Excellent EFL Teachers’ Strategies for Using Seewo Interactive Whiteboard Games in Chinese Middle Schools

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Abstract—Games play a pivotal role in language education, offering a multitude of benefits for both educators and learners. With the development of digital technology, Seewo Interactive Whiteboard (IWB) games as an emerging teaching tool have been proven effective by many studies that enable direct interaction between teachers and students with the displayed content by leveraging the touch and gesture capabilities of the interactive whiteboard. This study explored the process of using Seewo IWB games by six excellent EFL teachers in Taiyuan middle schools. The study focuses on the teachers’ instructional strategies before, during, and after playing the games. By analyzing the data collected from teacher participants, the researchers aimed to gain insights into how they effectively incorporate Seewo IWB games into EFL classrooms. The findings provided valuable guidance for EFL teachers’ professional development in using digital games.

Index Terms—Seewo IWB games, excellent EFL teachers, middle school classrooms, strategies, students

I. INTRODUCTION

The importance of English in the current era of the fourth Industrial Revolution (Industry 4.0) cannot be understated, as it serves as a means of communication in global interactions and various industries (Rafiq et al., 2019). In countries where English is not the native language, such as China, Korea, and Japan, the English teaching mode has evolved from traditional chalk-talk ways to a technology-driven approach, especially with the introduction of Seewo interactive whiteboards (IWBs) that provide a new platform for digital game-based language instruction. This interactive technology offers a personalized learning experience tailored to students’ needs and ensures an enjoyable learning process (Haleem et al., 2022).

In contrast to traditional games that do not require electronic devices, Seewo IWB Games leverage the touch and gesture capabilities of the interactive whiteboard, enabling direct interaction between teachers and students with the displayed content. These games integrate multimedia elements into lessons to enrich formal classrooms’ teaching and learning experience (Samsonova, 2021). Teachers often showcase videos, images, and audio files via games, providing visual and auditory support for English teaching (Wujec-Kaczmarek, 2021). Meanwhile, teachers can save and share their lessons online while monitoring student progress and offering immediate feedback (Luo et al., 2023). Thus, this dynamic and adaptable teaching tool caters to diverse learning styles, addressing individual student needs (Haidir, 2023). Many studies have demonstrated the effectiveness of digital games in teaching traditional language skills, including reading, writing, and second and foreign language teaching (Hidayatullah & Haerazi, 2021; Rasti-Behbahani, 2021).

Narrowing down the scope to the policy context of this study, it is noteworthy that the Chinese Ministry of Education (CMOE) issued the Informatization 2.0 Action Plan in 2018, which marked the first instance of proposing the establishment of an intelligent campus with intelligent teaching platforms and e-resources (CMOE, 2018, pp. 3-5). As a result of this initiative, by 2022, the penetration rate of information facilities nationwide had reached 80%, with the Seewo 5.0 interactive electronic whiteboards being installed in two million middle school classrooms (Jiang, 2023). In response to the changes, the revised Chinese Middle School English Curriculum Standards (2022) emphasized the necessity for EFL teachers to become digital educators first. This transformation involves integrating technology, subject knowledge, and effective teaching methods (CMOE, 2022, pp. 50-56). It also underscored the importance of teachers’ roles in the entire digital game-based teaching process. Thus, English teachers are responsible for equipping their students with the necessary skills to communicate confidently and authentically in the target language via digital platforms (Domogen, 2023).

The importance of incorporating digital games in English classrooms can be summarised as affective, cognitive, class dynamic, and adaptability aspects (Supandhi et al., 2022). However, many EFL teachers have difficulties effectively integrating Seewo IWB games, pedagogy, and subject content, which causes time-consuming problems and inefficiency.
Worse, some scholars only focus on learners’ behaviours and outcomes rather than teachers’ instructional practices. They oversimplified the effectiveness of digital games by attributing successful teaching solely to the games instead of the teachers’ effort. They also did not realise that highly efficient game-based learning heavily relies on teachers’ lesson preparations, practical strategies, and emotional engagement (Hartt et al., 2020). Therefore, the role of English language teachers should be given more prominence in this research.

II. LITERATURE REVIEW

Interactive whiteboards, or intelligent boards, are technological devices widely adopted in classrooms to improve teaching and learning experiences (Adrini & Wahyuna, 2023). These boards are equipped with a large touch-sensitive display that can be connected to various teaching aids such as computers, laptops, televisions, overhead projectors, and CD players (Pringle, 2021). Users can actively engage with the displayed content on the whiteboard using a laser pointer with a remote control or their fingers. Essentially, the interactive whiteboard serves as a digital canvas that facilitates lesson delivery, content annotation, and student engagement through interactive activities, enabling users to directly write, draw, and manipulate objects on the screen (Wang et al., 2020). Hence, teachers can use the interactive whiteboard as a game control platform to display videos, images, and audio files within games, providing visual and auditory support to their instruction. This dynamic and flexible teaching tool caters to diverse language learning styles and preferences, accommodating students’ individual needs (Al-Kahlal & Khasawneh, 2023). Meanwhile, teachers can save and share their game-based lessons to facilitate easy revision and reuse while monitoring student progress and providing immediate feedback via game hints.

Besides using pre-made business digital games on interactive whiteboards, teachers can quickly create personalised digital games with specific purposes (Luo et al., 2023). The assortment of game design templates tailored for IWB games empowers educators to seamlessly fashion games that fit their instructional objectives and curriculum (Tp & Minh, 2021), as outlined in Table 1.

<table>
<thead>
<tr>
<th>Seewo IWB Game Types</th>
<th>Definitions &amp; Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quizzes Games</td>
<td>Quizzes games allow teachers to create interactive quizzes and assessments. Students can answer multiple-choice or true/false questions by selecting the correct answer on the whiteboard. The whiteboard can provide immediate feedback on the answers, allowing students to track their progress.</td>
</tr>
<tr>
<td>Matching Games</td>
<td>Matching games involve matching pairs of related items, such as words and definitions, images and descriptions. Students can drag and drop the matching items on the whiteboard to complete the game.</td>
</tr>
<tr>
<td>Sorting Games</td>
<td>Sorting games require students to categorize items based on specific criteria. For example, students may need to sort animals into different habitats or sort words into different parts of speech. They can drag and drop the items into the correct categories on the whiteboard.</td>
</tr>
<tr>
<td>Puzzle Games</td>
<td>Puzzle games involve solving puzzles or completing patterns. Students can manipulate puzzle pieces or objects on the whiteboard to solve the puzzle or complete the pattern. These games can help develop problem-solving and critical-thinking skills.</td>
</tr>
<tr>
<td>Interactive Story Games</td>
<td>Interactive story games allow students to participate in a story by making choices or solving problems. The whiteboard displays the story and presents interactive elements where students can make decisions or interact with the story’s characters.</td>
</tr>
<tr>
<td>Team-based Games</td>
<td>Team-based games encourage collaboration and teamwork among students. These games can involve challenges, quizzes, or problem-solving activities where students work together in teams to achieve a common goal. The IWB can display the game interface and track team scores or progress.</td>
</tr>
</tbody>
</table>

There has been a surge in academic research examining the positive impact of IWB games on teaching vocabulary in recent years. Notably, a large number of scholars have explored how IWB games can motivate students to learn new words in both primary and tertiary educational settings (Hartt, 2020; Hiep, 2020; Humairoh et al., 2023; Kühl & Wohninsland, 2022). These investigations have elucidated the efficacy of IWB games in facilitating rapid vocabulary acquisition. Through the integration of visual and auditory aids, IWB games offer learners a tangible platform for processing, reflecting on, and assimilating new linguistic content (Vu, 2023). Incorporating visual tools such as graphic organisers, concept and story maps, and word banks within IWB games provides students with a solid foundation for language learning.

Moreover, some studies have proven that students had favourable attitudes toward IWB games, particularly in learning writing and grammar (Şengül & Türel, 2019). There is also a positive impact of IWB games on collaborative writing, meta-cognitive activities, and co-regulation patterns among EFL learners (Bahari et al., 2023). Nevertheless, prior research has primarily concentrated on students’ fragmented language skills, such as vocabulary, grammar, and writing, neglecting the overall teaching strategies, which calls for further exploration from teachers’ perspectives.

III. CONCEPTUAL FRAMEWORK

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The current study employed a systematic literature review of digital game-based pedagogy (DGBP) from the research conducted by Bado (2022) to develop a conceptual framework that guided the collection and analysis of research data in this study. According to Bado (2022), prevalent educational themes on DGBP were categorized into a taxonomy of activities that occur before, during, and after the game. Pre-game teaching activities encompass educational tasks or endeavours organised or executed by teachers to prepare students for gameplay. Game teaching activities, on the other hand, refer to the instruction tasks or endeavours facilitated by teachers during actual gameplay. Post-game instructional activities involve follow-up tasks or exercises a teacher leads after a game to reinforce the knowledge gained through gameplay. Thus, clarifying the specific activities involved is crucial to comprehend the range of instructional strategies when using digital games.

However, student learning situations are also essential impact factors for digital game-based language teaching (DGBLL), which were not included within the previous framework. Thus, teachers should understand their students before adopting digital games (Hämäläinen et al., 2021). This view was echoed by Sauber et al. (2020), Byrd (2020), Ng (2023), and Carliss and Winstone (2023). In their research, there was a consensus that teachers must go beyond simply grasping the rules and mechanics of the game and instead have a profound understanding of students’ characteristics and requirements to select suitable games that aroused their attention and establish varying levels of game tasks. For instance, some scholars have successfully enhanced the performance of underachieving students by adjusting the difficulty levels of digital games based on students’ learning situations to boost their motivation and engagement in classroom learning (Susiani & Utami, 2020; Tan et al., 2023). Therefore, the researcher refined the themes within the framework by exploring the practical strategies that excellent EFL teachers employ to utilize digital games to teach middle school English curriculum.

IV. METHODOLOGY

A. Research Question

Seewo IWB games represent a cutting-edge instructional resource for EFL educators in Chinese middle schools. Given the pivotal role of teachers’ strategies in classroom instruction, the main research question guiding this study is:

What strategies do excellent EFL teachers employ when incorporating digital games into middle school classrooms?

B. Research Design

This study adopted a qualitative study design, as its primary goal is to uncover, comprehend, and interpret the strategies that excellent EFL teachers utilise when incorporating digital games into their classroom teaching practice in natural middle school settings. It explored a contemporary “teaching with Seewo IWB games” phenomenon within its authentic context. Given the circumstances, a case study is the most appropriate method for this study, particularly when “the boundaries between the phenomenon and its context are not defined” (Yin, 2018, p. 51). Furthermore, this study relied on diverse sources of evidence, requiring the convergence of data through triangulation. Hence, the researcher visited the target public middle schools to gather data through observations, interviews, and documentation. Subsequently, a substantial portion of this data will pertain to experiences, motivations, and emotions, necessitating the researchers’ meticulous analysis, interpretation, and thick descriptions.

C. Participants and Data Collection

The researchers adopted a purposive sampling approach based on identifying and understanding effective strategies, thus selecting a sample that provided the most valuable information (Merriam, 1990, p. 10). This approach can help the researcher of this study to quickly obtain a specific sample rather than for proportionality (Patton, 2014). Hence, the researcher chose six excellent EFL teachers from six public middle schools (only 30 teachers in the local education bureau’s database). This research aims to gain a deep understanding of individual cases rather than generalizing findings through a large sample size.

In the present study, the selection and justification of all participants are guided by the following considerations: (a) their inclusion in the list of national excellent teachers; (b) their eagerness to engage in this research; (c) diversity in teaching experience, age, gender, and other relevant factors; (d) the geographical accessibility of these EFL teachers. A comprehensive overview of their fundamental details is provided in Table 1.

<table>
<thead>
<tr>
<th>Teachers (N=6)</th>
<th>Gender (Female/Male)</th>
<th>Age</th>
<th>Teaching experience (year)</th>
<th>Degree</th>
<th>Grades</th>
<th>Schools</th>
</tr>
</thead>
<tbody>
<tr>
<td>T1</td>
<td>F</td>
<td>32</td>
<td>10</td>
<td>Bachelor</td>
<td>7, 8, 9</td>
<td>No.1</td>
</tr>
<tr>
<td>T2</td>
<td>M</td>
<td>35</td>
<td>12</td>
<td>Bachelor</td>
<td>7, 8, 9</td>
<td>No.2</td>
</tr>
<tr>
<td>T3</td>
<td>F</td>
<td>40</td>
<td>17</td>
<td>Bachelor</td>
<td>7, 8, 9</td>
<td>No.3</td>
</tr>
<tr>
<td>T4</td>
<td>M</td>
<td>42</td>
<td>15</td>
<td>Bachelor</td>
<td>7, 8, 9</td>
<td>No.4</td>
</tr>
<tr>
<td>T5</td>
<td>F</td>
<td>33</td>
<td>11</td>
<td>Bachelor</td>
<td>7, 8, 9</td>
<td>No.5</td>
</tr>
<tr>
<td>T6</td>
<td>M</td>
<td>35</td>
<td>12</td>
<td>Bachelor</td>
<td>7, 8, 9</td>
<td>No.6</td>
</tr>
</tbody>
</table>
Before collecting qualitative data, all participants were invited to attend a five-hour seminar hosted by Taiyuan Normal University, focusing on how to use Seewo IWB games. During the seminar, the researchers provided an overview of Seewo IWB’s latest functionalities and demonstrated how to design a game within ten minutes. Subsequently, the researchers outlined the entire research plan and data collection procedures. This study had three distinct phases. Firstly, the researchers conducted non-participant observations, allowing participants to record their teaching processes using a video app. Secondly, the researchers conducted in-depth semi-structured interviews with each participant. During these interviews, the researchers and participants reviewed the video recordings, pausing at three key stages—pre-game, in-game, and post-game—to discuss teaching strategies and reasons. In addition, the researchers posed questions based on the semi-structured interview protocols and requested participants to record their answers in the protocol within a week. Finally, the researchers reviewed relevant documents, including teachers’ lesson plans, middle school English textbooks, and the Chinese Middle School Curriculum Standards (2022), to comprehensively understand their teaching strategies.

D. Data Analysis

Since Seewo IWB games are novel to EFL teachers in Chinese middle schools, the participants were expected to offer fresh ideas. A hybrid inductive thematic analysis is utilised to extract and categorise these insights from the collected data. This analysis condenses the critical features across multiple datasets by highlighting similarities in strategies. It pinpoints themes that resonate with the conceptual framework, thereby assisting researchers in formulating innovative themes. Additionally, this study’s sample size of six excellent EFL teachers was sufficient to produce codes vital for thematic analysis. This study used a four-step approach to analyse the qualitative data on the strategies for using the Seewo IWB game in EFL classrooms.

Step 1: Data Examination: Initially, one researcher acquainted herself with the data and utilised a predefined framework to generate initial codes. Subsequently, the other researcher annotated the data using these codes.

Step 2: Theme Generation: Two researchers collaboratively reviewed all annotated data, scrutinising the codes and addressing any discrepancies in interpretation. The seminar leader facilitated the resolution of any interpretative differences. Eventually, they arrived at the initial themes and sub-themes.

Step 3: Theme Review: The researchers engaged in a cyclic process to assess whether the themes and sub-themes could be grouped or divided further.

Step 4: Theme Naming: The research team defined and labelled the themes, enhancing their significance and clarity.

V. RESULTS AND DISCUSSIONS

The results indicated three main categories aligned with the pre-determined conceptual framework and added new categories encompassing nine sub-themes to expand the previous framework. Participants highlighted the significance of prerequisite knowledge and tailored teaching strategies for the pre-game, in-game, and post-game phases. The thematic map in Table 3 provides a comprehensive overview of the study findings.

TABLE 3
THE RESULTS OF THEMATIC ANALYSIS

<table>
<thead>
<tr>
<th>Theme</th>
<th>Sub-theme</th>
<th>Strategies from the cases</th>
</tr>
</thead>
</table>
| 1. Pre-game Activities | 1.1 Training in Gameplay    | ➢ Introduction of IWB game rules: Ensure students clearly understand how to play the game.
<p>|                        |                             | ➢ IWB game demonstration: Help students understand the gameplay.                          |
|                        |                             | ➢ Explanation of the IWB game mechanics: Break down the game mechanics into smaller components and explain each step in detail. |
|                        |                             | ➢ Student questioning: Allow students to ask questions and clarify any confusion before starting the game. |
|                        | 1.2 Lectures                | ➢ Setting clear learning objectives: Before starting the lecture, clearly define the learning objectives and expected outcomes. |
|                        |                             | ➢ Creating a positive learning atmosphere: Introduce exciting topics, engaging stories, or videos to stimulate students’ interest and curiosity, making them more willing to participate in the lecture. |
|                        |                             | ➢ Interaction: Encourage student participation in the lecture by asking questions and sharing opinions or experiences. |
|                        |                             | ➢ Using IWB games’ multimedia resources: Combine images, videos, audio, and other multimedia resources to help students understand the lecture content. |
|                        |                             | ➢ Guiding students to think: Guide students to think critically and analytically, cultivating their critical thinking skills by posing questions, discussing topics, or presenting case studies. |
|                        |                             | ➢ Providing practical content: Enable students to apply the knowledge and skills they have learned to real-life situations. |
|                        |                             | ➢ Timely feedback: Evaluate students and help them understand their learning progress and areas for improvement. |
|                        | 1.3 Handouts                | ➢ Instructions: Provide clear instructions on how students should use the handouts, whether for individual work, group activities, or as a reference during a discussion. |
|                        |                             | ➢ Content organization: Structure the handouts in a clear and organized manner, with headings, subheadings, bullet points, and visuals to help students easily navigate and... |</p>
<table>
<thead>
<tr>
<th>Subtheme</th>
<th>Activities</th>
</tr>
</thead>
</table>
| 1.4 Understanding Students | ➢ Student profiling: Get to know students by understanding their interests, learning styles, strengths, and areas for improvement through surveys, informal conversations, or observation.  
➢ Differentiation: Provide varied game activities, resources, and assessments to cater to different learning styles and abilities.  
➢ Personalized learning: Offer opportunities for students to pursue topics of interest or work on projects that align with their goals. |
| 2. In-game Activities | ➢ Providing appropriate support based on students’ language proficiency.  
➢ Progressive challenges: Gradually increase the game difficulty level in students’ learning tasks, allowing them to continuously enhance their language abilities through challenges while ensuring they can complete the tasks.  
➢ Guiding student autonomy: Encourage students to think and solve problems independently.  
➢ Creating authentic contexts: Simulate real-life language usage scenarios to allow students to learn language through practice and enhance their language application abilities.  
➢ Diversified teaching methods: Stimulate students’ interest in learning and increase their engagement through group competitions, role-playing, and product-oriented activities. |
| 2.1 Scaffolding | ➢ Establishing clear expectations for behaviour during in-game activities, such as listening attentively, following instructions, and respecting others.  
➢ Grouping strategies: Organize students into groups based on their abilities, interests, or learning styles to promote collaboration and engagement during gameplay. Monitor group dynamics and provide support as needed.  
➢ Time management: Set time limits for in-game activities to ensure students stay focused and on task. Use timers or visual cues to help students manage their time effectively.  
➢ Monitoring and feedback: Circulate the classroom during gameplay to monitor students’ progress, provide feedback, and address any issues that may arise.  
➢ Behaviour reinforcement: Use positive reinforcement strategies, such as rewards, praise, or incentives, to encourage positive behaviour and participation during in-game activities. Address any disruptive behaviour promptly and consistently. |
| 2.2 Classroom Management | ➢ Preparing in advance: Ensure all technical equipment is set up and functioning correctly before the in-game activities begin. Test any software or online platforms that will be used during the lesson.  
➢ Providing instructions: Clearly explain to students how to use the technical equipment and any software.  
➢ Troubleshooting guidance: Anticipate potential technical issues that may arise and encourage students to seek help from peers or the teacher if they encounter difficulties. |
| 2.3 Technical Support | ➢ Group discussions: Divide students into small groups to discuss their experiences during the game.  
➢ Whole class discussion: Facilitate a forum where students can share their reflections, insights, and key takeaways from the gameplay.  
➢ Application to real life: Help students make connections between the gameplay experience and their everyday lives in English. |
| 3. Post-game Activities | ➢ Guided prompts: Provide students with guided reflection prompts to help them think critically about their gameplay experience. These prompts can include questions about the challenges faced, successes achieved, and areas for improvement.  
➢ Journal: Encourage students to keep a reflection journal where they can write about their thoughts, feelings, and insights gained from the gameplay.  
➢ Visual aids: Use visual aids such as charts, graphs, or diagrams to help students visualize their progress and achievements during the gameplay.  
➢ Goal setting: Guide students in setting specific, measurable, achievable, relevant, and time-bound goals based on their reflections.  
➢ Group communications: Encourage students to listen actively, ask questions, and engage in meaningful dialogue with their peers. |

### A. Theme 1: Pre-Game Activities

Theme 1 discusses what strategies were used by excellent EFL teachers in pre-game instructional activities, with three main themes suggested in the findings: training in gameplay, lectures, and handouts.

**(a). Subtheme 1.1 Training in Gameplay**

Before the formal gameplay sessions, teachers trained students to introduce the game content and gameplay. The results uncover that the successful teaching methods encompassed introducing Seebo IWB game rules to students...
before gameplay initiation. The teachers adopted live demonstrations or video tutorials to illustrate the gameplay, meticulously explained the intricate game mechanics by deconstructing them into smaller, digestible components, and encouraged student engagement through interactive questioning sessions to address any uncertainties before embarking on the game. These meticulously crafted strategies ensured that students acquired a comprehensive grasp of the game rules and objectives, fostering heightened engagement levels and enriching the overall learning experience within the classroom setting.

(b). Subtheme 1.2 Lecture

As part of the pre-game preparation, lectures were conducted to provide students with background information on the curriculum, learning content, and problem-solving techniques. Excellent EFL teachers employed various strategies to enhance the learning experience. Firstly, they established clear learning objectives to help students understand their learning goals and to improve learning efficiency. Secondly, they created a positive learning environment by introducing engaging topics, captivating stories, or stimulating videos to capture students’ interest and foster active participation in the lecture. Additionally, all teachers emphasized the importance of interaction as a critical way to promote student learning. They also used multimedia resources from the Seewo IWB games, such as game images, videos, and audio, to engage students with the lecture content. Through posing questions, facilitating discussions, and presenting case studies, teachers guided students to think critically and analytically during the learning process. Furthermore, teachers believed that delivering practical lecture content enabled students to apply their acquired knowledge and skills to real-life scenarios. Lastly, the teachers provided timely feedback and evaluations to assess students’ progress and identify areas for improvement, enhancing the overall learning experience.

(c). Subtheme 1.3 Handouts

Excellent EFL teachers in this study frequently distributed handouts to their students containing reading materials, game content summaries, strategy guides, and worksheets. Upon analysis of the data gathered during the handout session, it can be found that explicit guidelines are furnished on utilising handouts, whether for individual tasks, collaborative endeavours, or as reference materials during group discussions. Notably, handout content is organised and coherent, featuring structured headings, subheadings, bullet points, and visual aids to facilitate students’ navigation and comprehension of the material. Furthermore, some interactive components embedded within the handouts, such as fill-in-the-blank exercises, matching activities, or reflective inquiries, are integrated to actively involve students and strengthen their learning. Visual elements, including images, diagrams, charts, and info-graphics, are also utilised to enhance comprehension and augment the visual appeal of the handouts. The linguistic complexity is tailored to align with the student’s proficiency levels, with elucidations or definitions provided for intricate terms. Implementing these strategies not only elevates the pedagogical quality of the handout session but also enriches the overall learning experience for students.

(d). Subtheme 1.4 Understanding Students

In this study, understanding students involved in gaining insights into students’ interests, learning styles, strengths, and areas for improvement through surveys, informal conversations, or observation. This information enables educators to tailor their teaching approaches to better meet each student’s needs. Meanwhile, differentiation can be achieved by providing various game activities, resources, and assessments to accommodate diverse learning styles and abilities. This ensures that all students can engage and excel in their learning. Additionally, excellent EFL teachers advocated using personalised learning, which allowed students to explore topics of interest or work on projects aligned with their personal goals, fostering motivation and active participation in the learning process.

B. Theme 2: In-Game Activities

In the second phase of in-game teaching activities, three main areas were identified: scaffolding, classroom management, and technical support.

(a). Subtheme 2.1 Scaffolding

Teachers actively supported students through Seewo IWB games, addressing challenges in-game content, curriculum alignment, and problem-solving skills to ensure a positive and productive gaming experience. Scaffolding, a targeted approach, assisted students in mastering new language knowledge and skills. Initially, teachers tailored their support to student’s individual learning needs, facilitating the gradual acquisition and application of new language points. Over time, they introduced increasingly complex learning tasks to challenge students and enhance their language abilities while ensuring task completion.

Some teachers specifically focused on guiding student autonomy by providing crucial support to build confidence in the learning process and creating authentic contexts for improved language application. They employed diverse teaching strategies, including group discussions, role-playing, and engaging games, to stimulate interest and boost student engagement. Furthermore, these teachers provided timely feedback and assessment to help students assess their progress and identify areas for improvement. Occasionally, teachers spoke the mother tongue when students encountered comprehension difficulties.
b. Subtheme 2.2 Classroom Management

Classroom management is crucial for fostering a conducive learning environment during in-game activities. Teachers took several vital steps in this study to ensure effective classroom management. Firstly, they established clear behavioural expectations for students, such as attentive listening, following instructions, and respecting others. These expectations were communicated at the start of the activity, setting the tone for student conduct throughout. Secondly, teachers employed grouping strategies to organize students based on their abilities, interests, or learning styles. This fostered student collaboration and engagement, allowing them to work together effectively. Thirdly, setting time limits for in-game activities helped students maintain focus and stay productive. Visual cues or timers were used to aid students in managing their time efficiently, ensuring that tasks were completed within the allocated time frame. More importantly, monitoring and providing feedback during gameplay can track student progress, offer guidance, and promptly address any issues. Teachers always used praise and constructive criticism to motivate students and support their learning journey. Positive behaviour reinforcement through rewards, praise, or incentives encouraged desired behaviour and active participation. Disruptive behaviour, on the other hand, was promptly and consistently addressed to maintain a positive learning atmosphere.

c. Subtheme 2.3 Technical Support

Several specific measures can be taken to ensure the smooth operation of technical equipment during in-game activities. Firstly, before starting the learning activities, it is essential to check and set up all technical devices, including computers, tablets, and interactive whiteboards. This ensures that they are in good working order and ready for use. Moreover, anticipating potential technical issues and offering troubleshooting guidance is essential. Teachers should be prepared to address common problems during the activities, such as connection issues, software glitches, or hardware failures. Having a plan to resolve these issues quickly can minimize disruptions and maintain the flow of the lesson. At last, students were encouraged to seek assistance from peers or the technical support team when necessary. Collaborating with other teachers or professionals with expertise in technical matters can provide valuable support and solutions to any challenges.

C. Theme 3: Post-Game Activities

Based on the findings, debriefing emerges as a critical activity in the post-game activities, comprising two primary elements: discussion and reflection.

a. Subtheme 3.1 Discussion

The discussion phase involves interactions between teachers and students, enabling teachers to underscore the link between game content and the curriculum. This dialogue is crucial as it helps students recognize these connections that may take time to be apparent. In this study, discussions were guided by questions and topics prepared by teachers either before or after gameplay, derived from notes taken during gameplay. Teachers also observed and documented content-related issues and student challenges during gameplay, which later informed the post-game discussion. Moreover, this study noted that team debriefing fostered talks between teachers and students and among peers. Here, there were two major types of discussions: group and whole class. Group discussions can be organized to allow students to share and discuss their experiences during the game in small groups. In contrast, the class discussions can provide more chances for students to share their reflections, insights, and key takeaways from the gameplay. Encouraging peer feedback can enhance learning by allowing students to provide constructive feedback on each other’s gameplay performance.

In addition, this study found that helping students draw connections between the gameplay experience and real-life situations in English can deepen their understanding. Notably, most excellent EFL teachers carried out follow-up activities, such as writing reflections, creating presentations, or conducting further research related to the gameplay experience. These can reinforce key concepts learned during the game and provide opportunities for extended learning and application of knowledge.

b. Subtheme 3.2 Reflection

In the post-game activities, several strategies on reflection can be employed to enhance students’ critical thinking and self-assessment. Firstly, providing guided reflection prompts can help students analyze their gameplay experience by prompting them to consider challenges faced, successes achieved, and areas for improvement. Excellent teachers always encouraged students to maintain a reflection journal that allowed them to document their thoughts, feelings, and insights gained from the gameplay. Moreover, guiding students in setting goals based on their reflections can help them establish specific, measurable, achievable, relevant, and time-bound objectives for future improvement. Promoting group communications where students actively listen, ask questions, and engage in meaningful dialogue with their peers can further deepen their understanding and reflection on the gameplay experience.

VI. IMPLICATIONS AND FUTURE TRENDS FOR SEEWO GAMES-BASED TEACHING STRATEGIES IN EFL CLASSROOMS

A primary goal of this study was to investigate how excellent EFL teachers used digital games in middle schools. The findings suggested that diverse pedagogical strategies were adopted when using Seewo IWB games in three main
In the pre-game stage, all the teachers created a constructive learning environment for students to learn actively, mainly providing them with training in gameplay by demonstrating how to operate the games, technical support, and making students familiar with the learning materials, which pave the road for doing the autonomous learning. During the Seewo IWB game activities, most teachers used communicative strategies to give students more chances to practice English, such as group discussions, reflective questions, timely feedback, and presentations. The mother language and other scaffolding helped students overcome difficulties when meeting difficulties. In the post-game activities, teachers facilitated the discussion through group work and classroom discussions. They proposed reflective questions to deepen students’ understanding and reinforce essential information learned during the IWB game. Correspondingly, they provided students with guided reflection prompts to help them think critically about their gameplay experience. These prompts can include questions about the challenges faced, successes achieved, and areas for improvement. They also adopted a reflection journal and used visual aids such as charts, graphs, or diagrams to help students visualize their progress and achievements during the gameplay.

In addition, the researchers identified four future research directions to prepare teachers to address the challenges of future digital game-based learning and teaching.

First, excellent EFL teachers paid close attention to combining game content and teaching objectives when using the Seewo IWB games. By carefully selecting the game content, they ensured that the game covered the language knowledge and skills required by the teaching objectives so that students could naturally master new knowledge in the game. This strategy not only improved students’ interest in learning but also helped to improve their learning results. Future research can further explore how to design more targeted and effective electronic whiteboard games according to teaching objectives and student characteristics.

Secondly, excellent EFL teachers were good at using the interactive characteristics of Seewo IWB games to stimulate students’ enthusiasm for participation. Through the design of various interactive links, such as group cooperation, class communication, and competitions, students cooperated and competed in the game to cultivate their teamwork spirit and competitive consciousness. This strategy helped to develop students’ comprehensive quality and laid a solid foundation for their future development. Future research may focus on further exploiting the interactive advantages of electronic whiteboard games to improve students’ participation and learning effects.

In addition, excellent EFL teachers highlighted the importance of developing students’ autonomous learning abilities via the Seewo IWB games. By actively guiding the exploration of the game’s content, the teachers encouraged their students to ask questions and find answers to cultivate their awareness and ability to learn independently. This strategy benefited students’ lifelong learning. Future research may explore how to design more effective autonomous learning activities in combination with the characteristics of electronic whiteboard games to improve students’ autonomous learning abilities.

Finally, all the teachers in this study were also concerned about the impact of games on students’ mental health. Through reasonable arrangement of game time and control of game difficulty, they ensured that students maintained a positive and pleasant emotional state in the game and avoided the adverse effects of excessive addiction to the game. Future research can further focus on the mechanism of influence of electronic whiteboard games on students’ mental health and provide more scientific guidance for teachers when using games.

VII. CONCLUSIONS AND LIMITATIONS

Instruction is “an effort to assist or shape growth” (Iraqi, 2020). When implementing Seewo IWB games in the context of English language teaching, this concept focuses on the specific strategies used by educators to assist players in achieving educational objectives (Laine & Lindberg, 2020). This study represents one of the pioneering empirical investigations into the strategies used by teachers when incorporating Seewo IWB games into their teaching. The research offers a comprehensive analysis of the utilization of IWB games throughout the teaching process, including pre-game activities, in-game activities, and post-game activities, while also considering various instructional strategies. The findings suggested that game-based teaching involves two essential elements: (a) the instructional aspects integrated within the digital game and (b) the instructional content surrounding the game. Excellent EFL teachers have more control over the latter aspect than the former and must ensure that the educational components of the game align with their learning goals rather than detract from them. Notably, there is considerable overlap among diverse strategies, with participants seldom relying solely on a single approach.

However, the study is subject to two primary limitations. Firstly, the research was conducted exclusively in the classrooms of highly proficient EFL teachers in Chinese middle schools. Thus, its generalizations may be limited to experienced EFL teachers. Future studies should engage in comparative research to evaluate the impact of other IWB games on more EFL teachers with different teaching levels. Secondly, since Seewo IWB games include the latest game functionalities, additional research is warranted to focus on specific features of these games through quantitative studies to assess their effectiveness.

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