Out of the total users, young adults surpassed the 30-40 age group as the highest mobile phone users (Flowers, 2015; Malaysia, Communications, & Commission, 2015). Hence, the mobile phone has become a very useful and accessible tool for teaching and learning.

3. Research Questions

The study seeks to find answers to these two pertinent research questions:

- i. Does the Throw Back Time game via MALL lead to better performance in grammar tenses?
- ii. What are the learners' perceptions towards Throw Back Time via MALL in learning grammar tenses?

4. Theoretical Framework

4.1 The Theory of Variation

The Theory of Variation by Marton & Booth (1997) holds that students comprehend, experience and think differently in a specific aspect of the world due to their background knowledge and existing understanding. Students will have different ideas and expectations of what the educators want to deliver, and therefore variations in learning outcomes are necessary. To improve teaching, educators need to realize that a lesson will be digested differently by different students according to varying perceptions. Therefore, educators should plan their teaching approaches in the intended way (Marton & Tsui, 2004) and educators need to be aware of students' prior knowledge and work on how to exploit this to enhance students' knowledge (Marton & Booth, 1997). Moreover, students' prior knowledge has to be improved and tested (Bransford, Brown, & Cocking, 2002). Specifically, educators should meticulously plan what is to be taught (the object of learning) and introduce appropriate teaching approaches that are capable of holding students' interests and provide activities which are appealing and engaging. "An object of learning is a specific insight, skill, or capability that the students are expected to develop during a lesson or during a limited sequence of lessons" (Marton & Pang, 2006, p. 194). Variation should be used as a guideline so that the "object of learning" is exposed in an intended way. Students should be given a chance to concentrate on the critical elements independently or cooperatively using variation models (Bowden & Marton, 1998). Essential aspects that have yet to be discerned by students are known as critical aspects which are connected to the object of learning and the students involved (Marton, 2015). Thus, it is vital to search for these critical aspects for teaching purposes.

The digital board game in this study was designed to permit students to recognize and learn tenses through variation. In designing the contents of the digital board game, the researcher has exposed students with the crucial patterns by using sentences in a manner that characters, actions and events in the sentences remain unchanged, but the linguistic and discourse aspects of the sentences are varied. The idea is to see if students can discern the underlying principle or grammar rule and whether they can discern what is important and what is not important in making decisions about the correct use of tenses.

There are many studies in language learning and grammar that have successfully benefited from the Theory of Variation, for example, in teaching reading (Tong, 2012), writing (Thorsten, 2015), the present tense (Annie, 2011), the present perfect (Annie, 2011; Roy, 2014) and the adverb (Roy, 2014). To complement the intended research, this study seeks to investigate whether the Theory of Variation that governs the activities in the MALL game 'Throw Back Time' could lead to better performance of students in understanding grammar tenses.

4.2 Technology Acceptance Model (TAM)

Technology Acceptance Model (TAM) by Davis (1989) constitutes the next part of the theoretical foundation of this study. TAM is the most favorable theoretical framework in defining user acceptance of information technology (Kang, 2014) and mobile applications (Yeh, 2014). In adopting a technology, Davis (1989) believes in two aspects i.e. perceived usefulness (PU) and perceived ease of use (PEOU). Perceived usefulness means "the degree to which a person believes that using a particular system would enhance his or her job performance" (Davis, 1989, p. 986). It has to do with an individual's perceptions of how technology will unmistakably affect one's ability towards better outcomes. Individuals will be optimistic that they will accomplish more with the use of technology. Perceived ease of use is defined as "the degree to which a person believes that using a particular system would be free of effort" (Davis, 1989, p. 984). It affects an individual's behavior in utilizing technology. Perceived ease of use will affect behavior and perceived usefulness. This theory was used to investigate and (assess answers about the learners' perceptions towards Throwback Time via MALL in learning grammar tenses, in terms of perceived usefulness (PU) and perceived ease of use (PEOU). In other words, the theory was used to determine whether Throwback Time via MALL, is easy to use and useful in helping students to learn grammar.

5. Literature review

5.1 Grammar

The different methods of teaching grammar - Grammar Translation Method, Audio Lingual Method, Communicative Approach, Total Physical Respond (TPR) and the Natural Approach - introduce grammar either in explicit (Jean & Simard, 2011; Baugher, 2012; Brown, 2014; Larsen-Freeman, 2015) or implicit ways (Liamkina & Rsyhina-Pankova, 2012; Al-issa, 2014). Nevertheless, the emphases of these methods are on the forms and functions that will produce students who can use the language accurately and fluently. Both the implicit and explicit approaches share some advantages and disadvantages, but both could indeed complement each other in many ways (Chitravelu, 2005; Azar, 2007; Abdullah. & Shah, 2015; Collentine & Collentine, 2015). For example, students can first be exposed to the correct structure, followed by the use of communicative activity. With both approaches, students can acquire the correct structure and function simultaneously and could eventually

use the correct structure in their everyday life. Similarly, (Matsumoto & Dobs, 2017) utilized both explicit and implicit approaches and integrating cultural element as an additional approach in the grammar lessons. The objectives were to compare the impact of guided explicit and traditional implicit method and to analyze whether learners would be able to contain the cultural aspect. The study also sought to examine learners' choice from both approaches and also their perceptions on the assimilation of culture in grammar classes. The results signified that learners' preferred the implicit approach over explicit but the study did not signify that learners' preference and accomplishment were inter-related. Additionally, the results also conveyed that culture element was a good aspect to be injected into grammar activities as the learners acknowledged the integration of culture element positively.

Another possible solution is the introduction of grammatical rules using activity that is meaningful or what is commonly known as the integrated approach (Hawanum, 2004; Lamont et al., 2010; Dkhissi, 2014; Dibra et al., 2014; Q. Wu, 2015; Hwang & Lai, 2017). Meaningful learning is one of the cognitive principles of Second Language Learning Acquisition as it "will lead towards better long-term retention than rote learning" (Brown, 2001, p. 57). Indeed, language acquisition could be enhanced and expedited, if focus is given to actual communication.

5.2 MALL

Many studies have investigated the benefits of MALL for learning purposes (Cavus & Ibrahim, 2009; Ahmad et al., 2013; Hayati et al., 2013; Sari, 2013; Melero et al., 2015; Oz, 2015). The studies found that MALL provides positive outcomes in the classrooms. Several other studies employ MALL in the teaching of four basic skills of reading, speaking, writing and listening (Miangah & Nezarat, 2012; Luo, Lin, Chen, & Fang, 2015; Mingyong, 2015). The researchers believe that MALL enhances learners' four language skills.

Other aspects of learning advantages that MALL imparts include:

- a) Mobility and accessibility – where learning is not confined to the four walls of the classroom; it can take place anywhere anytime (Stockwell, 2007; Wu, 2012; Flowers, 2015; K. Thomas, 2016).
- b) Affordability and availability – where it has become a must-own gadget (Wu, 2012; K. Thomas, 2016).
- c) Flexibility in learning – where learning can take place inside and outside the classroom (Tai, 2012; Ahmad et al., 2013; G.R.Zarei et al., 2013; K. Thomas, 2016).
- d) Interactivity – where educators and students can collaboratively interact with one another regardless of location (Cavus & Ibrahim, 2009; Ahmad et al., 2013; Chen, 2013; K. Thomas, 2016).
- e) Authenticity of material - where exposure to authentic materials will be increased (Ducate & Lomicka, 2013; Rosell-Aguilar, 2013; Brown, 2014).
- f) Cultural appreciation - where the idea to inject cultural values in materials development will not only help learners to improve their English but also encourages cultural, history and literature appreciation of the world (Vilbar & Ferrer-malague, 2013; Liao & Lin, 2016).

5.3 MALL and grammar

MALL - with the use of the handheld mobile gadget – has also been used to assist and improve language learning such as grammar (Baleghizadeh & Oladrostam, 2012; Li, 2013; Jin, 2015; Ganapathy et al., 2016). However, the potential of MALL in strengthening students' knowledge of grammar must go hand-in-hand with a reliable teaching methodology (Baleghizadeh & Oladrostam, 2010). Proper planning and selection of appropriate applications are necessary for the purpose of enhancing learning. Despite the number of studies on MALL, there is still a dearth of research relating to the use of MALL in grammar

acquisition. A less significant number of studies have examined the effectiveness of MALL in grammar tenses and aspects as compared to speaking, listening and writing skills (Jin, 2015). Hence, the current study aims to fill this gap by creating a digital game specifically for the target learners' proficiency level.

5.4 Digital Games

Digital games developed under MALL are seen to be a good tool in language learning, as the younger generation is generally more technology-savvy. Many studies have investigated the advantages of using digital games in the classroom (Ma et al., 2012; Ongoro & Mwangoka, 2014; C. J. Wu et al., 2014; Christanti et al., 2016; Paulo Basto Levay, 2016). With the advent of a variety of digital games, the important consideration is to find a game that is fun while successfully meeting learning objectives. This is essential, as there are games with learning benefits but with little excitement (Jantke & Hume, 2015). There are also games that are not applicable to the learning process and unrealistic for educational purposes. The lack of purpose will re-classify these games as more suitable for after class activities only (Ongoro & Mwangoka, 2014). Hence, a suitable application is necessary to efficiently integrate learning theory into game play that could harmonize learning and entertainment and consequently boost the students' enthusiasm towards learning grammar.

6. Methodology

A quantitative study by means of a time series pre-test/post-tests single group design and survey were used to answer the research questions. The population of the study consisted of 47 TESL Foundation students of Universiti Teknologi MARA (UiTM) Dengkil who enrolled into the program in June 2016.

6.1 Research Instrument

Two research instruments have been used to conduct the study. The first instrument was a questionnaire that was distributed to all the students. In order to study the students' motivation and perceptions towards MALL, the researcher has adopted one instrument. The instrument was used to evaluate MALL's perceived usefulness and perceived ease of use (Ducey, 2013) with some changes made to suit the study.

The second research instrument was the pre- and post-test. The pre- and post-test questions consist of 50 error identification and correction sentences. The students have to identify 1 error from each of the 50 sentences concerning tenses and aspects (present, present progressive, past and past progressive tenses) by underlining and correcting the errors and writing the correct words on top of the words that they have underlined. The pre-test and post-test questions were formulated based on the content of the recommended textbooks chosen by UiTM, a local Malaysian University. The Cronbach's alpha reliability test result for the pretest and posttest questions is (.855) which is considered acceptable.

7. Procedure

Table 1. The whole data collection process took approximately ten weeks to complete. As future tense was not included in the syllabus, the study dealt only with the present and past grammatical tenses, and present progressive and past progressive grammatical aspects.

Table 1. Data collection activities

Weeks	Activities
1	The students were given a pre-test for two hours to gauge their knowledge of grammatical aspects.

1-	Treatment The students were taught grammar that involved tenses and aspects (present, present progressive, past and past progressive tenses) using Mobile Assisted Language Learning (MALL). The contents for MALL were uploaded from the digital game Throwback Time (TBT). Students could play the game at any time as frequent as they wished. They would also meet the researcher every week in a two hours slot in order to play the game and to discuss any problems that they faced with the game or grammar.
3	Students were given a post-test 1 for two hours to gauge whether they had improved their understanding of grammatical aspects.
3-	Treatment The students were taught grammar that involved tenses and aspects (present, present progressive, past and past progressive tenses) using Mobile Assisted Language Learning (MALL). The contents for MALL were uploaded from the digital game Throwback Time (TBT). Students could play the game at any time as frequent as they wished. They would also meet the researcher every week in a two hours slot in order to play the game and to discuss any problems that they faced with the game or grammar.
5	Students were given a post-test 2 for two hours to gauge whether they had improved their understanding of grammatical aspects.
6-	Treatment The students were taught grammar that involved tenses and aspects (present, present progressive, past and past progressive tenses) using Mobile Assisted Language Learning (MALL). The contents for MALL were uploaded from the digital game Throwback Time (TBT). Students could play the game at any time as frequent as they wished. They would also meet the researcher every week in a two hours slot in order to play the game and to discuss any problems that they faced with the game or grammar.
8	Students were given a post-test 3 for two hours to gauge whether they had improved their understanding of grammatical aspects.
8-	Treatment The students were taught grammar that involved tenses and aspects (present, present progressive, past and past progressive tenses) using Mobile Assisted Language Learning (MALL). The contents for MALL were uploaded from the digital game Throwback Time (TBT). Students could play the game at any time as frequent as they wished. They would also meet the researcher every week in a two hours slot in order to play the game and to discuss any problems that they faced with the game or grammar.
10	Students were given a post-test 4 for two hours to gauge whether they had improved their understanding of grammatical aspects. Questionnaire was distributed to the students for them to answer within 30 minutes.

8. How to play 'Throwback Time' Game?

The digital board game is called "Throwback Time" (TBT) as the students will be trapped in different times reflected in the various English grammatical tenses such as the present, present continuous, past or past continuous tense when playing the game. The students have to know the time in order to play and explore the game. The concept of playing the digital board game is similar to playing the "snake and ladders" game. The difference is that the "snake and ladders" game involves numbers, whereas the digital board game involves verb tenses. There will be one to four players in this game. Prior to playing the game, players have to click on 'practice' button to get to know the basic aspects of grammar tenses and aspects. It is in accordance to the Theory of Variation states that if there are many critical features involved, each grammatical tense has to be treated individually first and then only followed by the simultaneous use of all aspects (Lo, 2012). Each of the critical aspects (tenses) needs to be treated separately at first to help students discern them. Before students start playing the game, they have to click on 'practice' button where there will be notes, tables and quizzes on each grammatical tense. The notes are in the form of a formula. It is used as a part of language learning strategy to assist learners to cultivate language competence as it permits learners to incarnate the learning development (Embi & Amin, 2010). The formula will help students to remember the uses and functions of each tense easily. Once the students are confident about their progress on each grammar tense and aspect they can start playing the game by retreating from 'practice' menu and click on 'board game' button.

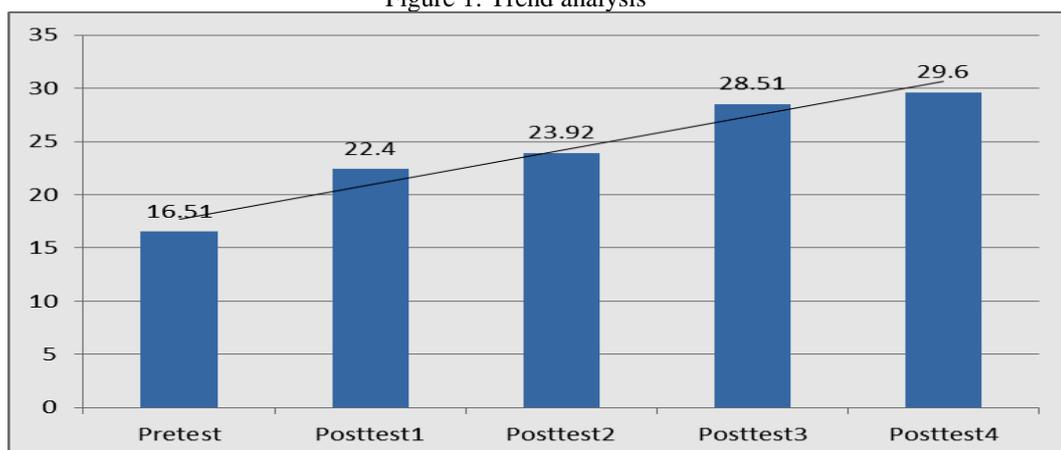
9. Results and discussion

This section presents the results of the pre- and post-test scores and discusses the findings. As shown in Table 2 there is a significant difference between a) pre-test and post-test 1, b) post-test 1 and post-test 2 and c) post-test 2 and post-test 3 as the 'p' value of each post-test is more than 0.05. However, there is no significant difference between post-test 3 and post-test 4 as the 'p' value is 0.559 which is considered not strong. Nevertheless, there is an increment in trend analysis as shown in the bar graph in figure 1 from pre-test towards post-test 1, 2, 3, and 4. The improvement in the post-test scores of the respondents shows that the use of TBT via MALL in teaching grammar permits students to retain grammar rules and reduce grammatical mistakes. This is consistent with the studies conducted by (Sasan Baleghizadeh & Oladrostam, 2012; Li, 2013; Jin, 2015) which found positive benefits in using MALL in teaching grammar. These positive findings can enable us to generalize that the more people play the games, the more positive emotion will be developed (Schwarz & Braff, 2012). It is also possible that the non-threatening environment of gaming helps students to feel more at ease with their lessons and help them to acquire better input and hence perform better in the post-test.

Table 2: Students' pre and post-test scores: Paired samples test

		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	Pretest – Posttest1	-5.8936	5.0054	.7301	-7.3632	-4.4240	-8.072	46	.000
Pair 2	Posttest1 – Posttest2	-1.5106	3.9002	.5689	-2.6558	-.3655	-2.655	46	.011
Pair 3	Posttest2 – Posttest3	-4.5957	5.2239	.7620	-6.1296	-3.0619	-6.031	46	.000
Pair 4	Posttest3 – Posttest4	-1.08511	3.83253	.55903	-2.21038	.04017	-1.941	46	.058

Figure 1: Trend analysis



The next section describes the findings from the questionnaire. The findings show that 97.8 % of the respondents strongly agree and agree that TBT via MALL is an interesting method in learning grammar and the other 2.1 % remain neutral to the statement. In addition, 95.7% strongly agree and agree that TBT via MALL is a useful method in learning grammar and the

remaining 4.3 % agree to the statement. Besides that, 100% strongly agree and agree that TBT via MALL can help to improve grammar knowledge. In addition 85.1% of the respondents strongly agree and agree that TBT via MALL can help them to remember grammar rules, and 14.9 % remain neutral.

The promising findings are encouraging as they reflect a positive attitude towards MALL which, in turn, “lead towards better long-term retention than rote learning” Brown (2001, p.57). The study believes that the integration of digital board game via MALL into the teaching and learning practices is likely to result in more positive impact, inventive and enhanced grammar learning.

On top of that, 95.8. % of the respondents strongly agree and agree that Throwback Time (digital game) via MALL is a good idea to learn grammar and only 4.3 % remain neutral to the statement. Besides 100% of the respondents strongly agree and agree that Throwback Time (digital game) via MALL is helpful. 78.8% of the respondents strongly agree and agree that they are confident to learn grammar using Throwback Time (digital game) via MALL and 21.3% remain neutral. Apart from that 91.5% strongly agree and agree that Throwback Time (digital game) via MALL is easy to use, 6.4% remain neutral and the other 2.1 % strongly disagree to the statement. 91.5% of the participants intend to use MALL in various learning activities in the future and the other 8.5% is neutral to the statement. 68% strongly agree and agree to use MALL frequently and 31.9 remain neutral. Lastly, 59.6% of the respondents intend to be a heavy user of MALL, the other remaining 40.4% is neutral to the statement. The results are in accordance with the previous study by (Davis, 1989) that claimed when students notice that an application will make a difference in their grades, they will see the application as beneficial and would want to use it and get benefits from it. The positive attitude represent their optimistic behavior in utilizing an application via mobile technology.

Table 3. Students' Perceptions on the Digital Board Game via MALL

Statements	Strongly Agree	Disagree	Neutral
	(%)		
1. Interesting method in learning grammar	97.8	2.1	
2. A useful method in learning grammar	100		
3. Can help improve grammar knowledge	100		
4. Can help remember grammar rules better	85.1		14.9
5. It is a good idea to learn grammar	95.8		4.3
6. It is helpful	100		
7. I am confident to learn grammar	78.8		21.3
8. It is easy to use	91.5	2.1	6.4
9. Intend to use MALL in other learning activities	91.5		8.5
10. Intend to use MALL frequently	68		31.9
11. Intend to be a heavy user of MALL	59.6		40.4

10. Conclusion

Although the findings of this pilot study is encouraging, further investigation is needed. The length of the treatment given to the respondents should be extended to yield better results. It is also necessary for the respondents to have ample time to engage in the game to learn more

grammatical structures and elements. After all, the more people play the games, the more positive emotion can be developed (Schwarz & Braff, 2012). Most importantly, it is necessary to keep the game uncomplicated. A simple game means it is playable and less time is needed to study the manual. Indeed, the study shows that the digital game via MALL with some improvement can become a practical and engaging tool for grammar teaching and learning. The digital board game could complement textbooks and could get the students to be motivated to learn grammar. The students believed that the board game was an interesting grammar activity in and outside classrooms. Besides, the board game also has the potential to help students to remember grammar rules and improve their grammar. Hence, the digital board game via MALL can definitely serve as a useful, handy and relatively cheap tool for English grammar learning. Effective teaching and learning methodologies are essentials for the success of grammar learning. Technology on the other hand, can help strengthening the teaching approaches. Interactive learning via technology promotes flexible learners that can develop learning at learners' own pace. As educators we have obligations to lead and supervise learners to progress in their learning stages and personal development, not only to succeed in exams but also and above all, for the challenging life.

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References

- Abdullah, H. I., & Shah, P. M. (2015). Enhancing Competency in English: The Covert Approach a Complementary to the Overt Approach in Teaching Grammar. *International Journal of Applied Linguistics & English Literature*, 4(1). <http://doi.org/10.7575/aiac.ijalel.v.4n.1p.191>
- Ahmad, K. S., Armarego, J., & Sudweeks, F. (2013). Literature review on the feasibility of mobile-assisted language learning (MALL) in developing vocabulary skills among non-English speaking migrant and refugee women. *IEEE*, 2013, 336–341. <http://doi.org/10.1109/ICRIIS.2013.6716732>
- Al-issa, A. (2014). Constructing Grammar Instruction in the Omani ELT System : A Critical Literacy Perspective. *The Qualitative Report*, 19(1989), 1–26.
- Annie, T. S. Y. (2011). Learning english tenses through the theory of variation. *Journal of Asia TEFL*, 8(2), 145–167.

- Azar. (2007). Grammar based teaching: A practitioner's perspective. *TESL-EJ*, 11(2), 1–12.
- Baleghizadeh, S., & Oladrostam, E. (2012). Mobile - Assisted Language learning. *International Journal of Distributed and Parallel Systems*, (309–319), 1–10.
- Baughner, M. W. (2012). Explicit Grammar Instruction and the Acquisition of Second Language Verbal Morphology: A Framework for Generalized Learning in Second Language Acquisition. *ProQuest Dissertations and Theses*, 3562593, 355. Retrieved from http://ezproxy.net.ucf.edu/login?url=http://search.proquest.com/docview/1377280928?accountid=10003%5Cnhttp://sfx.fcla.edu/ucf?url_ver=Z39.88-2004&rft_val_fmt=info:ofi/fmt:kev:mtx:dissertation&genre=dissertations+&+theses&sid=ProQ:ProQuest+Dissertations+&+Th
- Borg. (2010). Language teacher research engagement. *Language Teaching*, 43,4, 391–429.
- Bowden, J., & Marton, F. (1998). *The University of learning*. London, Kogan Page.
- Bransford, J. D., Brown, A. B., & Cocking, R. R. (2002). *How people learn: Brain, mind, experience and school*. Washington DC: National Academy Press.
- Brown. (2001). *Teaching by principles, An interactive approach to language pedagogy*. Longman.
- Brown, D. B. (2014). Mobile learning for communicative language teaching: An exploration of how higher education language instructors design communicative MALL environments. *ProQuest Dissertations and Theses*, (August).
- Cavus, N., & Ibrahim, D. (2009). M-Learning: an experiment in using SMS to support learning new English Language words. *British Journal of Educational Technology*, 40(1), 78–91.
- Chen, X.-B. (2013). Tablets for informal language learning: Student usage and attitudes. *Language Learning & Technology*, 17, 20–36.
- Chittravelu. (2005). *ELT Methodology: Principles and Practice (2nd Ed.)*. Penerbit Fajar Bakti Sdn. Bhd.
- Chomsky, & Halle. (1991). *The Sound Pattern of English* (MIT Press).
- Christanti, A. R., Sanjaya, R., & Murniati, C. T. (2016). Developing Educational Game for Collaborative Learning. *International Seminar on Application for Technology of Information and Communication*, 1–6.
- Collentine, J., & Collentine, K. (2015). Input and output grammar instruction in tutorial CALL with a complex grammatical structure. *CALICO Journal*, 32, 273–299.
- Davis, F. D. (1989). Perceived usefulness, perceived ease of use and user acceptance of information technology. *MIS Quarterly*, 13(3), 319–340.
- Dibra, D., Otero, N., & Pettersson, O. (2014). Real-time interactive visualization aiding pronunciation of English as a second language. *IEEE*, 436–440. <http://doi.org/10.1109/ICALT.2014.131>
- Dkhissi, Y. (2014). An integrative model of grammar teaching: From academic to communicative needs. *International Journal of Language and Linguistics*, 2(3), 145–153. <http://doi.org/10.11648/j.ijll.20140203.13>
- Ducate, L., & Lomicka, L. (2013). Going mobile: Language learning with an iPod touch in intermediate French and German classes. *Foreign Language Annals*, 46(3), 445–468.

- Ducey, A. J. (2013). Predicting Tablet Computer Use : An Extended Technology Acceptance Model. *Graduate Theses and Dissertations, Graduate t*(January), 1–97.
- Embi, M. A., & Amin, M. Z. M. (2010). *Strategies for successful English Language Learning (SELL)*. Karisma Publications Sdn. Bhd. Shah Alam.
- Flowers, T. M. (2015). Examining the Relationship between Parental Involvement and Mobile Technology Use. *ProQuest Dissertations and Theses*.
- G.R.Zarei, A.Jalilifar, & Khazai, S. (2013). Does it make a difference? L2 vocabulary learning via mobile and conventional mode. *English Language Teaching, 1*, 200–210.
- Ganapathy, M. (2014). Using Multiliteracies to Engage Learners to Produce Learning. *International Journal of E- Education, E-Buisines, E-Management and E- Learning, 4*(6), 410–423.
- Ganapathy, M., Shuib, M., & Azizan, S. N. (2016). Malaysian ESL students' perceptions on the usability of a mobile application for grammar test: A case study of ESL undergraduates in universiti sains Malaysia. *3L: Language, Linguistics, Literature, 22*(1), 127–140.
- Harmer, J. (1991). *The Practice of English language Teaching* (Longman, p. 22).
- Hawanum. (2004). Using simple poems to teach grammar. *The Internet TESL Journal*.
- Hayati, A., Jalilifar, A., & Mashhadi, A. (2013). Using Short Message Service (SMS) to teach English idioms to EFL students. *British Journal of Educational Technology, 44*(1), 66–81. <http://doi.org/10.1111/j.1467-8535.2011.01260.x>
- Hsiao, T.-C., Cheung, A., Jiang, G. & Yu, X. (2016). An Interactive IELTS Vocabulary Memorizing Method Based on Ebbinghaus Curve. *IEEE*. <http://doi.org/https://doi.org/10.1109/ICASI.2016.7539762>
- Hwang, G. J., & Lai, C. L. (2017). Facilitating and Bridging Out-Of-Class and In-Class Learning : An Interactive E-Book-Based Flipped Learning Approach for Math Courses. *Educational Technology & Society, 20*(1), 184–197.
- Jalali, S., & Dousti, M. (2012). Vocabulary and grammar gain through computer educational games. *GEMA Online Journal of Language Studies, 12*, 1077–1088.
- Jantke, K. P., & Hume, T. (2015). Effective Learning Through Meaning Construction in Digital Role Playing Games. *IEEE*, 653–656.
- Jean, & Simard, D. (2011). Grammar learning in English and French L2. *Foreign Language Annals, 465–492*.
- Jin, S. H. (2015). Implementation of Smartphone-based Blended Learning in an EFL Undergraduate Grammar Course. *Multimedia Assisted Language Learning, 11–37*.
- Kang, J. (2014). More-than-voice use mobile at the bottom of the pyramid: Analysis of motivational and contextual drivers to mobile use among low income users in South Asia. *ProQuest Dissertations and Theses*.
- Kukulska-Hulme., Agnes & Shield, & Lesley. (2008). An overview of mobile assisted language learning: from content delivery to supported collaboration and interaction. *ReCALL, 20*(3), 271–289.
- Lamont, L. a., Chaar, L., & Toms, C. (2010). Using interactive problem-solving techniques to enhance control systems education for non English-speakers. *European Journal of Engineering*

Education, 35(1), 99–108. <http://doi.org/10.1080/03043790903480324>

- Larsen-Freeman, D. (1991). Research on language teaching methodologies: A review of the past and an agenda for the future. *Foreign Language Research in Cross-Cultural Perspective*, 119–132.
- Larsen-Freeman, D. (2015). Research into practice: Grammar learning and teaching. *Language Teaching*, 48(2), 263–280. <http://doi.org/10.1017/S0261444814000408>
- Li, Z. (2013). Mobile-Assisted Grammar Exercises : Effects on Self-Editing in L2 Writing. *Language Learning & Technology*, 17(3), 135–156.
- Liamkina, O., & Rsyhina-Pankova, M. (2012). Grammar dilemma: Teaching grammar as a resource for making meaning. *The Modern Language Journal*, (12), 270–289.
- Liao, P., & Lin, C. S. (2016). Innovation design: Integrating mobile-mediated communication with computational intelligence for task-based EFL learning in Taiwanese higher education. *IEEE*, 186–192. <http://doi.org/10.1109/ICACI.2016.7449824>
- Lo, M. L. (2012). *Variation Theory and the Improvement of Teaching and Learning*. Gothenburg Studies in Educational Sciences 323. Goteborgs Universitet. <http://doi.org/10.1007/s35834-013-0078-0>
- Luo, B. R., Lin, Y. L., Chen, N. S., & Fang, W. C. (2015). Using smartphone to facilitate english communication and willingness to communicate in a communicative language teaching classroom. *IEEE*, 320–322. <http://doi.org/10.1109/ICALT.2015.22>
- Ma, Z. H., Hwang, W. Y., Chen, S. Y. & Ding, W. J. (2012). Digital game-based after-school-assisted learning system in English. *IEEE*, (Ispacs), 130–135. <http://doi.org/10.1109/ISPACS.2012.6473466>
- Malaysia, Communications, & Commission, M. (2015). *Hand Phone Users Survey, 2014*. Malaysia Communications and Multimedia Communication.
- Marton. (2015). *Necessary conditions of learning*. Routledge, New York, NY.
- Marton, F., & Pang, M. F. (2006). On Some Necessary Conditions of Learning. *Journal of the Learning Sciences*, 15(2), 193–220. http://doi.org/10.1207/s15327809jls1502_2
- Marton, & Booth. (1997). *Learning and awareness*. Mahwah, New Jersey, Lawrence Erlbaum Associates,.
- Marton, & Tsui, A. B. M. (2004). *Classroom discourse and the space of learning*. Mahwah, New Jersey, Lawrence Erlbaum Associates,.
- Matsumoto, Y., & Dobs, A. M. (2017). Pedagogical Gestures as Interactional Resources for Teaching and Learning Tense and Aspect in the ESL Grammar Classroom. *Language Learning*, (March), 7–42. <http://doi.org/10.1111/lang.12181>
- Melero, J., Hernández-Leo, & D. H.-L., & Manatunga, K. (2015). Group-based mobile learning: Do group size and sharing mobile devices matter? *Computers in Human Behavior*, 44, 377–385. <http://doi.org/10.1016/j.chb.2014.11.078>
- Miangah, T. M., & Nezarat, A. (2012). Mobile-Assisted Language Learning. *International Journal of Distributed and Parallel Systems*. <http://doi.org/10.5121/ijdps.2012.3126>
- Mingyong, Z. (2015). Investigation into the Use of Mobile Technology in English Teaching and Learning in Institutes of Higher Vocational Education in Hubei Province in China. *IEEE*,

(Ablaze), 505–509.

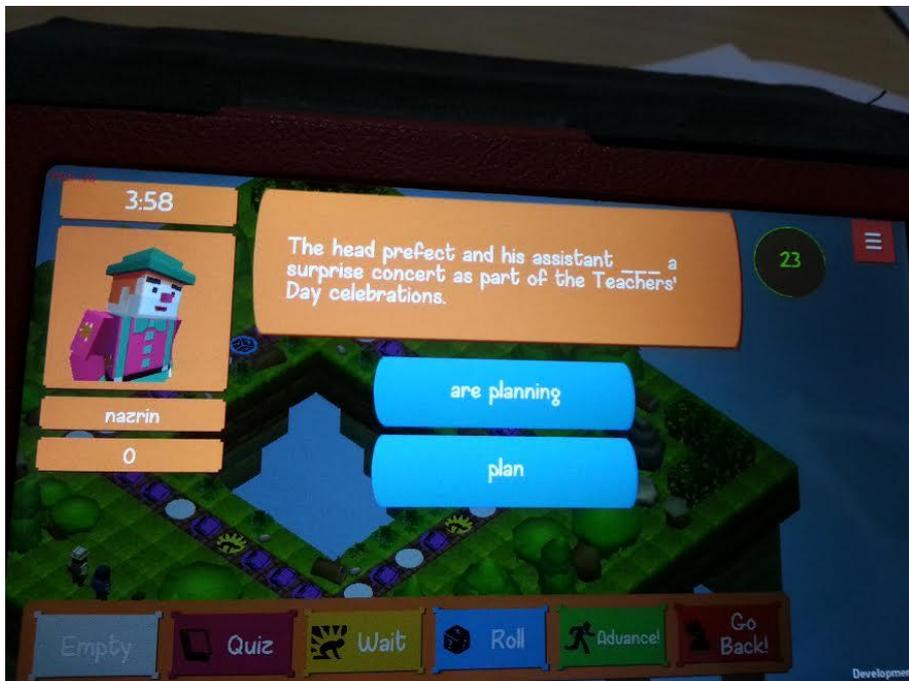
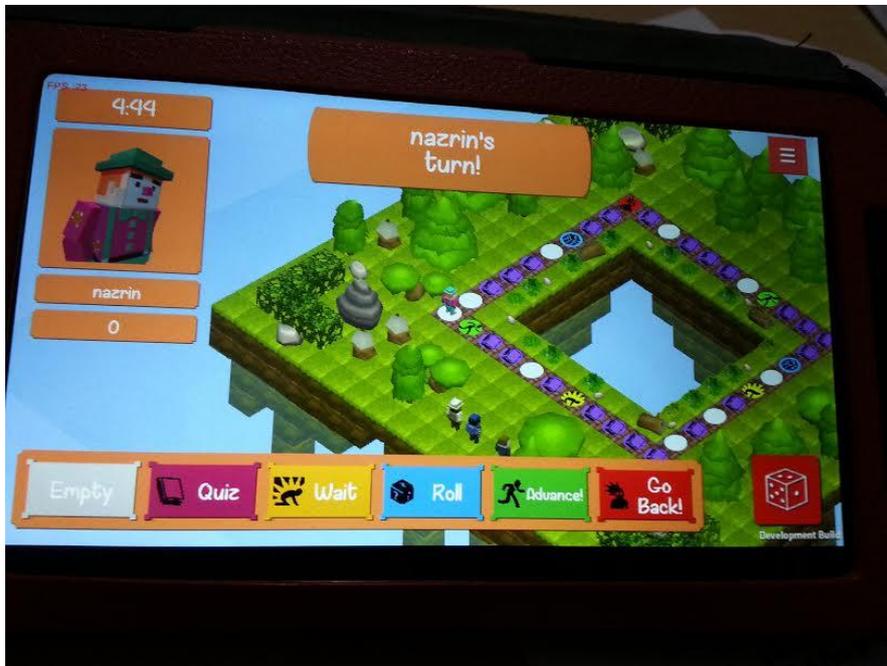
- Mystkowska-Wiertelak, A., & Pawlak, M. (2012). Production-oriented and Comprehension-based Grammar Teaching in the Foreign Language Classroom. *Springer*, 29–60. <http://doi.org/10.1007/978-3-642-20856-0>
- Ni, Q., & Yu, Y. (2015). Research on Educational Mobile Games and the effect it has on the Cognitive Development of Preschool Children. *Third International Conference on Digital Information, Networking, and Wireless Communications (DINWC), 2015*, 165–169.
- Ongoro, C. A., & Mwangoka, J. (2014). Using Game-Based Approach to Enhance Language Learning for Preschoolers in Tanzania. *IEEE*, 121–126.
- Oz, H. (2015). An Investigation of Preservice English Teachers' Perceptions of Mobile Assisted Language Learning. *English Language Teaching*, 8(2), 22–35. <http://doi.org/10.5539/elt.v8n2p22>
- Pachler, N., Bachmar, B., & Cook, J. (2010). *Mobile learning: structures, agency, practices*. Springer, New York.
- Paris, T. N. S. T., & Yussof, R. L. (2013). Use of “Time Trap Board Game” to Teach Grammar. *Procedia - Social and Behavioral Sciences*, 105, 398–409. <http://doi.org/10.1016/j.sbspro.2013.11.042>
- Paulo Basto Levay, J. R. B. D. (2016). Evaluating the use of digital stories in the teaching and learning of English. *IEEE*.
- Pedrazinni, & Nava. (2012). *Learning and teaching English: Insights from research*. Monza, Italy:Polimetrica.
- Rosell-Aguilar, F. (2013). Podcasting for language learning through iTunesU: The learner's view. *Language Learning & Technology*, 17(3), 74–93.
- Roy, J. (2014). The perfect approach to adverbs, applying variation theory to competing models. *ProQuest Dissertations and Theses*. <http://doi.org/10.1007/s13398-014-0173-7.2>
- Samad, A. A., & Hussein, H. (2010). Teaching Grammar and What Student Errors in the Use of the English Auxiliary “ Be .” *The English Teacher*, XXXIX, 164–178.
- Sari, A. (2013). Vocabulary learning on move: An investigation of mobile assisted vocabulary learning effect over students' success and attitude. *EKEV AKADEMI DERGISI*, 54(K1ş).
- Schwarz, R., & Braff, E. (2012). *We are no fun anymore*. Routledge Taylor & Francis Group New York.
- Shima, T. N., & Rahmah. (2012). Enhancing Grammar Using Board Game. *Procedia - Social and Behavioral Sciences*, 68(2011), 213–221. <http://doi.org/10.1016/j.sbspro.2012.12.221>
- Stockwell, G. (2007). Vocabulary on the move: Investigating an intelligent mobile phone-based vocabulary tutor. *Computer Assisted Language Learning* 20(4), 365–383.
- Suwanarathip, O., & Orawiwanakul, W. (2015). Using mobile-assisted exercises to support students' vocabulary skill development. *TOJET: The Turkish Online Journal of Educational Technology*, 14(1), 163–171. Retrieved from <http://search.ebscohost.com/login.aspx?direct=true&db=psyh&AN=2015-15483-017&site=ehost-live&scope=site%5CnWiwatt48@hotmail.com%5Cnornprapat.s@bu.ac.th>
- Tai, Y. (2012). Contextualizing a MALL: Practice design and evaluation. *Educational Technology &*

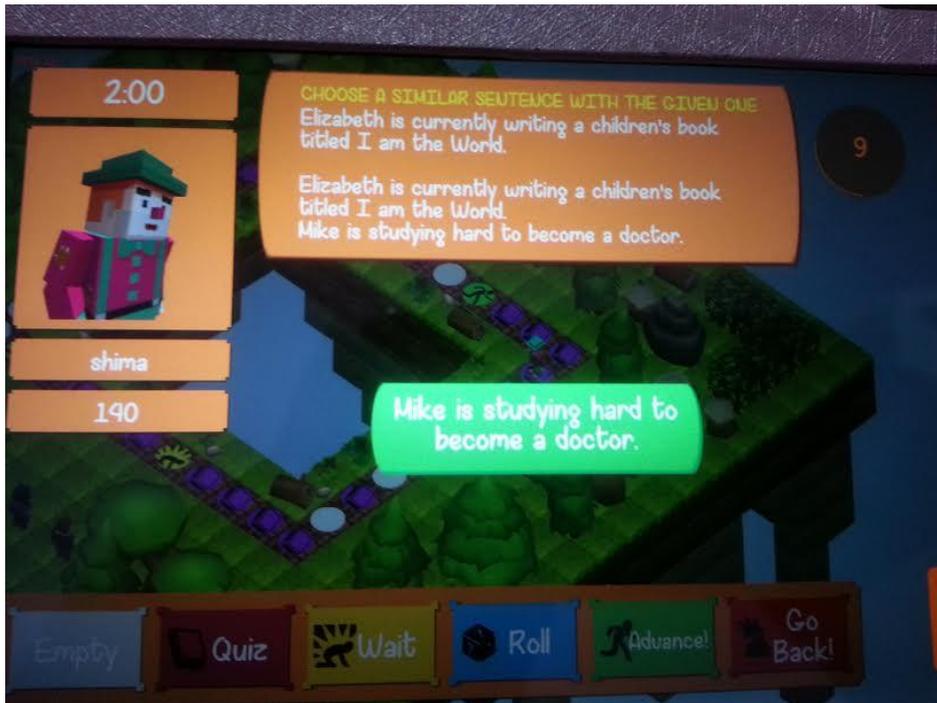
Society, 15(2), 220–230.

- Thomas, K. (2016). Hold the Phone ! High School Students ' Perceptions of Mobile Phone Integration in the Classroom. *American Secondary Education*, 44(3), 2016.
- Thomas, K. M., Bannon, B. W. O., & Britt, V. G. (2014). Standing in the Schoolhouse Door: Teacher Perceptions of Mobile Phones in the Classroom. *Journal of Research on Technology in Education*, 46(4), 373–395.
- Thorsten, A. (2015). How teachers' practice knowledge is used and challenged in a learning study using variation theory as a tool. *Emerald*, 4(3), 274–287.
- Tong, S. Y. A. (2012). Applying the theory of variation in teaching reading. *Australian Journal of Teacher Education*, 37(10). <http://doi.org/10.14221/ajte.2012v37n10.3>
- Ur, P. (1996). *A Course in Language Teaching, Practice and Theory* (Cambridge, p. 77).
- Vilbar, A. P., & Ferrer-malague, C. (2013). Training Teachers to Develop Interactive Multimedia ESL Courseware for ASEAN Community and Sustainable Development. *IEEE*.
- Virvou, M., & Papadimitriou, S. (2014). Use of digital "Guess Who Board Game' in Teaching English. *IEEE*.
- Wu. (2012). Review of trends from mobile learning studies. A meta-analysis. *Computers & Education*, 59, 817–827.
- Wu, C. J., Chen, G. D., & Huang, C. W. (2014). Using digital board games for genuine communication in EFL classrooms. *Educational Technology Research and Development*, 62(2), 209–226. <http://doi.org/10.1007/s11423-013-9329-y>
- Wu, Q. (2015). Pulling Mobile Assisted Language Learning (MALL) into the Mainstream: MALL in Broad Practice. *Plos One*, 10(5), e0128762. <http://doi.org/10.1371/journal.pone.0128762>
- Yeh, J. Y. (2014). Mapping the Intellectual Structure of Mobile Commerce. *IEEE Xplore*, 430–433.

Appendices

i. DIGITAL BOARD GAME “THROWBACK TIME” – SCREEN SHOT





II. PRE AND POST TEST QUESTIONS

NAME: _____ I/C: _____

GROUP: _____

PRE AND POST TEST

ERROR IDENTIFICATION & CORRECTION

IDENTIFY ONE ERROR & CORRECT IT FROM EACH SENTENCE

1. I are having an awful cold.

2. They are a very nice couple and they is having six lovely kids.

3. The dish is slipping from Ann's hands and broke.

4. They are playing soccer all morning. Now they are asleep.

5. Nadia study Japanese this term.

6. I was believing you are probably right.

7. Does you married?

8. The baby cries at 8.00 p.m. that evening.

9. We kept an eye on his house while he is away on holiday. He is due back next week.

10. What time are you gone to class every day?

11. The judge make a decision now.

12. Did the thief tall?

13. She were buying a brand new car in 2000.

14. He were often coming to visit us when he was on leave.

15. We never crossed the road without looking both ways.

16. Seven and five equaled twelve.

17. The letter are concerning the voting arrangements but it does not apply to us.

18. I was admitting I was wrong.

19. I was expecting Tini will be here shortly.

20. What do you do when the alarm bell rang?

21. This time last week I bask in the sun on a Tioman beach.

22. Mohd is mentioning your name to me this morning.

23. I waited here till you apologize.

24. I tried to lose weight, so I jog three miles every morning.

25. I tastes the sauce to see if there is enough salt in it.

26. Who make the meal this evening?

27. You does not attend to what I am saying.

28. Qaisarah was last seen by her school friends as she get into a bus for Johor.

29. We were crossing the bridge when it is beginning to make cracking noises.

30. Did you hear what he was saying? Sorry, I do not listen.

31. Since Halim see Harlini the following day I asked him to give her the message.

32. Last year we are employing two men to do conjuring and magic tricks.

33. I catch a plane to Kuala Lumpur the next morning, so I left the party early.

34. They feeds my cat until I get back.

35. While the boys eat dinner, Anna came through the door.

36. Johar did not use to eat fish, but now he was.

37. When Rani saw Mr. Ali, he stands in his driveway.

38. Sally are having a hardware shop in town.

39. Mr. Ito were waving to Sally when he saw her.

40. Look out the window. Do it rain?

41. Shh! I am heard something on our roof.

42. Mr. Rin weren't die in the accident.

43. Do they sleep while he was talking?

44. The train is departing at 14.00 hours and arrives at 18.00 hours.

45. She were knowing me before I met her at the party.

46. I does not take any more insults from him.

47. Sally suggested going round to her place later on, if we do not do anything in particular.

48. You will have to show your passport when you are reached the barrier.

49. While the Titanic sails toward New York, the Carpathia was traveling from New York to the Mediterranean.

50. While the ship was sinking, passengers get into lifeboats.

CHOOSE A SIMILAR SENTENCE WITH THE GIVEN ONE

51. These roadworks are going to cause long delays.
a. We are not travelling now.
b. My uncle is coming to stay with us this week.
c. Danis is not taking the same course as us this semester.
d. I think I am going to faint.

52. We are sitting at this table till they bring us the correct bill.
a. Alia is not coming with us today.
b. The store is opening on Friday.
c. I am not taking any more insults from him.
d. Is she collecting their mails when they are away?

WHAT IS THE RULE OF THE PAIR?

53. She took out her textbook and began to learn.
When it started to rain, our dog wanted to come inside.
a. Actions in the past taking place one after another, simple past.
b. Completed action, simple past.
c. It comes with past time expression, simple past.
d. Situation that is finished, simple past.

54. Tom and I were talking about you last night.
I was discussing this very problem earlier today with Mum.
a. Past progressive to avoid sounding direct.
b. Past progressive for something happening at a specific time in the past.
c. Past progressive with simple past to talk about action that was interrupted by another action.
d. Past progressive for two actions happening simultaneously in the past.

FIX THE SENTENCES WITH THE CORRECT GRAMMAR RULE

55. By the time the troops were arriving, the war will have ended.
By the time the troops arrived, the war will have ended.
a. Simple present 'the troops arrive' to refer to the future in subordinate clause.
b. Future arrangement use present progressive 'the troops are arriving'.

56. I was seeing a lot of horse-drawn carriages in rural areas while I was travelling through Bulgaria.
I am seeing a lot of horse-drawn carriages in rural areas while I travel through Bulgaria.
- a. Interrupting action, use simple past 'I saw' & action being interrupted 'I was travelling'
 - b. Completed action, use simple past in both clauses 'I saw' & 'I travelled'

END OF TEST!