

การใช้เกมแบบผสมผสานในการส่งเสริมการมีส่วนร่วมในการเรียนรู้ภาษาอังกฤษของนักเรียน ระดับประถมศึกษา

Blended Gamification in Promoting English Language Learning Engagement for Elementary Students

ภัสรา นามแสง

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บทคัดย่อ

การมีส่วนร่วมในการเรียนรู้ (learning engagement) เพื่อส่งเสริมการรับรู้เชิงบวกตั้งแต่อายุน้อยเป็นประโยชน์ต่อการเรียนภาษาอังกฤษอย่างยิ่ง การศึกษานี้มีวัตถุประสงค์เพื่อ 1) พัฒนาการวัดกิจกรรมการใช้เกมแบบผสมผสานสำหรับนักเรียนในระดับประถมศึกษา 2) ศึกษาการมีส่วนร่วมการเรียนรู้ในระหว่างกิจกรรมการใช้เกมแบบผสมผสาน และ 3) ศึกษาความพึงพอใจหลังกิจกรรมการใช้เกมแบบผสมผสาน ผู้เข้าร่วมการวิจัยได้แก่นักเรียนชั้นประถมศึกษาปีที่ 2-5 จำนวน 12 คน ซึ่งเก็บรวบรวมข้อมูลแบบทั้งชั้นเรียนตามสภาพจริง (intact classes) เครื่องมือที่ใช้ในการวิจัยมีสองประเภท ได้แก่ 1) แบบตรวจสอบรายการการมีส่วนร่วมของนักเรียน และ 2) แบบสำรวจความพึงพอใจ ผลการวิจัยพบว่าการพัฒนานวัตกรรมการใช้เกมแบบผสมผสานนั้นมียอดประกอบ 3 ส่วน ได้แก่ สื่อหรือแพลตฟอร์มออนไลน์ สื่อในชั้นเรียนจริง และขั้นตอนของกิจกรรมนั้น และยังพบอีกว่าด้านความคิดริเริ่มและความพยายามของนักเรียนมีสูงมากในระหว่างการทำกิจกรรมการใช้เกมแบบผสมผสาน โดยเฉพาะอย่างยิ่งในระดับชั้นประถมศึกษาปีที่ 5 และ 3 ตามลำดับ ในขณะที่พฤติกรรมก่อนและไม่ตั้งใจนั้นค่อนข้างต่ำ อาจเป็นเพราะความเพเลิดเพลิน ความตื่นเต้น และการมีส่วนร่วมที่เพิ่มขึ้น ซึ่งทำให้นักเรียนมีความต้องการชนะ ต้องการเรียนรู้ มีความพึงพอใจ และมีการใช้ความคิดในขณะทำกิจกรรม การวิจัยในอนาคตควรมุ่งเน้นไปที่การพัฒนากิจกรรมการใช้เกมแบบผสมผสาน ให้มีความหลากหลายมากกว่าเพียงแพลตฟอร์มออนไลน์ประเภท Kahoot, Quizizz หรือ Padlet และในอนาคตครูผู้สอนควรตระหนักถึงการปรับเปลี่ยนบทเรียนหรือการปรับตัวเมื่อออกแบบกิจกรรมการใช้เกมแบบผสมผสานในชั้นเรียนจริง เพื่อให้เหมาะสมกับระดับภาษาอังกฤษของนักเรียนและทักษะการใช้เทคโนโลยีมากที่สุด

คำสำคัญ: เกมแบบผสมผสาน การเรียนภาษาอังกฤษ การมีส่วนร่วมในการเรียนรู้ นักเรียนระดับประถมศึกษา

Abstract

Learning engagement to promote positive perceptions from a very young age can benefit English language learning. This study aims to 1) develop blended gamification teaching and learning for young elementary students; 2) investigate the learning engagement during the use of blended gamification; and 3) study the learning satisfaction of the students after using blended gamification. The participants were 12 elementary students from grades 2–5, whose data were collected via intact classes. There were two research instruments being used: 1) the Student Engagement Observation Checklist (SEOC) and 2) the satisfaction survey. The results showed that the development of blended gamification innovation requires three components: online materials or platforms, onsite materials, and procedures. The aspects of initiative and effort underlying student engagement were considerably high, especially for grades 5 and 3, respectively while disruptive and inattentive behaviours were perceived as very low. This can be due to the increased enjoyment, excitement, and involvement with blended gamification activities, which made students desire to win, to know, to satisfy, and to think. Further research should focus more on developing the blended gamification platforms than Kahoot, Quizizz, or Padlet, and teachers should be aware of lesson adjustment or adaptation in an actual classroom when designing future blended gamification activities to best fit with the students' level and technological literacy skills.

Keywords: Blended Gamification, English Language Learning, Learning Engagement, Elementary Students

Introduction

Language Learning engagement is defined as an active mental state that occurs when students are considering, concentrating, and having fun while learning a language (Mercer, 2019). Through extensive research studies of learning engagement, such as qualitative case studies of language learning engagement with technology-based pedagogy (Quibrantar & Ezezika, 2023) or student' learning engagements and higher-order thinking skills (Li et al., 2023), researchers have mainly looked at interactions with educational activities from a broad perspective from the perspective of youth students (Wang & Holcombe, 2010). However, little study has been conducted with the young students.

Technology-based pedagogy sheds light on the aspect of blended gamification platforms. Indeed, the blended gamification platform is the operational definition for this particular study. Similar earlier research found that gamification satisfied the psychological demands of students. Both intrinsic and extrinsic motives were present in the gamified classroom, although the level of autonomous motivation was higher (Grabner-Hagen & Kingsley, 2023). However, the mentioned study solely focused on e-learning applications. Differently, the blended gamification platform in this current study is defined as an integration of both technology-supported game learning and non-technology-supported game learning.

There are three gamification platforms for the current study: Kahoot, Quizizz, and Padlet. The selection of Kahoot as one of the gamification platforms is because it is widely used by researchers around the globe, such as in Indonesia, Ireland, Italy, etc., as a formative assessment tool for facilitating learning and testing knowledge (Cadet, 2023; Coveney et al., 2022; Wirani et al., 2022), which implies that it is an acceptable tool internationally. Another gamification platform is Quizizz. It has been chosen because it is easy to use and appropriate for young children, especially those between 3 and 12 years old (Common Sense Education, 2022). Its overall rating score is also high, at 4.8 out of 5 as reviewed by 519 users (Software Advice, 2023). The last gamification platform is Padlet. It is employed as a scaffolding tool for the students. They could see multiple words and ideas at the same time and choose the one that was relevant to their answer. Indeed, Padlet gives young children a tool to concentrate with. This platform can also be used to design a learning module for the deaf (DeWitt et al., 2015).

Nevertheless, young students in Thai government schools may not foresee what the goals of education can be: dislike, demotivation, and viewing English as a boring subject (Polrak, 2019). This conforms with the previous studies that demotivation in students can be due to a lack of interest in the lesson, classroom activities, too much emphasis on grammatical structures, learning for testing, teaching and learning without communication, and inexperienced or unskilled practitioners (Alyousif & Alsuhaibani, 2021; Polrak, 2019). Thus, the English teachers must have teaching tactics that can promote the students' positive attitude toward learning English, which can be implemented through the usage of technology, intrinsic motivation, providing encouragement, and cooperative or competitive activities (Alyousif & Alsuhaibani, 2021). This confirms the previous study that integrating

games improves the efficiency of teaching and learning over the traditional method. Fadhli et al. (2020) studied the effectiveness of using gamification in teaching and learning and found that it made young students between the ages of 6 and 10 significantly knowledgeable, skilled, and positive. This can be due to the characteristics of games helping to draw the students' attention because they have a chance to compete, be excited, physically touch a new instrument, relieve themselves from stress, express their opinions, etc. Thus, using games has a high potential to promote motivation in small students to be fun and happy in the English classroom.

Integrating games into teaching and learning can be done with and without technology. Online Games can be benefit in education such as improving cognitive abilities, enhancing problem-solving skills, and improving strategic thinking skills (Gaming Respawn, 2023). Whilst, its disadvantages can be found as an addiction, less interaction with other people, and spending a lot of time in front of screen (Hafeez, 2021). On the other hand, the development of children in the physical, cognitive, linguistic, and social-emotional domains is supported by traditional children's games. Traditional child games, on the other hand, allow students to combine all of their knowledge and skills necessary for life through games, explain themselves in a very simple way, and exhibit their skills throughout the preschool and school years. It has been discovered that games greatly aid children's self-care as well as their physical, linguistic, cognitive, and social-emotional development (Gelisi & Yazici, 2015). Thus, teachers should bring both the games without technology and the games with technology into classrooms. This, however, can bridge the disadvantages found in online games (games with technology). Games without technology will make students interact with their classmates by using physical movements. Hence, the use of Blended Gamification, or integrating both technology-supported game learning and non-technology-supported game learning, can potentially provide efficiency and effectiveness in teaching and learning.

However, too much emphasis on game learning can prevent the students from comprehending the components of lessons or content in English; game learning might not cover all four English skills (listening, speaking, reading, and writing). Thus, the design of game learning must include those skills mentioned as well as the appropriate content for a particular level. This is the direct responsibility of teachers or researchers in designing teaching and learning to be knowledgeable, fun, motivated, cover all four skills, and conform

to the content indicated in the curriculum. This use of game learning can create a quality curriculum and bring about quality education, as mentioned in the study (Alam et al., 2022).

This current study serves stakeholders: the parents' needs in searching for high standards of quality in teaching and learning; the students' needs for English courses to be happy, fun, and knowledgeable; and the program requirement in producing four skills of English language according to the curriculum standard together. The embedment of positive perceptions shall be done at a young age due to the best time of language development, widely known as the Zone of Proximal Development. This study uses blended gamification to increase elementary students' engagement in learning the English language.

Research objectives

This research aims to promote English Language Learning Engagement for Elementary Students by using blended gamification with three objectives.

2.1 To develop teaching and learning innovation by using blended gamification for elementary students.

2.2 To investigate the learning engagement during the use of blended gamification for elementary students.

2.3 To study the learning satisfaction of elementary students after using blended gamification.

Methodology

A mixed-method research design was used in which the data was collected from convenient sampling through intact classes at a small newborn demonstration school in northeastern Thailand. The participants were 12 elementary students from grades 2 ($n = 7$), 3 ($n = 2$), and 5 ($n = 3$). In total, there were four males and seven females between 7 and 10 years old. There were two research instruments: 1) the Student Engagement Observation Checklist (SEOC) (Cassar & Jang, 2010), which was collected during the blended gamification activities, and 2) the satisfaction survey, which was collected at the end of blended gamification activity. Then the quantitative data was analyzed using frequency, percentage, mean, and standard deviation. While the qualitative data was analysed by content analysis with verification from an experienced intra-coder, the theme was generated based on the collected qualitative data.

The Student Engagement Observation Checklist (SEOC)

SEOC is originally used for the game-based approach in teaching word recognition and spelling previously for students with reading disabilities and attention deficits (Cassar & Jang, 2010), in which the word recognition and spelling in the game-based approach are likely to be appropriate for the young students, elementary students, too. The researcher, as an observer, filled out the SEOC.

Scale	Statement	Never		Sometimes		Always
		1	2	3	4	5
E ^a	1. Pays attention in class					
E	2. Works well with other children					
I	3. Attempts to do his/her work thoroughly and well, rather than just trying to get by					
D	4. Acts restless, is unable to sit still					
I	5. Participates actively in discussions					
E	6. Completes assigned seatwork					
D	7. Needs to be reprimanded					
D	8. Annoys or interferes with peers' work					
E	9. Is persistent when confronted with difficult problems					
N	10. Doesn't seem to know what is going on in class					
N	11. Is withdrawn, uncommunicative					
E	12. Approaches new assignments with sincere effort					
I	13. Asks questions to get more information					
D	14. Talks with classmates too much					
N	15. Doesn't take independent initiative, must be helped to get started and kept going on work					
E	16. Tries to finish assignments even when they are difficult					
I	17. Raises his/her hand to answer a question or volunteer information					
E	18. Gets discouraged and stops trying when encounter an obstacle in schoolwork; is easily frustrated					

Notes: E = Effort; I = Initiative; D = Disruptive behavior; N = Inattentive behavior.

Figure 1 Student Engagement Observation Checklist (SEOC) (Cassar & Jang, 2010)

Figure 1 shows the SEOC. There are 18 items in 4 categories: effort, initiative, disruptive, and inattentive behaviors. The rating scores have 5 levels: for example, 1 = never, 3 = sometimes, and 5 = always. The data is interpreted by grouping the mentioned categories.

Satisfaction Survey

The satisfaction survey is composed of two sections: demographic information such as grade, age, gender, and English GPA, and ten satisfaction survey items. Intentionally, participants are required to fill out the satisfaction survey themselves. However, in some classes, such as grades 2 and 3, the teacher, as a researcher, asked and filled it out for the

student due to the limitations of the reading deficits. In grade 5, however, the participants did it themselves. The first eight items were closed-ended questions asking about general satisfaction, and the other two questions were open-ended questions asking what they liked and disliked most about blended gamification activities. There are merely three scales: Happy 😊, OK 😐, and Sad ☹️ for students. The scale is designed for ease due to reducing the complexity of the survey for young participants. The questionnaire for young children should, in accordance with the University of Exeter (2017), have a simple scoring system. For instance, a questionnaire based on emoticon-style facial expressions could assist teachers and other individuals who work with young children (University of Exeter, 2017). The quantitative data was on items 1–8, and the qualitative data was on items 9 and 10. The survey was tried out with three students at approximately the same level. They understand and are able to answer by using those words.

The research data collection procedure can be briefly shown in figure 2 below.

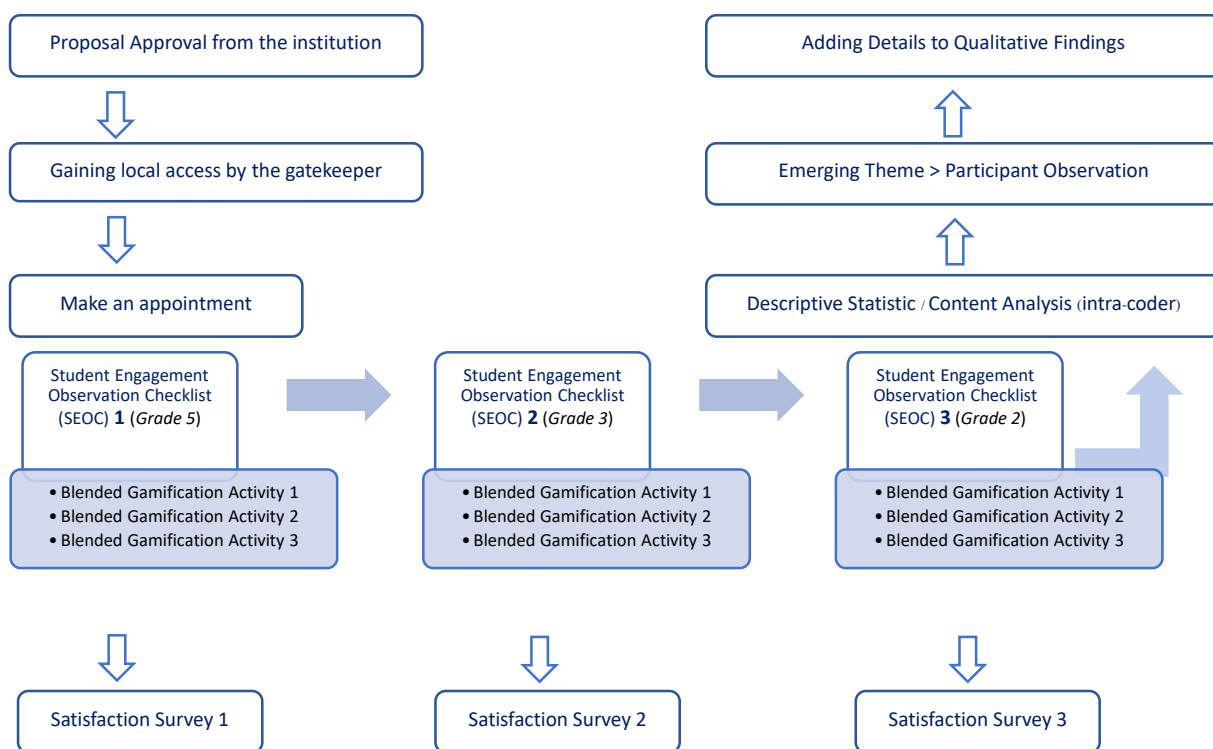


Figure 2: Data Collection Procedure

Figure 2 shows the data collection procedure of the study. After viewing the broad assumption as well as narrowing down the point, it came up with the research objective, research instruments, and research proposal. The institutional board approved the research proposal. Then gaining access from the gatekeeper in order to make the appointment to make contact with the class. Three sets of data were collected from students in grades 5, 3, and 2, respectively. SEOC was used to collect data during the three blended gamification activities, and a satisfaction survey was used to collect data after each data collection set. After that, the quantitative data obtained from the SEOC and the eight items of the satisfaction survey were analyzed using frequency, percentage, mean, and standard deviation. The qualitative data from the last two items from the satisfaction survey were analyzed by content analysis. Moreover, a researcher acting as a teacher also acted as a participatory observer. The participatory classroom observation was also conducted during the data collection procedure, and an emerging theme emerged in adding details to the qualitative findings.

Results

Developing teaching and learning innovation by using blended gamification for elementary students

As blended gamification is the combination of both traditional games in the classroom and technology-dependent electronic games, as mentioned earlier, the three Blended Gamification Activities were invented and employed during the three sets of data collection procedures via the intact classes as shown in Table 1.

Table 1 Blended Gamification Activity 1

Blended Gamification Activity 1																							
Online materials/ platforms:	Kahoot	Show pictures of animals with choices of English words																					
Onsite materials:	Unscramble words!	<p>A list of focused vocabulary:</p> <table> <tr> <td>(Alligator</td><td>Camel</td><td>Cheetah</td></tr> <tr> <td>Chicken</td><td>Giraffe</td><td>Gorilla</td></tr> <tr> <td>Hamster</td><td>Kangaroo</td><td>Octopus</td></tr> <tr> <td>Panda</td><td>Penguin</td><td>Rooster</td></tr> <tr> <td>Seal</td><td>Shark</td><td>Sheep</td></tr> <tr> <td>Snake</td><td>Spider</td><td>Tiger</td></tr> <tr> <td>Whale</td><td>Zebra)</td><td></td></tr> </table>	(Alligator	Camel	Cheetah	Chicken	Giraffe	Gorilla	Hamster	Kangaroo	Octopus	Panda	Penguin	Rooster	Seal	Shark	Sheep	Snake	Spider	Tiger	Whale	Zebra)	
(Alligator	Camel	Cheetah																					
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Snake	Spider	Tiger																					
Whale	Zebra)																						
Blended Gamification Activity 1																							
Procedures:	<ol style="list-style-type: none"> 1. Teach vocabulary about animals. 2. Split the students into two teams (if there are enough students). 3. Use Kahoot to show the virtual flashcards of animals and ask the students to choose the right word for each picture. 4. Ask students to unscramble the words of each chosen word shown in Kahoot earlier. 5. Repeat the same process until it reaches the target number of vocabularies learned. 6. Count the score (if teams are applicable). <p>*Remarks: The proposed blended gamification activity 1 was actually implemented in the grade 5 student; however, it slightly changed for the grades 2 and 3 by allowing them to have the correct scrambled words for their references since they would not be able to catch up with the English words shown in Kahoot.</p>																						

Table 2 Blended Gamification Activity 2

Blended Gamification Activity 2		
Online materials/ platforms:	Quizizz	Show choices of English words about parts of the body.
Onsite materials:	<p>Teacher's pointing to the part of the body (visuality)</p> <p>Or</p> <p>The teacher says the part of the body (auditory)</p>	<p>A list of focused vocabulary:</p> <p>(Neck Teeth Lips Legs</p> <p>Hands Head Elbow Face</p> <p>Feet Stomach Fingers knees</p> <p>arms eyes nose eyebrows</p> <p>back toes ears hair)</p>
Procedures:	<ol style="list-style-type: none"> 1. Teach vocabulary about parts of the body. 2. Split the students into two teams (if there are enough students). 3. Use Quizizz integrated with either 1) the teacher's pointing to the part of the body (visuality) Or 2) the teacher saying the part of the body (auditory). 4. Ask students to choose the correct choice appearing in Quizizz. 5. Repeat the same process until it reaches the target number of vocabularies learned. 6. Count the score (if teams are applicable). <p><i>*Remarks:</i> In grades 2 and 3 students, the drawing may be integrated as a continued activity, such as asking students to draw an alien based on listening to the teacher. For example, it has a big face, six ears, four teeth, three eyes, three noses, etc. Then check for correctness in the drawing. This activity can be done individually.</p>	

Table 3 Blended Gamification Activity 3

Blended Gamification Activity 3		
Online materials/ platforms:	Padlet	Show all the mixed words of actions, and family members. (Actions: stand up, walk, sit down, turn right, turn left, stop, turn around, jump, squat, clap your hands! Family members: Mother, mom father, dad, son, daughter, grandmother, grandfather, aunt, uncle, brother, sister)
Onsite materials:	Simon Says and/or Wordsearch Worksheet	
Procedures:	<ol style="list-style-type: none">1. Teach vocabulary about actions and family members.2. Combine the actions and family members in the sentences, i.e., father dances, sister sits down, etc.3. Play Simon says to engage the students.4. Use Padlet to show all the mixed words about actions and family members without separating the categories.5. The teacher says the word, then students search for the word in a wordsearch worksheet (references provided in the Padlet).6. Repeat the same process until it reaches the target number of vocabularies learned. <p>*Remarks: For grades 2 and 3 students, in item 5, apart from saying the word, the teacher may scaffold them by pointing at the word in the Padlet so that the young learner can notice the word form (virtually supported) rather than audio supported per se.</p>	

According to Tables 1, 2, and 3, it shows the integration of traditional games in the classroom with technology-dependent electronic games. Each blended gamification activity consists of three elements: online materials or platforms, onsite materials, and procedures. Obviously, as seen in the procedure, there is a combination of traditional games (unscramble words worksheet, visual or audio resources from the teacher, and wordsearch worksheet) and electronic games (by using online platforms such as Kahoot, Quizizz, and Padlet) during all steps of the activity to support English language learning in young students. Finally, the procedures of each blended gamification include both traditional and electronic games

integrating in order to teach the language at the word and sentence levels for the elementary level. There were remarks for each blended gamification activity, in which it is designed to scaffold young students who are partly insufficiently proficient in English for their level.

Learning engagement through the use of blended gamification for elementary students

The Student Engagement Observation Checklist (SEOC) (Cassar & Jang, 2010) has been collected from the elementary students during the blended gamification activity. There are four aspects of learning engagement: effort, initiative, disruptive behaviour, and inattentive behaviour. It appears in the following tables.

Table 4 Effort: The Student Engagement Observation Checklist (SEOC)

Effort: SEOC (Cassar & Jang, 2010)	Grade 5	Grade 3	Grade 2	Total
1. Pays attention in class	5.00	5.00	5.00	5.00
2. Works well with other children	4.67	5.00	5.00	4.89
3. Completes assigned seatwork	3.67	4.50	4.14	4.10
4. Is persistent when confronted with difficult problems.	4.33	4.00	4.00	4.11
5. Approaches new assignments with sincere effort	4.67	4.50	4.29	4.48
6. Tries to finish assignments even when they are difficult	5.00	4.50	4.29	4.60
7. Get discouraged and stops trying when encounter an obstacle in schoolwork; is easily frustrated (Reversed Score*)	4.33	5.00	5.00	4.78
Mean Score	4.52	4.64	4.53	4.57
S.D.	0.47	0.38	0.45	0.36

Table 4 shows that the student engagement underlying the aspect of effort was high at 4.57 (91%), and the highest effort was made by grade 3 students (4.64; 93%), followed by grades 2 (4.53; 91%) and 5 (4.52; 90%), respectively.

Table 5 Initiative: The Student Engagement Observation Checklist (SEOC)

Initiative: SEOC (Cassar & Jang, 2010)	Grade 5	Grade 3	Grade 2	Total
1. Attempts to do his/her work thoroughly and well, rather than just trying to get by	4.33	5.00	4.86	4.73
2. Participates actively in discussions	4.67	4.50	4.29	4.48
3. Asks questions to get more information	3.67	5.00	4.14	4.27
4. Raises his/her hand to answer a question or volunteer information	4.33	4.50	3.86	4.23
Mean Score	4.25	4.75	4.29	4.43
S.D.	0.42	0.29	0.42	0.23

Table 5 shows that the student engagement underlying the aspect of initiative was high at 4.43 (89%), and the highest initiative was made by grade 3 students (4.75; 95%), followed by grades 2 (4.29; 86%) and 5 (4.25; 85%), respectively.

Table 6 Disruptive Behaviour: The Student Engagement Observation Checklist (SEOC)

Disruptive Behaviour: SEOC (Cassar & Jang, 2010)	Grade 5	Grade 3	Grade 2	Total
1. Acts restless, is unable to sit still	2.00	1.00	1.14	1.38
2. Need to be reprimanded	1.00	1.00	1.00	1.00
3. Annoy or interfere with peers' work	1.00	1.00	1.00	1.00
4. Talk with classmates too much	1.67	2.00	2.14	1.94
Mean Score	1.42	1.25	1.32	1.33
S.D.	0.50	0.50	0.55	0.44

Table 6 shows that the student engagement underlying the aspect of disruptive behaviour was low at 1.33 (27%), and the lowest disruptive behaviour was made by grade 3 students (1.25; 25%), followed by grades 2 (1.32; 26%) and 5 (1.42; 28%), respectively.

Table 7 Inattentive Behavior: The Student Engagement Observation Checklist (SEOC)

Inattentive Behavior: SEOC (Cassar & Jang, 2010)	Grade 5	Grade 3	Grade 2	Total
1. Does not seem to know what is going on in class	1.33	2.00	1.43	1.59
2. Is withdrawn, uncommunicative	1.33	1.00	1.00	1.11
3. Does not take independent initiative, must be helped to get started and kept going on work	2.33	2.00	2.14	2.16
Mean Score	1.67	1.67	1.52	1.62
S.D.	0.58	0.58	0.58	0.52

Table 7 shows that the student engagement underlying the aspect of inattentive behaviour was low at 1.62 (32%), and the lowest inattentive behaviour was made by grade 2 students (1.52; 30%), followed by grades 3 and 5 (1.67; 33%) equally,

To conclude, the learning engagement of elementary students during the Blended gamification activity through the classroom observation found that their learning engagement via the aspect of initiative was the highest at 89%, followed by the aspect of effort at 81%. Whilst the aspects of disruptive and inattentive behaviours were perceived very lowly at 27% and 32%, respectively.

Learning satisfaction after using blended gamification

The satisfaction survey had been collected after the use of blended gamification. The results revealed that the participants were happy with the blended gamification activity accounted for 98.66% as shown in the following figure.

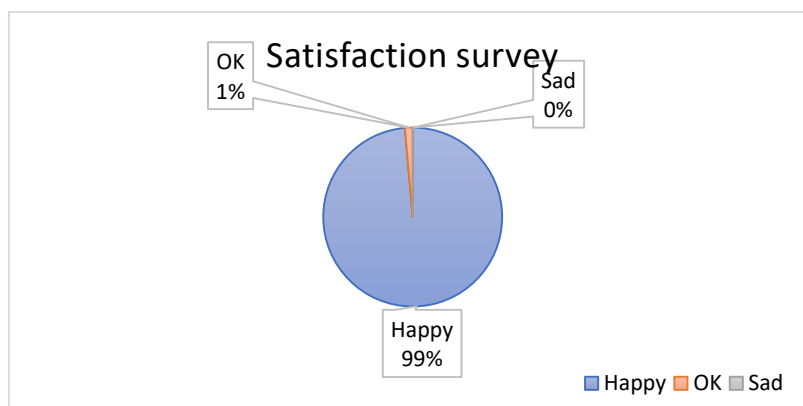


Figure 3 Satisfaction Survey

Figure 3 shows the satisfaction of the participants after the blended gamification activity. Most of the participants were happy with the games, tools, activity, friend, and teacher. Also, there were some open opinions about the likes and dislikes of the blended gamification activity. Likes include unscrambled word activities, the use of computers where students can control their own learning, flashcards, and helping their friends. Dislikes are also indicated, such as competing with friends in order to seize the word they want while playing games.

Table 8 Satisfaction Survey by grades.

Satisfaction Survey	Mean	%	S.D.
Grade 2 (n=7); 8 items	3	100	0
Grade 5 (n=3); 8 items	2.92	97.22	0.28
Grade 3 (n=2); 8 items	2.88	95.83	0.34

Table 8 shows the satisfaction survey by grades 2, 5, and 3, respectively. The grade 2 students expressed the highest satisfaction (100%, S.D. = 0), followed by grade 5 and grade 3, respectively, at 97.22% (S.D. = 0.28) and 95.83% (S.D. = 0.34).

As per the qualitative data from the two last items of the satisfaction survey, what the participants like the most about the blended gamification activities is seen in the following excerpts:

- "I like to compete with others," participant 1.
- "I like to unscramble words, said participants 2 and 3.

- "I like games, everything on the computer, and flashcards," participant 4.
- "I like to look for the word, said participants 5, 6, 8, and 9.
- "I like to help other students," participant 5.
- "I like computers because it's fun, said participants 7, 9, 11, and 12.
- "I like to write," participant 10.

Out of twelve participants, eight indicated that there was nothing they did not like. However, the other four participants expressed what they disliked the most about the blended gamification activities, which are as follows:

- "I don't like when the classmate takes the flashcards from me," participants 2, 3, and 4 say.
- "I don't like being captured by the camera," participant 11.

Moreover, a holistically participant observation was also conducted. First, the high engagement leads to the loudness of the classroom. Since all participants are eager to touch both offline and online materials or platforms, it is undeniable to seize or be taken the materials leading to the arguments, in which the teacher helped solve them in the class. Second, the participants need a lot of scaffolding, especially in grade 2. There were a lot of questions being asked and requested. Since the teachers are dealing with young students, they have to spend a lot of energy scaffolding both matters relevant and irrelevant to the subject. Third, it was time-consuming to prepare the teaching materials for blended gamification due to the inadequate or unexpected opportunity to use them in a real classroom. Fourth, flexibility in the implementation is needed. For young children, there were a lot of adjustments during the teaching procedure. The teachers should observe and adjust accordingly. Finally, the competition may lead to trouble. The teacher for young students was considered an authorized person and made a decision if any disputes arose.

Discussion

The need for extensive blended gamification innovations

In connection with the result of first research aim, blended gamification innovation can be developed by combining the three elements: online materials or platforms, onsite materials, and procedures. First, the online materials or online gamification platforms being

used in the current study are merely Kahoot, Quizizz, and Padlet. Compared with the current digital era, it seems limited in terms of teaching and learning in the digital era. Since there are available online platforms that can effectively nurture language learning, specifically Socrative, Kahoot!, FlipQuiz, Duolingo, Ribbon Hero, ClassDojo, Goalbook, and BadgeOS™ (Kiryakova et al., 2014). In widely spreading the use of different online tools, language learning as well as teaching methods may be extensively and effectively instructed. Second, onsite materials or traditional games are still applicable since the participants increase their self-esteem and promote their relationships with other classmates, both in competitive and cooperative forms (Nemerow, 1996). Though Azhar and Ab (2022) divided games into three groups, which are traditional, individual, and collaborative game-based learning, it is even greater to combine those three characteristics into the blended gamification classroom. Finally, the procedures in all blended gamification activities proposed are merely at the word and sentence levels, which are actually appropriate for the young students. This corresponds with the previous study mentioned that teaching English to native French elementary students can use a few English words or a whole sentence, and it is considered appropriate and sufficient enough to make them earn a score in the classroom (Diehr & Frisch, 2008). Anyhow, the adjustment or adaptation of the pedagogies or actual implementation can be adapted to be best suited for a particular classroom. Adjustment is not a new thing but rather can be seen in a formal term as formative assessment since it is viewed as a tool to monitor the students' progress, provide encouragement, foster engagement, and signal an intervention as early as possible (McCallum & Milner, 2021). In each blended gamification activity, the teachers are required to adjust the level of difficulty (by using formative assessment) by providing sufficient scaffolding to meet the students level of English language proficiency.

As per the result for the second research objective, blended gamification activities are being liked because: 1) it gives a sense of competition in the classroom; 2) interesting characteristics of the activities such as unscrambling words, looking for the words, computer-assisted language learning, and learning by flashcards; 3) the increase of chances to promote peer-assisted language learning by helping other students; and 4) it motivates students as a fun way of learning, leading to a stress-free learning atmosphere. However, there are some dislikes such as the competition is not likely to be a comfort zone for some students and students seem aware of using the camera in capturing photos and videos during the activities.

This is confirmed by the previous study of the Hawthorn effect (Adair, 1984). It is indicated that the participants are likely to act differently when they acknowledge being captured, so a possible solution should be to allow the participants to become familiar with the camera or other instruments before starting to collect the data. Due to the limitations of the current study, the short timeframe of the data collection procedure may cause the Hawthorn effect.

Another aspect can be found in the competition-cooperation operationalization continuum. As per one of the most desirable and undesirable characteristics of blended gamification activities is 'competition'. Some participants like competition, while others totally dislike it. Cooperation and competition tend to be viewed as opposing in nature, as incompatible powers, and as the two extremes on a continuum. The previous study indicated that the paradox between cooperation and competition is a three-dimensional model of relational space (fairness-opportunism, sharing-control, and engagement-rivalry) (Ricciardi et al., 2022). As a result, they may coexist and support each other. Reflecting blended gamification, though there is an attempt to promote cooperation over competition, the two ends could potentially support English language teaching and learning in the classroom.

Blended Gamification in Nurturing Learning Engagement

The learning engagement of elementary students during the blended gamification activity was considerably high, especially in the aspects of initiative (89%) and effort (81%), which students in grades 3 and 5 showed the most. However, the disruptive and inattentive behaviours were perceived as very low. This confirms the previous study that using games makes students enjoy the learning activities with the desire to win, to know, to satisfy, and to think (Arnold, 2014). Also, with the support of traditional games such as unscramble words worksheets, visual or audio resources from the teacher, and wordsearch worksheets, the learning engagement can mutually increase, as said in excerpts of the satisfaction survey: "*I like to unscramble words*" (students 2 and 3). Moreover, with the variety of conditions and techniques found in technology-dependent gamification, it helps increase the excitement in blended gamification, such as challenges, points, levels, badges, and ranking (Kiryakova et al., 2014). The blended gamification is even more challenging and increases the involvement of the class.

As per tables 4 and 5, grade 2 students slightly exert less effort than other grades, and grade 3 students are likely to express more initiative than other grades. Grade 2 students are considered the largest group of students ($n = 7$), while grade 3 students are considered the smallest group of students ($n = 2$). This confirms the Ringelmann effect: the larger the group, the lower the productivity. Ingham et al. (1974) indicate that the performance declined dramatically as the number of participants climbed from one to two or three but produced insignificant declines with the addition of a fourth, fifth, or sixth participant. Thus, this is the reason why grade 2 students seem to have less effort, while grade 3 students expressed greater productivity in terms of initiative.

Conclusion

To conclude, blended gamification is an activity combining technology and classic classroom games. Developing teaching and learning innovation by using blended gamification consists of three elements: online materials or platforms, onsite materials, and procedures. The online materials or platforms of the current study are Kahoot, Quizizz, and Padlet, and the onsite materials are the unscramble words worksheet, visual or audio resources from the teacher, and a wordsearch worksheet. The procedures of blended gamification activities mutually support both online platforms and onsite materials with the specification of teaching English at word and sentence levels for elementary students.

The SEOC showed through the use of blended gamification that the aspects of initiative and effort were perceived highly by grades 5 and 3, respectively. Supportably, disruptive and inattentive behaviors were perceived as low. While the satisfaction survey indicated that participants were happy with the blended gamification activity. The holistic participant observation was also conducted and showed that high engagement leads to the loudness of the classroom, the participants need a lot of scaffolding, especially for young students, both relevant and irrelevant to the subject matter, and it is time-consuming to prepare the teaching materials while having inadequate opportunity to use them.

With the notion of employing blended gamification at a very young age, especially between 6 and 10 years old, students will become knowledgeable, skilled, and positive. Positive perceptions should be nurtured during this period of time. However, there are limited studies in blended gamification, so there is an urgent need to explore this area underlying the digital era and expand the online platforms that are specifically used for

particular learning styles and specifications. The onsite materials should be developed and still exist in a creative way, and learning beyond the level of words and sentences as well as the adaptation of the teachers should be considered. With the advantages of both online gamification and traditional games, students expressed high learning engagement (effort and initiative) and low disruptive and inattentive behaviours. This makes blended gamification challenging and makes students more involved in the classroom.

Suggestions and limitations

Teachers should be flexible in adjusting teaching and learning and be ready for all relevant and irrelevant matters happening in the class, especially when involving high engagement that produces loud noises or conflicts among the classmates. Since this is merely a small-scale research study, the findings cannot be generalized. There are several limitations to the study. Despite the use of intact classes, the number of students was low due to the newborn demonstration school. A variety of online tools should be employed rather than Kahoot, Quizizz, or Padlet. Different research methodologies are needed, such as quantitatively experimental research in terms of students' learning achievement enhancement or qualitative interviews in terms of in-depth perceptions towards blended gamification. A longer period of time should be studied with different focuses for the blended gamification activity. Surprisingly, during the blended gamification activities, it should be able to control the traditional learning style that students cling to; for example, in a small school, grade 2 and 3 students were familiar with learning together. They may try to intervene when a particular grade is administered. Lastly, blended gamification should inform quality assurance as it is embedded in the curriculum and quality certified.

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