

The effects of gamified learning using interactive PowerPoint games on young ESL learners' learning engagement and speaking performance

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ABSTRACT

Gamified learning has gained attention in the past decade, especially in language teaching and learning. Despite its expanding popularity, gamified learning still has substantial gaps in its effectiveness, particularly in terms of long-term engagement and comprehensive learning results. This action research aimed to explore the effects of gamified learning by utilizing six adapted interactive PowerPoint games on young ESL learners' engagement. To this end, an observation checklist and pre- and post-speaking tests were used to assess the effects on students' speaking abilities. Eleven year 4 pupils from a suburban school in Sarawak, Malaysia, were selected through purposive sampling. Data were analyzed using frequency distribution and descriptive statistics. The findings showed that gamified learning significantly enhanced learners' behavioral, cognitive and emotional engagement during English as a second language (ESL) speaking activities. Students were more enthusiastic, made greater efforts to speak English and were motivated to complete speaking tasks when gamified elements were included. These results suggest that gamified learning is a promising strategy for increasing learner engagement and improving speaking skills in ESL classrooms.

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1. INTRODUCTION

The English language is widely spoken as a second language worldwide, providing an essential tool for communication in our increasingly interconnected world. When it comes to language proficiency, speaking abilities are just as crucial as reading and writing [1]; without them, learners could struggle to interact with others in both formal and informal settings. Effective English speaking is necessary to allow individuals to engage fully in the global world, opening doors to business, education and intercultural relationships. In Malaysia, English language proficiency has become increasingly important as a result of initiatives to increase its ability to compete internationally. English as a second language (ESL) and it is widely used in education, business and daily life alongside Bahasa Malaysia, the national language. As a multilingual country, Malaysians learn English in school and use it for studies, work and communication. English fluency is seen to boost efficient outcomes and interaction with global audiences, as seen by the country's effort in acknowledging English as a second language [2]. Therefore, English language proficiency is essential for both individuals and the country since it offers greater possibilities for development and enhances the ability to compete globally.

Nevertheless, ESL learners sometimes struggle with speaking, especially in classroom settings, despite an extensive number of programs targeted at promoting English proficiency. The unwillingness of ESL students to actively use English is still a concern, particularly when it comes to speaking lessons where they could feel uncomfortable or hesitant [1], [3], [4]. On top of that, the level of English proficiency among ESL Malaysian learners seems to be deteriorating, which is worrying. Even in secondary school, many students still struggle with basic communication skills, especially speaking, even after more than eleven years of solid study of English [5]. Additionally, research shows that these students frequently have pauses and gaps when speaking the English language [6], which impairs their ability to communicate effectively and confidently [7], [8]. Their reluctance to use the language is further heightened by their fear of being judged [8], [9] and their worries about speaking in public, speech inaccuracy and negative impressions [3], [10]. In this situation, they usually avoid eye contact and keep silent as a coping mechanism [3]. They also feel more comfortable expressing their thoughts in their first language or mother tongue, which can impede their ESL speaking skills [11]. These challenges can seriously impede the ability of ESL learners to speak the English language effectively.

Along with these challenges, the way ESL speaking lessons are structured and delivered is also highly important in encouraging students to engage in speaking. Previous studies also revealed that learners are often disengaged and demotivated during ESL speaking lessons due to dull and uninteresting lessons [12], [13]. It can significantly affect ESL learners' engagement and proficiency. With the learners not feeling excited and uninterested in the lessons, it makes it hard for them to make an effort to participate in the speaking activities. Thus, teachers are highly accountable for engaging and encouraging the learners to participate in ESL speaking activities. They also hold a great deal of responsibility for selecting an appropriate teaching strategy that is thought to be relevant to the needs of their pupils [14], [15]. However, some teachers struggle to adjust and adapt their pedagogical skills to teach ESL lessons [16], especially in developing speaking skills. Furthermore, speaking abilities are frequently neglected in favor of teaching reading and writing skills. Consequently, ESL students often struggle with spoken English [5]. Therefore, to ensure that ESL teachers are equipped to meet their students' needs and provide more engaging lessons, they must continuously improve their abilities to remain efficient and able to adapt to the changing world of learning.

One of the effective strategies used by teachers to improve speaking difficulties in ESL classrooms is gamified learning [17], which has been proven to boost learners' engagement and motivation. Moreover, gamification in the educational context has been trending over the years [18], changing teaching and learning dynamics. Gamification is known as using game components or characteristics in non-gaming contexts [19]. It is also defined as incorporating game components as pupils' incentives into the learning process to motivate students and improve their performance in learning [20]–[27]. To provide an interesting educational experience, gamified learning uses a variety of game elements including points, badges, leaderboards, levels and challenges. Teachers are also recommended to implement gamified learning as 21st-century pedagogies in teaching ESL [8]. A few research studies were carried out to investigate the impact of gamified learning utilizing PowerPoint games in ESL classrooms and the findings showed that it improved students' speaking skills [6], [13], [28]. These findings suggest that gamified learning can improve students' educational experiences by improving engagement, motivation and interactive learning. Gamified learning has the potential to shift the conventional ways of teaching, providing students with an engaging and compelling approach to learning new skills and knowledge. Hence, teachers need to adjust and adapt to the current trends to stay relevant in their field, especially with the rapid use of technology in our lives.

Despite the encouraging outcomes of gamified learning, research on its precise effectiveness in enhancing students' speaking performance and engagement levels in ESL classes is still lacking. Previous studies [6], [13] have explored the impact of gamified learning on fluency, motivation, use of media and the assessment of the innovation in teaching English speaking skills while employing gamified learning. To fill this gap, the current study aimed to determine the effects of interactive PowerPoint games on the speaking performance and engagement of young ESL learners. This study was motivated by the persistent difficulties young ESL learners encounter in Malaysian primary schools, such as low engagement [12], [13] and speaking difficulties [5]–[10]. It is important to address these issues at an early age since language learning serves as the basis for future English language proficiency. At this crucial developmental stage, early involvement, and the capacity to communicate fluently in a second language can have a big impact on young learners' long-term language proficiency. Addressing these gaps in primary ESL lessons is critical since persistent issues like lack of engagement and speaking difficulties could impede students' overall learning progression from a young age. Therefore, this study aims to explore the following research questions: i) how does gamified learning impact young ESL learners' engagement in ESL speaking activities? and ii) to what extent does gamified learning influence young ESL learners' speaking performance?

2. LITERATURE REVIEW

2.1. Gamified learning theory

Gamification refers to the use of game features in non-gaming environments to improve learning outcomes [19], [22]. According to Lander's theory of gamified learning [22], it differs from game-based learning. In Landers' theory, instructional designers can gamify an existing lesson plan by adding game components to increase student motivation and improve the lesson plan through the moderation process. The process involves adding game elements such as points, badges, leaderboards, and challenges to traditional lessons. However, the effectiveness of gamified learning is determined by how well these components connect with learning objectives and promote cognitive processes. For example, in English lessons, teachers can use a gamified learning approach to create an engaging and fun learning environment [29]. The addition of gaming components makes the learning process more engaging and stimulating, which could improve learners' engagement and participation. Learner engagement is essential to encourage students to complete their tasks. Students' effort in completing a task indicates their learning engagement [30]. Successful completion of tasks indicates that the learners are truly engaged in their learning process.

Moreover, it may boost learners' confidence, encourage persistent engagement and give teachers feedback on the success of their teaching methods and the learning environment. Considering these theoretical foundations, gamified learning is considered very effective in ESL lessons. Previous studies also confirmed that gamified learning is one of the ways to encourage students and enhance their learning outcomes [20]–[27], [30]. It is also noted that games can provide learners with a stress-free environment [31]. Gamification reduces anxiety by establishing a stress-free and pleasurable learning setting, enabling learners to actively participate in speaking and other ESL tasks [32]. It is also fun and engaging, which not only increases engagement but also allows learners to practice language skills with more confidence. An in-depth analysis of the empirical data based on gamification also suggests that there are more advantages than disadvantages in implementing gamified learning in EFL and ESL instruction [33]. This also implies that game elements that act as rewards for learning can boost young ESL learners' engagement and thus improve learners' learning outcomes.

2.2. Gamified learning using interactive PowerPoint games

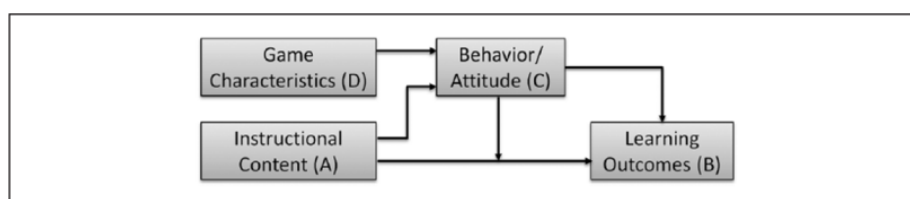
Using interactive PowerPoint games is one of the accessible techniques for gamified learning. Not only restricted to available online games such as Quizziz and Kahoot! PowerPoint games can also be a teacher's lifesaver when employing a gamified learning approach, especially for ESL learners attending rural schools with little to no network connectivity. Moreover, PowerPoint games may be instantly customized to meet specific learning requirements and challenges in the classroom, giving teachers a versatile tool for improving education and supporting different learners' abilities. Teachers can create a more accessible and stimulating learning environment, especially in resource-constrained contexts, by incorporating such games into their teaching practices. Making games with PowerPoint can be considered one of the strategies for effective teaching when teaching a foreign language [13]. This implies that ESL teachers can use PowerPoint slides to enhance their teaching and learning outcomes.

For instance, some teachers have created original PowerPoint games featuring vocabulary challenges, grammar exercises and interactive quizzes to improve learning outcomes in ESL classrooms and it was successful [8], [28], [34], [35]. Studies have also highlighted that the implementation of gamified learning through the use of PowerPoint games can engage students and improve their learning engagement and outcomes. It is also confirmed that ESL learners significantly improved their speaking performance by using PowerPoint games as a means of gamified learning [6], [13]. Such approaches also significantly improved their anxiety and hesitancy in speaking English during speaking lessons. Consequently, ESL teachers must adapt and grow by broadening their approaches to teaching and learning, particularly when it comes to speaking and using technology [36]. In short, gamified learning can be an effective tool to boost learners' engagement and enhance their learning performance.

2.3. Theoretical framework

The theoretical framework of this study is shown in Figure 1. Figure 1 shows the moderation process in Lander's theory of gamified learning [22]. This study strictly follows this framework, where gamified learning is thought to impact learning through its application in the revision of instructional content to enhance learning outcomes. This theory specifies gamified learning as modifying and revising the existing instructional content (categorized as A in Figure 1) to make it more engaging and motivating for learners. It also suggests that adding game elements such as points as rewards into learning environments increases student motivation (categorized as C in Figure 1) by providing immediate input, establishing clear goals and creating a sense of advancement through reward systems. It can improve learning outcomes by creating a more interactive and immersive learning environment, which aids in grasping and sustaining learners' attention and promoting active engagement [22]. In this study, the teacher revised the instructional content of

the year 4 syllabus into interactive PowerPoint games to explore the effects of gamified learning on learners' engagement and speaking performance.



Theory of gamified learning.

Note. $D \rightarrow C \rightarrow B$ and $A \rightarrow C \rightarrow B$ are mediating processes. The influence of C on $A \rightarrow B$ is a moderating process. Directional arrows indicate theorized path of causality.

Figure 1. Lander's theory of gamified learning (moderation process)

3. METHOD

This study adopted an action research model by Kemmis and McTaggart [37], which involves a cyclical process of planning, acting, observing, and reflecting. Action research allows researchers to improve their practice and understand their context, particularly in refining teachers' pedagogical approaches [38], [39]. Teachers identify specific classroom challenges, collect and analyze data and implement solutions to address these issues. In this study, the action research design enabled the teacher to use gamified learning through interactive PowerPoint games in ESL-speaking classrooms, aiming to enhance pupils' engagement and speaking performance. This iterative process supports the development of effective teaching methods and improved student outcomes.

In this study, purposive sampling was used to select eleven fourth-grade students from a suburban primary school in Sarawak, Malaysia, which follows a standardized national curriculum. The school's low enrollment explained the small sample size and having fewer participants allowed greater data collection and deeper insights [40]. The sample size of eleven pupils was determined based on the qualitative nature of action research, which prioritizes depth of insight over generalizability [41]. Small sample sizes are common in action research studies, especially in classroom-based interventions, as they allow for close observation, individual tracking and richer data collection. According to recent studies, small, targeted groups are beneficial for educational action research because they enable rich reflection, deeper participation, and meaningful cooperation in an environment where the researcher is actively participating [42]. The participants, aged ten to eleven, were chosen based on particular criteria, including year 4 enrollment, alignment with characteristics of young learners [43] and observable challenges in speaking English during class activities. These challenges were identified through teacher observations, learning engagement levels and pupils' responses in speaking activities. Specifically, students were often hesitant when speaking, frequently pausing or leaving gaps in their responses. At this phase, young learners benefit from engaging in activities that are matched to their developmental needs [44]. This purposeful selection of participants ensured that the study focused on students who could provide valuable insights into the challenges and possibilities of learning the English language using gamified learning and thus, contributing to a more focused and meaningful analysis [45] of the educational process overall.

This study utilized several instruments—six interactive PowerPoint games, each integrated into one-hour lesson plans with gamified learning elements, observation checklists and speaking tests. The PowerPoint games were adapted and developed to align with the year 4 Malaysian English syllabus, incorporating gamified learning elements like badges, points, quests and levels based on Landers' gamified learning theory [22]. Six interactive PowerPoint games were adapted from pre-existing online resources with engaging visuals, animations, and sound effects to align with the curriculum. Designed to enhance speaking skills, they included sentence building to describe people and objects and narrate basic stories about their routines. These instruments were essential for assessing both the pupils' learning engagement and their language proficiency during the implementation of the gamified learning approach.

The speaking test provided individual assessments of the pupils' oral communication skills, while the observation checklist enabled rigorous monitoring of their behavior, particularly in terms of learning engagement and performance. It targeted the common European framework of reference for languages (CEFR) A1 level, assessing basic spoken interaction and production skills. The test included simple tasks such as self-introduction, describing familiar objects or routines and responding to basic questions to evaluate

fluency and vocabulary association. Together, these tools offered a comprehensive evaluation of both the pupils' speaking abilities and their engagement in the gamified learning process. The study was conducted over six cycles, with a prior pilot study involving a similar sample of students who were categorized as Gen Alpha [46] to assess the feasibility and reliability of the research instruments.

An observation checklist was also used to assess pupils' performance during oral presentations for speaking activities during the gamified learning process. During the implementation of the PowerPoint games, pupils were required to complete speaking tasks, such as talking about their house chores routine within 60 seconds. Their behaviors were closely observed throughout the activity. The most common way to gather data on any aspect or occurrence during the teaching and learning process is through observation [47] and it is widely acknowledged as an essential tool for improving teachers' professional development [48]. The observation checklist gives the process of execution more focus, which leads to increased efficiency and accuracy [49]. The observation checklist was adapted from previous studies [6], [50]–[52], consisting of 13 criteria related to behavioral, cognitive and emotional engagement elements.

The same pre- and post-speaking test was also conducted to determine the effects of gamified learning on pupils' speaking performance. In determining the effectiveness of an intervention on a target group, the test is one of the reliable methods to do so [53], as it aids in giving useful information on pupils' performance in learning [54]. Their speaking proficiency was measured using a speaking test aligned with the year 4 Malaysian English primary school standard-based curriculum. Participants were asked to describe a series of pictures using the appropriate vocabulary to determine the impact of gamified learning through PowerPoint games in pre- and post-test administrations. To minimize bias in scoring, two raters were involved: the teacher and the head of the school's English language panel. Using rubrics for assessment provides valuable feedback to pupils, particularly when applied formatively [55]. The tests were evaluated using an adapted version of the scoring rubrics scaled from Bands 1 to 6 provided by the Malaysian Ministry of Education, modified from a holistic scale to an analytic scale. An analytic scale was chosen as it aligns with the goal of a formative assessment [56]. Using descriptive statistics, the average means from both raters were analyzed to determine the effects of the gamified learning approach.

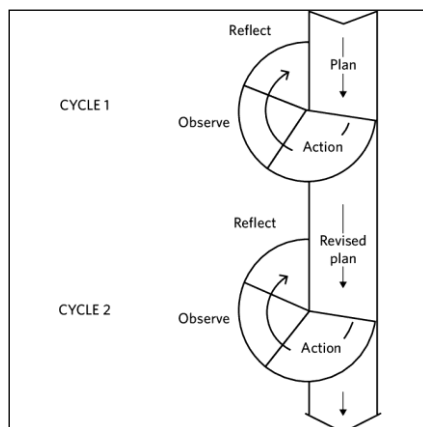
The instruments employed in this study were adapted from established sources and corresponded to the present year 4 Malaysian English syllabus to assure validity [6], [48]–[56]. Content validity was confirmed through expert review by two English language specialists, including the head of the school's English panel, to ensure that the tasks and rubrics accurately reflected the constructs being measured, which were speaking ability and engagement. For reliability, inter-rater reliability was applied to the speaking test scores. Two independent raters scored the pupils' performance and consistency was checked using mean score comparisons. The comparison of mean scores between Raters 1 and 2 showed negligible differences in both the pre- and post-test phases, indicating strong scoring consistency between the two independent raters. The observation checklist was adapted from validated frameworks in previous studies [6], [50]–[52], ensuring both content relevance and construct clarity. To control confounding variables, the lessons focused on only two topics and were taught by the same teacher (the researcher) to maintain consistency in instructional delivery. The classroom environment remained constant throughout the six cycles and pupils were not exposed to any additional speaking-focused interventions outside of the study. The use of the same pre- and post-test instruments helped ensure comparability of results, while involving two raters minimized scoring bias.

The procedure of this study strictly followed action research by Kemmis and McTaggart [37], which involves four stages: plan, action, observation, and reflection as shown in Figure 2. This model proposed a cyclical action research method that takes a structured, continuous approach to improving practice through reflection and action. Four major steps make up the process: planning, which involves identifying a problem and developing an intervention strategy; acting, which involves carrying out the planned action; observing, which includes assessing the intervention's effectiveness; and reflecting, which involves analyzing the results to improve subsequent actions. Because of its cyclical structure, which enables ongoing improvement, this methodology is beneficial for practice-based and participatory research. Thus, due to its structure, this research employed this model to determine the effects of gamified learning on young ESL learners' learning engagement and their speaking performance.

The steps in implementing gamified learning using interactive PowerPoint games are as follows:

- Plan: based on the teacher's previous reflection, an hour-long lesson plan and interactive PowerPoint games were modified based on the year 4 syllabus, Unit 1 (Where are you from?) and Unit 2 (My Week). The gamified learning elements were points, badges, scores, levels and quests.
- Action: the teacher taught the lesson with gamified learning elements for one-hour.
- Observe: during the implementation of gamified learning, the teacher also took notes of pupils' behavior using an observation checklist.

- Reflect: the teacher analyzed pupils' behavior using the observation checklist. Based on the pupils' responses, the teacher amended the PowerPoint interactive games for the next cycle. After the amendment, the teacher carried out the next lesson with a different gamified learning approach. The cycle continued until Cycle 6.



Note: Kemmis and McTaggart model (1988/2011), cited in Burns (2010)

Figure 2. Cyclical model of action research by Kemmis and McTaggart [37]

4. RESULTS

4.1. The effects of gamified learning on engagement in ESL speaking lessons

The observation checklist was used to determine the effects of the gamified learning approach using PowerPoint interactive games in speaking activities throughout the six cycles. The data was analyzed using descriptive statistics. The analysis was categorized into three domains: behavioral, cognitive and emotional engagement. These categories gave an extensive overview of how students engaged with gamified learning features and how this affected learning engagement. The results also offered insights into the effects of the usage of gamified learning on young learners' learning engagement, their willingness to learn and their performance.

4.1.1. Behavioral engagement

Throughout the six cycles, as shown in Table 1, the gamified learning approach was able to make all 11 participants show eagerness, attention, focus, actively discuss with peers and make an effort to speak the English language consistently in all six cycles. As their dependency on the teacher decreased, the participants' frequency in asking questions to the teacher decreased from 9 in the first cycle to only 2 in the last cycle. The data analysis also revealed that the ability to finish the speaking activity within the time frame increased, which was 5 in the first cycle to 11 in the last cycle. The data demonstrates that the gamified learning approach did positively affect the behavioral engagement of young ESL learners during speaking activities.

Table 1. Observation checklist data for behavioral engagement (Cycles 1-6, n=11)

Criteria	Frequency for Cycles 1-6					
	C1	C2	C3	C4	C5	C6
Pupils showed eagerness to complete the speaking activity.	11	11	11	11	11	11
Pupils were attentive and focused to complete the speaking activity.	11	11	11	11	11	11
Pupils were actively discussing with peers to complete the speaking activity.	11	11	11	11	11	11
Pupils were asking questions to their peers to complete the speaking activity.	10	9	9	10	11	9
Pupils were asking questions to the teacher to complete the speaking activity.	9	9	7	6	6	2
Pupils made effort to speak English language to complete the speaking activity.	11	11	11	11	11	11
Pupils were able to complete the speaking activity within the time frame.	5	6	6	10	9	11

4.1.2. Cognitive engagement

In all six cycles, as shown in Table 2, all 11 participants showed the ability to make connections between the topics taught using suitable vocabulary related to the speaking tasks given. They were able to use

words that they had learnt during the gamified learning sessions. All 11 participants were also able to produce speech with fewer gaps and pauses, which was from only 2 to 9. Similarly, all 11 participants were also able to show minimal hesitation in their speaking activities. The data implies that the gamified learning approach did have positive effects on young ESL learners' cognitive engagement.

Table 2. Observation checklist data for cognitive engagement (Cycles 1-6, n=11)

Criteria	Frequency for Cycles 1-6					
	C1	C2	C3	C4	C5	C6
Pupils were able to produce speech with lesser gaps and pauses in the speaking activity.	2	2	2	2	4	9
Pupils made an effort to make connections between learning topics by using appropriate vocabulary related to the task given.	11	11	11	11	11	11
Pupils showed minimal hesitation in the speaking activity.	2	2	2	2	6	9

4.1.3. Emotional engagement

As for emotional engagement, as shown in Table 3, when it came to collaborating with their peers and expressing their happiness through positive body language, such as laughing and smiling, all 11 participants showed a great deal of enthusiasm in finishing the speaking activities from Cycles 1 until 6. Additionally, the data indicates that participants' self-confidence in finishing the speaking task increased from 2 to 10 throughout the six cycles. The data analysis implies that the gamified learning approach positively affected young ESL learners' emotional engagement.

Table 3. Observation checklist data for emotional engagement (Cycles 1-6, n=11)

Criteria	Frequency for Cycles 1-6					
	C1	C2	C3	C4	C5	C6
Pupils showed great enthusiasm by making efforts to collaborate with their peers in completing the speaking activity.	11	11	11	11	11	11
Pupils showed self-confidence in completing the speaking activity.	2	2	4	5	7	10
Pupils expressed their enjoyment through positive body language (e.g., smiling, laughing, happy) in completing the speaking activity.	11	11	11	11	11	11

As demonstrated in the observation checklist analysis in Table 3, all 11 participants consistently demonstrated high enthusiasm and engagement when the teacher implemented the gamified learning approach which incorporated game elements such as points, badges and levels. Throughout multiple cycles, participants also consistently showed that they were focused, willing to participate in group discussions and consistently made an effort to complete the speaking tasks, thus showing their behavioral engagement. This is in line with a previous study [19], which found that gamified learning can boost students' engagement in learning. In terms of cognitive engagement, it was observed that pupils spoke more confidently, showed a great lot of curiosity, actively attempted to make connections between various learning areas by using appropriate vocabulary and progressively demonstrated more excitement and confidence which is also in line with previous studies [20]–[27], [31].

Next, the information gathered from the observation checklist throughout the six cycles shows that the gamified learning approach successfully sustained participants' enthusiasm, engagement and interest in learning. These positive attitudes also resonate with the findings of previous studies [6], [34], [35] when teaching using a gamified learning approach with PowerPoint games. Regarding emotional engagement, the pupils showed positive body language, such as being joyful and enthusiastic during gamified learning. In the present study, it was also evident that pupils studied in an enjoyable and safe setting. Additionally, the interactive nature of gamified learning appeared to foster collaboration among students, enhancing their social interactions and teamwork skills. The continuous engagement observed suggests that gamified methods can create a dynamic and motivating educational experience.

Lastly, pupils were mostly confident and engaged in the activities. The findings of this study also resonate with previous studies [6], [32], which it was able to demonstrate that gamified learning provides fun and meaningful learning, as well as a safe and non-threatening environment for pupils. The positive outcomes also showed the relation of gamified learning elements in grasping and maintaining young learners' attention and engagement in learning. In agreement with Lander's theory of gamified learning [22], elements such as increased engagement among learners were also highlighted in the present study. The suitability of the game elements in the revised instructional content may influence learners' engagement [22]. This bodes well for the potential of gamified learning to sustain young learners' interest and enhance pupils' engagement in learning in ESL classes, particularly during speaking lessons.

4.2. The effects of gamified learning on speaking performance in ESL speaking lessons

4.2.1. The result of speaking performance

To discover whether there were any noteworthy differences between the pre- and post-test results, the average means for the pre- and post-test from the speaking test of both raters were also computed. The results were obtained using the adapted rubric, which assesses year 4 students' speaking skills across six levels. It covers four key areas: sharing information, classroom interaction, describing people or objects and narrate basic stories. Higher levels show clearer, more detailed and confident speaking. Table 4 compares the data from the average mean difference between the pre- and post-test for 11 participants in the speaking test. This data highlights the overall improvement in speaking proficiency. Additionally, statistical analysis was carried out to determine the significance of these changes, confirming whether the differences observed were substantial and consistent across both sets of evaluations.

Table 4. The difference in average mean between the pre- and post-test

Participants	Pre-test			Post-test		
	Rater 1	Rater 2	Average	Rater 1	Rater 2	Average
P1	2	2	2	3	3	3
P2	4	4	4	4	4	4
P3	3	3	3	4	4	4
P4	3	3	3	3	3	3
P5	2	3	2.5	3	3	3
P6	4	4	4	5	5	5
P7	2	2	2	3	3	3
P8	2	2	2	3	3	3
P9	2	2	2	3	3	3
P10	4	4	4	5	5	5
P11	3	3	3	4	4	4
Mean			2.86			3.64

The analysis revealed that the average mean between the pre- and post-test had slightly increased, from 2.86 to 3.64. The statistical significance of the slight rise in the mean score indicates a noteworthy improvement in speaking abilities, albeit not much. A more active engagement in class activities and enhanced self-confidence during gamified learning implementation might also contribute to the slight increase in their speaking performance. This implies that the gamified learning approach using interactive PowerPoint games positively affected the young ESL learners' speaking performance. Overall, the findings indicate that integrating gamified components into ESL lessons could offer an effective method for promoting gradual improvements in students' speaking skills.

Next, the data analysis from the pre- and post-speaking tests revealed that the gamified learning approach improved speaking performance for most participants. It demonstrated that the average mean of their speaking performance increased significantly, from 2.86 in the pre-test to 3.64 in the post-test. This result also resonates with the results of previous studies [6], [13], [28], which show that speaking skills have gradually improved after implementing gamified learning elements in their lessons. However, the focus on speaking skills in the present study differed from those studies as this study mainly focused on fluency and vocabulary. The majority of participants in this study also showed a notable improvement in their speaking vocabulary and fluency following the implementation of the gamified learning technique.

Their speaking abilities, as outlined in the current syllabus, have also improved. They can now effectively manage interactions, convey simple information, describe people and objects, and confidently deliver brief, simple stories. The slight increase might be influenced by active participation and engagement during gamified learning in speaking activities [22]. As a result of their speaking engagement, the gamified learning strategy has a tremendous potential to increase learning outcomes in educational contexts, as indicated by studies [20]–[26]. Thus, gamified learning positively affected young ESL learners' speaking performance in this study.

5. DISCUSSION

This study aimed to study the effects of gamified learning using interactive PowerPoint games on young ESL learners and their speaking performance. While past studies have explored the effects of gamified learning [6], [13], [34], [35], they have not explicitly explored the effects of gamified learning on learning engagement and speaking performance. The findings demonstrate that gamified learning correlates with increased student engagement, which aligns with previous studies [6], [13], [17]–[29], [31]–[35]. The

proposed learning method in this study tended to have an inordinately higher proportion of active participation as speaking performance improved. It also suggests that higher engagement through gamified learning is not associated with poor performance in speaking skills.

Moreover, the gamified learning method may benefit from increased interaction and engagement without adversely impacting speaking proficiency. The young learners demonstrated improved behavioral, cognitive and emotional engagement through greater focus, collaboration, vocabulary use, confidence and enthusiasm, with reduced teacher dependency and hesitation during the gamified learning implementation. Their speaking performance also moderately increased from 2.86 to 3.64 due to improved fluency and vocabulary use. The slight improvement in speaking performance, notably in fluency and vocabulary, suggests that gamified learning has not only made sessions more fun, safe, enjoyable and interesting but also helped the young learners use language skills more effectively, resulting in significant progress in their learning. They were able to maintain their keen interest, stay engaged and successfully recall material as they enjoyed the learning experience. Recent observations also suggest that gamified learning enhances student engagement and speaking performance. In line with these findings [6], [13], [17]–[29], [31]–[35], our findings provide conclusive evidence that the gamified learning approach is associated with significant improvement in ESL speaking skills, especially in fluency and vocabulary.

Further and in-depth studies may be needed to confirm its effectiveness in ESL teaching and learning, especially regarding vocabulary acquisition, reading, writing and speaking skills, elements like pronunciation and comprehension, as well as literature when gamification is implemented into ESL learning materials. Additionally, future studies could explore alternative research designs on a larger scale to assess the long-term effects of gamified learning. The positive outcomes of this study also highlight the potential of gamified learning as a powerful tool to boost engagement and learning outcomes, making it a promising approach for future use in ESL education.

6. CONCLUSION

This research provides empirical evidence on the integration of a gamified learning approach using PowerPoint-based interactive games within an action research framework to enhance speaking skills in Malaysian ESL primary classrooms. By aligning instructional activities with the national curriculum and employing iterative cycles of planning, action, observation and reflection, the study presents a sustainable, teacher-driven model for improving learner engagement and oral proficiency. The use of cost-effective, offline gamification tools addresses the technological and financial constraints often faced in local educational settings, offering a practical alternative to more resource-intensive digital solutions. The findings underscore the effectiveness of gamified speaking tasks in fostering learner motivation, participation and confidence in a supportive and interactive environment. This study contributes to the existing body of knowledge by offering a contextualized, reflective approach to ESL pedagogy in Malaysia, bridging the gap between theoretical frameworks and classroom practice. The insights gained hold significant implications for educators, curriculum developers and policymakers aiming to innovate language teaching in similar contexts. Further research is recommended to investigate the long-term impact of this approach, its adaptability across varying language proficiency levels and its integration with other language skills to further strengthen the overall effectiveness of gamified instruction.

In summary, incorporating gamified learning to teach speaking skills enhances learner engagement, motivation and confidence. By integrating elements like points, badges, levels and quests, learners are encouraged to participate actively and improve their speaking skills in an enjoyable and low-pressure environment. Gamified learning fosters a sense of achievement, encourages collaboration and makes language learning more dynamic. To maximize its effectiveness, educators should ensure that the activities align with learning objectives, cater to diverse proficiency levels and provide meaningful feedback. Ultimately, gamified speaking activities create an interactive and immersive learning experience that promotes language fluency and communication skills.

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C : Conceptualization

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CONFLICT OF INTEREST STATEMENT

Authors state no conflict of interest.

INFORMED CONSENT

Written informed consent was obtained from all participants before their inclusion in this study.

ETHICAL APPROVAL

The research has been approved by the authors' institutional review board or equivalent committee.

DATA AVAILABILITY

The authors confirm that the data supporting the findings of this study are available within the article and/or its supplementary materials.

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