

Application of Production-Oriented Approach in Seewo IWB Game Activities: An Innovative Strategy for Boosting Middle School Students' Speaking Competencies

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Abstract—The Production-Oriented Approach (POA), uniquely imbued with Chinese pedagogical characteristics, stands as an innovative teaching method and concurrently occupies a central position in Chinese research endeavours in English education. This study aims to apply POA to middle school EFL classes and utilize comparative experimental data to show the efficiency of this approach in Seewo Interactive Whiteboard (IWB) game-based teaching activities. Despite the widespread recognition of Seewo IWB games' potential benefits, a notable challenge remains in effectively using them to improve students' speaking skills. Thus, this research included 120 middle school students as participants and involved comparing controlled and experimental groups. The findings revealed that integrating the POA teaching method improved students' speaking competencies, fostering a greater interest in learning English.

Index Terms—Production-Oriented Approach (POA), Seewo Interactive Whiteboard (IWB) Games, speaking competencies, middle school students, EFL teachers

I. INTRODUCTION

In the 21st century, the landscape of English as a foreign language (EFL) classrooms has significantly transformed, moving away from traditional chalk-and-talk environments towards technology-driven intelligent classrooms (Pacatang & Pandi-Ruedas, 2024; Salem, 2019). Integrating the Seewo interactive whiteboard (IWB) has played a crucial role in facilitating this shift, opening up new avenues for English language teaching and learning (Luo et al., 2023). One standout feature of the Seewo IWB is its inner interactive game activities, which cater to the needs of modern game-based educational approaches. These activities leverage interactive whiteboards' touch and gesture functionalities to encourage seamless interaction between teachers, students, and the displayed content (Terrell, 2023).

Unlike conventional entertainment games, the games on the Seewo IWB are classified as Serious games, specifically designed for K-12 educational settings. The primary objective is to deliver targeted subject matter through engaging gameplay, enhancing student engagement and interactivity throughout the educational process. Seewo IWB game templates incorporate various gaming types (Seewo company, 2024). In EFL classrooms, teachers often use six types of games, including matching games, sorting games, quiz games, puzzle games, interactive story games, and team-based games. Meanwhile, some digital game elements, such as badges, points, levels, avatars, quests, social graphs, and certificates, all work together to create immersive gaming experiences that effectively address the need for authentic English language practice within a simulated real-world context (Zainuddin et al., 2020). Furthermore, teachers can insert other online games into the Seewo interactive whiteboard game templates and design, customize, and record specific game activities to suit detailed teaching materials.

However, despite the availability of intelligent teaching tools to EFL teachers, the desired effect of teaching on enhancing students' speaking abilities remains elusive. Traditional teaching methods, including grammar translation and direct instruction, often contribute to a significant gap between language learning and practical application (Shah et al., 2022). Although digital game-based teaching can be engaging, it may not yield optimal effectiveness. Worse, these traditional approaches excessively emphasize exam-oriented skills, overlooking the comprehensive and practical utilization of the language within the real world, particularly in speaking skills (Meng et al., 2021; Lu, 2022). Consequently, it is imperative to identify a suitable approach that facilitates the creation of an authentic language environment, enabling students to comprehend others, articulate their thoughts, and engage in meaningful communication with English speakers.

II. LITERATURE REVIEWS

A. *Production-Oriented Approach*

The Production-Oriented Approach (POA) is a “localized” foreign language teaching theory formulated by Chinese linguistic scholar Wen Qiufang and her team from Beijing Foreign Studies University. Its primary objective is to address the challenge of the disconnect between learning and application in the English language (Wen, 2018). By synthesizing pertinent curriculum theories with second language acquisition principles, this approach offers a teaching method more aligned with China’s specific educational landscape and needs, thereby enhancing the effectiveness of English language instruction (Ellis, 2017; Fu et al., 2021).

According to Wen (2017, 2018), the theory of the Production-Oriented Approach originated from Swain’s output hypothesis and Krashen’s input hypothesis. The output hypothesis advocates that learners can continuously improve their fluency in language using the output practice. At the same time, it holds that learners only turn their attention from semantics to grammatical structure when they output language, and only when learners can produce “understandable language output” in the target language, it shows that they master the language. Input hypothesis theory emphasizes that comprehensible language input is the condition of second language learning and believes input materials slightly higher than learners’ language level is the condition of acquisition (Wanlu, 2021). After investigating the adaptability of output theory in English language teaching, Wen (2013) found that combining the output hypothesis with the input hypothesis is necessary because teachers are challenged to deal with the relationship between output and input in classroom English teaching.

This innovative teaching model combines the strengths of Western educational approaches with the specific characteristics of the Chinese context. With its three core components, POA offers a comprehensive and tailored approach to teaching English. The teaching philosophy of POA places a strong emphasis on student-centred learning, promoting active student engagement in their educational journey (Lin, 2020). Furthermore, Wen (2018) highlighted the importance of the principle of ‘learning-using integration,’ which encourages the practical application of knowledge in real-world settings. Additionally, the ‘whole-person education’ principle underscores the holistic development of students, beyond just their language skills. Moreover, Wen’s teaching strategies within the POA framework include the ‘output-driven,’ ‘input-enabled,’ and ‘selective learning’ hypotheses. In this regard, EFL teachers play a vital role in the teaching process, taking on key responsibilities in motivating, facilitating, and evaluating student progress. The three guiding principles of POA serve as the foundation for the teaching hypotheses and overall instructional process. These hypotheses, in turn, provide a theoretical underpinning for the practical implementation of POA, offering a robust framework for effective English language instruction (Wen, 2018).

The POA approach is different from the traditional English teaching ways in that it begins with output (the final goal) and finishes with output (the final goal). It aims to enhance the effectiveness of English language instruction in China, bridging the gap between learning and practical application. Thus, students can actively participate in classroom teaching activities in the POA teaching mode, resulting in a true blend of learning and application (Sun & Asmawi, 2021). The development of POA theory has experienced six critical phases since 2007, as presented in Table 1.

TABLE 1
THE DEVELOPMENT OF POA IN CHINA (WEN, 2018)

Phase	Development Track	Time
1. Warm-up Period	Output-driven	2007-2013
2. Embryonic period	Output-driven, Input-facilitation	2013-2014
3. Formative period	POA system	2015-2016
4. Revision Period	First revision of POA	2016-2017
5. Second revision period	Second revision of POA	2017-2018
6. Latest version period	Latest version of POA	2019-now

The theoretical framework of POA is continually evolving and being enhanced through the contributions of various scholars. Sun and Asmawi (2021) have advanced the POA theory by revising its theoretical system, which now comprises teaching philosophies, hypotheses, and procedures. The latest iteration of the revised POA system is visually represented in Figure 1, demonstrating the structured and integrated nature of this comprehensive approach to English language instruction.

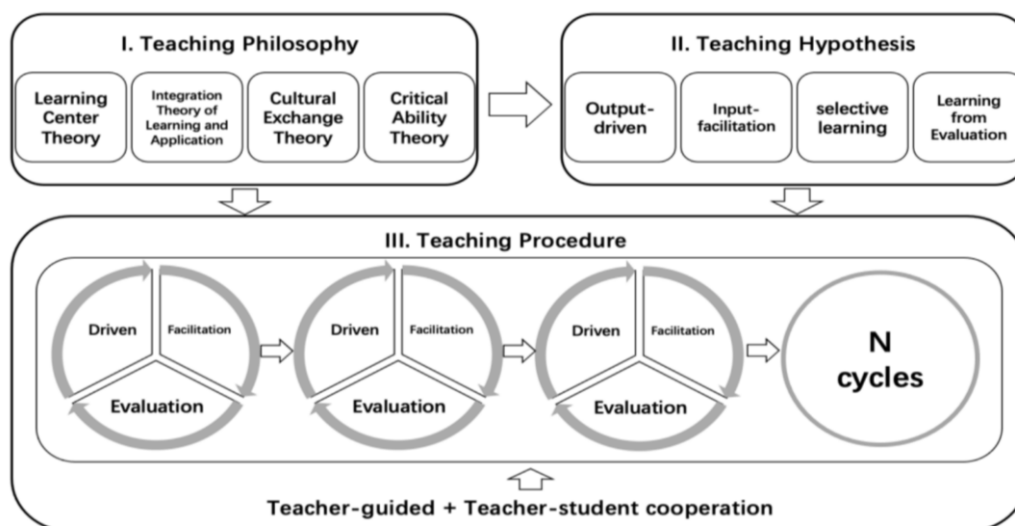


Figure 1. Theoretical System of POA (Sun & Adelina, 2021)

Regarding the instructional design of the Production-Oriented Approach (POA) in EFL classrooms, the majority of scholars have primarily focused on written discourses, exploring how to design reading and writing activities under its guidance. For instance, Zhang (2022) conducted a detailed analysis of the application of assessment in high school English reading classes. His study revealed that in immediate assessment, understanding and analyzing questions as well as providing critical feedback were more frequently observed. However, the creation of questions and process-focused feedback were limited. On the other hand, delayed assessment demonstrated a high level of student participation, with multiple assessments including group discussion, teachers' demonstrations of revision, and peer assessment, enabling students to deepen their understanding of assessment criteria and enhance their output. Furthermore, other scholars such as Du (2022), Huang (2020), Liu and Cao (2021), and Yi (2022) have demonstrated the effectiveness of utilizing POA to improve students' writing skills. These scholars share a consensus on several key points: input materials must be closely aligned with output goals, teacher-designed teaching tasks must be gradual and progressive, and students should be encouraged to accomplish output tasks in diverse ways to achieve their output goals.

It is evident that many scholars have realized that input and output are inseparable in language learning. However, there are also some problems in these studies: First, these scholars are based on the thinking mode of "input first, output later," demonstrating the importance of input to output but ignoring the reaction of output to input. Secondly, the evaluation of output tasks in these studies tends to be the final evaluation based on tests instead of the multi-level and multi-angle formative evaluation in which teachers and students participate together. Third, evaluating the teaching practice effect in the above studies is limited to achieving students' output tasks. Except for a few articles that use interviews with students, the rest fail to collect and analyze data by various methods to verify the effectiveness of teaching practice from multiple perspectives. Therefore, it is hoped that this research will contribute to bridging the gap in POA research and provide valuable insights for teachers and researchers alike.

B. Speaking Competencies

Oral communication constitutes a significant portion of our comprehensive expression, surpassing written forms. Proficiency in speaking has always been recognized as a key indicator of effective communication and success (John & Yunus, 2021). However, mastering the skill of speaking English as a foreign language presents a significant challenge compared to other language skills like listening, reading, and writing (Amoah & Yeboah, 2021). This is because speaking in English requires competency in pronunciation, grammar, vocabulary, fluency, and comprehension. Thus, EFL teachers need to provide ample opportunities for learners to engage with the target language and interact with native English speakers (Anugrah et al., 2019).

Various definitions of "speaking" have been proposed by researchers in language learning. Some scholars define it as transmitting and expressing ideas, opinions, or emotions to others through verbal communication and articulation (MacIntyre et al., 2020). This process facilitates the conveyance of information and can be enhanced through various teaching and learning approaches. Other scholars regarded speaking competencies as the organization and synchronization of language knowledge and language skills in actual communication (AD & Jumriani, 2021). This view is supported by Wangmo et al. (2023), who believe speaking is a dynamic skill involving activating the speaker's expressive desires and emotional needs in real-world interactions. In light of this, EFL teachers should carefully select appropriate teaching strategies to ensure learners perceive speaking activities as enjoyable rather than potentially embarrassing and anxiety-inducing in front of their peers.

Furthermore, teaching strategies for spoken English vary depending on the specific needs and goals of the learners. Scholars have examined various approaches to improve students' speaking ability. For instance, Pangket (2019) found

that English teachers commonly use group work activities, role-play conversations, problem-solving tasks, narrating, sequencing events, and picture-narrative exercises. Other researchers have explored strategies such as the communicative approach (Sentishcheva, 2021), discussion and debate (Laia, 2019), rehearsal or repetition tasks (Newton & Nguyen, 2019), pair and group work (Maca, 2020), free talking sessions (Pambudi, 2020), and error correction and feedback (Khansir & Pakdel, 2018). However, these studies indicated that students may not always be adequately motivated or show better performance as a result. As emphasized by Alsaleh (2020), merely providing activities to learners does not guarantee the acquisition of knowledge and strategies. Thus, it is crucial to integrate these activities in a meaningful manner.

III. METHODOLOGY

A. Research Questions

To examine the influence of POA as a strategy on Seewo IWB game-based spoken English teaching activities, a 16-week teaching experiment was carried out at the Taiyuan middle schools. The experiment primarily aimed to address the following concerns:

RQ1: Can POA improve students' speaking competencies in Seewo IWB game teaching activities?

RQ2: What are the challenges in using POA for Seewo IWB spoken English teaching activities?

B. Participants

The study involved 120 middle school students from two classes at Taiyuan Middle School. According to the school's curriculum schedule, an English oral communication course via Seewo IWB games was introduced in the second year of middle school (Grade 8). The course utilized random class assignments, with each class comprising 60 students. Upon enrollment in the middle school, the students underwent an English proficiency test, with pass rates of 48% for Class A and 49% for Class B, indicating similar overall proficiency levels with no significant differences. To examine the experimental effects, Class A was designated as the experimental group and taught using POA design, while Class B served as the control group and received instruction through Task-Based Language Teaching (TBLT) methods. The ratio of males to females balances in each class.

C. Experimental Group and Control Group Teaching Process

The total duration of the experiment was 48 classes, with 3 classes per week. The teaching in both groups was carried out by the same teacher, who possesses 12 years of extensive teaching experience and is familiar with the application of various English teaching methods. The teaching time, tasks, and objectives were consistent between the two groups, using the textbook "Go for It" published by People Education Press, and the teachers employed the same Seewo IWB game activities. The experimental group followed the guidance of POA and conducted teaching in a structured manner following the process of "motivating-enabling-assessment." Based on the textbook and Seewo IWB game content, the teacher slightly organized and compiled the teaching content and process, dividing it into six units: shopping, holidays, table manners, TV programs, food, and sports events.

To enhance the comprehension of the POA teaching method among students in the experimental group, the teacher held a guided introduction session during the initial English activity class of the academic year. This session included a concise explanation of the POA teaching philosophy, instructional procedures, and evaluation methods. To reduce students' anxiety towards learning, the instructor presented a video showcasing his involvement in both the preliminary and final stages of the 2019 English Teaching Competition via Digital Games organized by the Foreign Language Teaching Press, all grounded on the principles of POA. Students showed enthusiasm and eagerness for this innovative teaching approach.

To delve deeper into the teaching approach, this article used the first unit "shopping" as an example to elucidate the teaching process of Seewo game spoken English teaching activities under the guidance of POA. It also explained specific design concepts. This unit contained many oral practice topics so it can serve as a prime example of unit-wide teaching that offers relevant teaching insights for educators on the front-line. The following describes in detail the specific teaching operations of the three links of motivating, enabling, and evaluating.

(a). Motivating

Differing from traditional "warm-up" teaching methods, POA introduces the output "drive" at the beginning of a new unit. According to Wen Qiufang's teaching steps and requirements for the "drive", it should consist of three elements:

1. The Teacher Presents Communicative Scenes

In teaching practice, the teacher provided two sets of shopping communication scenarios using Seewo IWB games in the classroom and explicitly indicated to students that this scenario was closely related to the content they were about to learn, making students aware of the importance of this learning task. Meanwhile, the teacher used the training in gameplay strategy to ensure students have a clear understanding of how to play and provide students with the opportunity to ask questions and clarify any confusion before starting the game scenery. The teacher speaks English throughout the process.

Scenario 1: At a clothing store, a lady visited to purchase clothes and asked about the color, size, and price. Teachers instructed different students to take on the roles of shoppers and salespersons separately.

Scenario 2: A mother took her child to the shop to buy fruit. They inquired with the salesperson about the types of fruit available and their prices. The teacher assigned various students to play distinct roles as shoppers and salespersons individually.

2. *Students Try to Complete Social Activities*

The teacher in the experimental group initially had students engage in group discussions before randomly selecting students or encouraging them to speak voluntarily to complete the scenario teaching and address the aforementioned issues. However, the students' responses were not ideal, revealing several challenges: Firstly, there were issues related to inappropriate word choice and a lack of precision in vocabulary expression. Secondly, students struggled with disorderly sentence structures, frequent grammar errors, and instances of misspeaking. Thirdly, there was a deficiency in the use of polite language and authenticity in situational communication.

To tackle these three issues, the teachers refrained from directly providing the students with the "correct answers" at the start. Instead, she began by showing a real video of shopping in an English-speaking country via the Seewo IWB game platform and then compared the everyday expressions and basic etiquette of the salesperson with that of the customer in the video. The POA driving phase aims to enable students to personally experience the challenges inherent in completing seemingly simple, mundane output tasks and to recognize the shortcomings in their language proficiency, thereby fostering a desire to learn.

3. *The Teacher Explains Unit Output Tasks*

After students have attempted the communication activities, teachers should assign a "unit output task" that aligns with the communication scenario and emphasizes practical application. This task encourages students to integrate learning and application, effectively utilizing the content from each unit in authentic situations to improve their oral communication and language skills. Following the guidelines of "driving" and classroom teaching practices, teachers engage students in playing various roles in IWB games and outline the output tasks for this unit, including presenting clothing types, colors, and prices to customers; inquiring with the salesperson about fruit selections, quantities, and prices; and discussing the variances in shopping etiquette and habits between China and Western countries with classmates. Upon completing the unit study, students are expected to carry out the output tasks through classroom game interaction or by uploading audio or video on the Seewo game platform.

(b). *Enabling*

The second phase, known as "Enabling," lies at the heart of POA. Teachers strategically develop game-based instructional activities that adhere to the principles of "diversity," "progressiveness," and "precision" to language, perspectives, and discourse logic.

"Language enabling" concentrates on delivering vocabulary learning strategies, applying language knowledge, and integrating language skills in a multi-modal fashion through explanation and practical exercises. This approach enables students to enhance their vocabulary acquisition while completing output tasks. Before classes, teachers distribute specialized vocabulary lists related to clothing and fruits to students and engage them in online vocabulary games to strengthen their word pronunciation, spelling, and understanding of semantics. Through this method, students can review crucial vocabulary expressions, activate relevant language resources in their minds, and utilize the vocabulary list as a reference during oral communication activities in class.

"Perspectives enabling" adopts a blended teaching methodology, combining online independent learning, traditional classroom teaching, and mobile learning. Utilizing the Seewo game platform, students are introduced to fundamental sentence structures and shopping etiquette, engaging in interactive games to practice dialogues, shadow speaking, and human-computer interactions, addressing the limitations of traditional classroom instruction hours.

"Discourse logic enabling" primarily centers on the discourse exercises themed on "argumentative techniques" in the current unit. Before classes, students engage in self-study through the Seewo IWB game platform by watching relevant micro-lesson videos and completing game-based testing exercises. In classroom sessions, teachers consolidate essential knowledge points and assist students in reviewing through simulated dialogues, and group competitions.

To effectively monitor the progress of classroom teaching, review key teaching points, and timely promote output tasks, the teacher devised an "enabling chain" tailored for each unit (illustrated in Table 2). This enabling chain guided the entire unit's teaching activities, ensuring their coherence and effectiveness. However, due to variations in unit themes and students' comprehension levels, the facilitation process did not strictly adhere to a standard sequence of "language - perspectives - discourse logic." It depends on teachers' lesson plans and students' existing knowledge.

TABLE 2
GAME ACTIVITY ENABLING CHAIN (TAKE UNIT 1 FOR EXAMPLE)

Input Enabling	Language Enabling	Synonym rewriting	
		Make sentences with words	
		Syllable relay	
	Perspective Enabling	Polite expression	
		Polite physical gestures	
		Cultural difference	
	Discourse Logic Enabling	Argumentative means	Argument and refutation

(c). Assessment

In the third phase, to assess whether the output goal has effectively achieved its “enabling” effect, the teacher must evaluate the output task. For learning tasks completed in class, the teacher used traditional “immediate evaluation” methods. However, due to classroom time constraints, she also adopted a “teacher-student collaborative evaluation” approach to deal with those in-class reports without presenting. The teacher required students to upload their completed game tasks to the Seewo IWB teaching platform as audio-visual works, and then the teacher and students conducted self-evaluation, peer evaluation, or group evaluation based on the evaluation quantitative criteria jointly established by teachers and students (refer to Table 3). With specific feedback from the teacher, students revise and refine their oral works before uploading the final versions to the online teaching platform. The teacher further evaluates these works and affixes the “A+” label to outstanding pieces, facilitating mutual reference, learning, and communication among all students.

TABLE 3
QUANTITATIVE CRITERIA FOR EVALUATION OF OUTPUT TASKS (UNIT 1 “SHOPPING”)

	Quantitative Criteria for Evaluation of Output Tasks	Comments	Marks
Content Accuracy	Accuracy of product names and related terminology Correctness of information provided about products, prices, and discounts.		
Language Usage	Grammar and sentence structure accuracy Use of appropriate vocabulary and expressions Fluency and naturalness of language		
Creativity and Originality	Degree of uniqueness and innovation in describing products or shopping experiences Ability to incorporate personal opinions and experiences into the task		
Speaking Skills	Clarity and coherence of speech Use of effective verbal and non-verbal communication Ability to engage the audience and maintain interest		
Completion and Timeliness	Timely submission of the task Completeness of the task, including all required elements		

In addition, in the control group, teachers used TBLT to carry out Seewo IWB oral English game activities, focusing on deep processing of the text language, to maintain the language authenticity and reduce the difficulty of learning. The teaching process is “Introduction-background knowledge - intensive text reading - class conversation - extensive listening exercises-homework”. The teaching process is centered on textbooks. Except for the Seewo IWB game exercises, teachers do not provide extracurricular texts or audio-visual input materials. At the end of the whole unit, the teacher will assign tasks to the students and encourage them to complete them successfully. In class, teachers are responsible for reviewing students’ oral work and giving relevant suggestions, but students and groups do not evaluate each other. In the teaching process of the experimental group and the control group, the offline learning time of each unit was the same.

IV. RESULTS AND DISCUSSION

This study involved 120 students from both the “experimental group” and “control group” who participated in the middle school English spoken English test, with 60 students in each group. A quantitative method was utilized to compare and validate the analysis of the two student groups. Before the experiment, all participants completed a questionnaire survey to assist the research team in gaining insights into students’ learning attitudes, motivations, and proficiency levels to ensure the credibility and impartiality of the experimental data.

Both before and after the experiment, all participants underwent an oral test conducted by two members of the research team. Teacher A conducted individual tests with students, involving tasks such as reading paragraphs, describing images, and engaging in spontaneous conversations on everyday English topics for a duration of 5 minutes. Meanwhile, Teacher B was tasked with overseeing and recording the entire assessment process, in addition to providing preliminary scores for the students. After the test, the research team collectively reviewed the videos and re-evaluated each student’s oral proficiency based on the grading criteria established by Xue (2019). These criteria encompassed six elements: pronunciation and intonation (10%), vocabulary utilization (25%), coherence (25%), content depth (25%), breadth of knowledge (10%), and conduct (5%), ultimately totaling 100 points.

Moreover, drawing from the research findings of scholars such as Sheng and Sun (2020), it was determined that the middle school English oral test effectively reflects students' authentic English proficiency and displays a strong correlation with their academic achievements in the subject. To further assess students' English proficiency, the research team also included the English grades of the students for the conclusion of their first year of middle school in June 2023 as a pivotal reference point.

A. Students' English Ability and Oral English Level Before the Experiment

To assess students' oral English proficiency and learning outcomes, this study employed SPSS software (version 21.0) to conduct independent sample T-test analysis on the gathered data. Before the experiment, the teacher performed independent sample T-tests on the final English scores of grade 7 and pre-test of oral scores in both the experimental and control groups (refer to Table 4 and Table 5). The findings indicated that there was no significant difference in the oral English scores between the experimental and control groups after the final semester of Grade 7 ($p = 0.228 > 0.05$) and no significant variance in oral test scores between the two groups ($p = 0.416 > 0.05$). These results suggest that students' overall language proficiency and oral competency are comparable.

TABLE 4
INDEPENDENT SAMPLE T-TEST OF ENGLISH SCORES AT THE 7TH GRADE FINAL SEMESTER BETWEEN EXPERIMENTAL GROUP AND CONTROL GROUP

Groups	Number	Mean	Standard Deviation (SD)	Mean standard error	P-Value	Significance
Experimental Class	60	420.42	56.95	56.94	0.228	0.831
Control Class	60	422.51	49.51	49.25		

TABLE 5
INDEPENDENT SAMPLE T-TEST FOR ORAL PRETEST SCORES IN THE EXPERIMENTAL AND CONTROL GROUPS

Groups	Number	Mean	Standard Deviation (SD)	Mean standard error	P-Value	Significance
Experimental Class	60	53.96	9.77	1.261	0.416	0.777
Control Class	60	54.51	10.80	1.395		

B. Teaching Effect

After the end of the course (after the second round of oral tests), the teacher conducted the second independent sample t-test on the oral scores of the students in the experimental group and the control group. The results showed that there were significant differences between the two groups of students in the oral post-test (see Table 6).

TABLE 6
INDEPENDENT SAMPLE T-TEST OF ORAL POST-TEST SCORES OF EXPERIMENTAL GROUP AND CONTROL GROUP

Groups	Number	Mean	Standard Deviation (SD)	Mean standard error	P-Value	Significance
Experimental Class	60	67.22	7.23	0.934	0.018	0.000
Control Class	60	60.03	9.92	1.281		

Table 6 displays the improvement in oral test scores of students in both the experimental group and control group after a semester of intensive learning, showing significant differences ($p = 0.018 < 0.05$). Notably, students in the experimental group demonstrated a larger improvement of 13.26 points compared to the control group's 5.52-point enhancement. This outcome aligned with the observations made during the teacher's classroom evaluations. Following extensive exposure to professional English vocabulary, sentence patterns, and cultural background knowledge, students in the experimental group exhibited more flexible language expression and communication skills in English. In contrast, students in the control group tended to provide superficial commentary, highlighting room for improvement in their depth of thought and ability to articulate related topics.

To delve deeper into the specific areas of improvement, the study analyzed Tone and Intonation (TI), Lexicon Application (LA), Cohesion & Fluency (CF), and Cultural Background (CB). An independent sample T-test was conducted on the data from these aspects to compare the oral English performance of both groups. Before the experiment, the P-values of the oral indicators (TI, LA, CF, CB) in both groups were 0.062, 0.073, 0.091, and 0.086, respectively, all exceeding 0.05, indicating no significant differences in these specific indicators between the experimental and control groups. Identified issues from the students' oral pre-tests included limited English vocabulary, weak oral fluency, and a lack of cultural background knowledge.

Upon examining the data before and after the test, it was discovered that following one semester of study, significant changes were observed in the indicators of the experimental and control groups. Specifically, the significance P-value for TI, LA, CF, and CB in the experimental group was 0.000 (< 0.05), indicating a considerable improvement in these areas. Conversely, the control group showed significant differences in LA with $p = 0.011 < 0.05$ and CB with $p = 0.013 < 0.05$, while TI and CF did not exhibit significant changes with p-values of 0.072 and 0.059, respectively.

These findings suggest that Task-Based Language Teaching (TBLT) has a positive impact on students' mastery of vocabulary application and enhancement of professional knowledge. Nonetheless, the results imply that the teaching approach often focuses more on instructional content and output rather than refining students' pronunciation, intonation,

and logical reasoning. Consequently, issues persist in the oral tasks produced by students, including inadequate idiomatic expression, a lack of logical structure, and an over-reliance on Chinglish expressions.

C. Evaluation of the Effectiveness of POA From Students' Perspective

To ascertain students' comprehension of the new teaching approach of POA in Seewo IWB games and to ensure that the experimental group and control group completed their learning tasks without external interference, the author conducted a questionnaire survey with 60 students in the experimental group following the 16-week course of one semester. Guided by the principles of "logic, clarity, and neutrality" articulated by Qin and Liu (2015). The questionnaire, which encompassed three dimensions - pre-class feedback, in-class engagement, and overall evaluation of POA learning effectiveness, was anonymized and administered using Likert's five-level scale. Distribution of the questionnaire was facilitated through the questionnaire star mini-program, resulting in a total of 58 valid responses. Subsequent data analysis was carried out using SPSS software (version 21.0) in conjunction with student interviews to gain insights into genuine student feedback on the course (refer to Table 7).

TABLE 7
FEEDBACK OF SEEWO IWB GAME ORAL ENGLISH ACTIVITY BASED ON POA

Evaluative dimensions	Questions	M	SD	Agree completely	Agree	Unsure	Disagree	Disagree completely
Pre-class motivating	Q1. Satisfied with the self-directed learning resources before class	4.18	1.08	48.3%	36.2%	13.0%	1.7%	0%
	Q2. Language practice is full and targeted	4.11	1.04	46.6%	34.5%	15.5%	1.7%	1.7%
	Q3. Learning tasks moderate, and can actively complete	4.02	1.03	41.4%	31%	13.8%	6.9%	6.9%
	Q4. Actively participate in the classroom interaction and relaxing atmosphere	4.23	0.97	53.4%	32.8%	12.1%	1.7%	0%
	Q5. Lesson design is moderately difficult and enlightening	4.07	1.06	43.1%	32.8%	17.2%	3.4%	3.4%
Input during the class	Q6. Teaching content is not limited to textbooks, and pay attention to knowledge transfer	4.20	1.07	50%	32.8%	17.2%	0%	0%
	Q7. Courses can improve language competencies, especially speaking skills	4.28	1.01	55.2%	36.2%	6.9%	1.7%	0%
Post-class overall evaluation	Q8. Rich cultural knowledge	4.09	1.03	44.8%	31%	13.8%	5.2%	5.2%
	Q9. Courses can cultivate students' cross-cultural consciousness and moral values	4.20	1.04	51.7%	32.8%	13.8%	0%	1.7%

The survey results indicate that the majority of students give positive evaluations to three dimensions of course learning, but the characteristics of evaluation between different dimensions are inconsistent, specifically manifested in the following three aspects:

(a). Recognizing Autonomous Learning Resources, but Needing Improvement in Learning Management Skills

Based on the feedback from students on the pre-class driving phase of the digital game-based oral English course, 84.5% of students are satisfied with autonomous learning resources, 81.1% of students believe that the language practice content is enriching, and 72.4% of students can actively complete learning tasks. Through questionnaires, it is also found that most students spend 1 to 2 hours learning before class, generally finding online learning to be innovative and effective. However, some students have difficulties in allocating reasonable time for self-study due to the heavy course load this semester.

(b). Recognizing Classroom Teaching Content and High Classroom Participation

Students overall rate input in-class sessions highly, with the majority of students feeling that they can actively participate in classroom interactions, with an energetic atmosphere of communication between teachers and students (86.2%), thanks to innovative teaching methods. Guided by POA, students have more practical opportunities to participate in the game activities, becoming the true masters of the classroom. In addition, the output tasks set for each unit require students to expand their knowledge of English cultural backgrounds both in and out of class, with 82.8% of students giving positive evaluations of the breadth of teaching content. Compared to the previous two items, students find teaching difficulty moderate and inspiring to be relatively low (75.9%), related to their language proficiency. Some students with lower English levels reflect on rapid learning progress, set tasks with high difficulty, and many language barriers in verbal communication. Therefore, in future teaching designs, teachers should pay more attention to the demands of lower-level students.

(c). Improvement in Oral Skills and High Overall Evaluation of POA Teaching

Through overall learning evaluations, the degree of achievement of teaching objectives can be assessed. Statistical results showed that students were most satisfied with language objectives. 91.4% of students believed that their

language proficiency and speaking skills had improved after a semester of English learning, enabling them to express themselves confidently and fluently. 84.5% of students believed that the cultural background knowledge contained in the course can cultivate students' cross-cultural consciousness and moral character. 75.8% of students said that the course content had enriched their knowledge of Western cultural backgrounds. In comparison, students' recognition of the achievement of knowledge objectives is relatively low (75.8%), which may be related to students' traditional learning concepts and lack of relevant learning materials. This requires teachers to strengthen the collection and integration of foreign language materials, providing students with more opportunities for in-depth reading.

In the experimental teaching of one semester, the teaching teacher adhered to the concept of "teacher-led" instilled by the output-oriented approach, fully building a "scaffold" for students. Data from speaking tests and questionnaire surveys show that students have a positive evaluation of the Seewo IWB English speaking game activities, reduced negative emotions in communication, and increased communication confidence and willingness, confirming the author's research hypothesis in the initial research: POA can significantly improve the teaching effectiveness of middle school students' English speaking skills.

D. Problems and Reflection of Teaching Implementation

While the teaching model based on POA has yielded positive outcomes in the Seewo IWB spoken language game teaching activities and has garnered favorable evaluations from students, the author has also faced numerous challenges during the implementation of the teaching approach.

Firstly, in the "driving and facilitating" phase, students utilized a human-machine interaction mode for flipped classroom oral language learning on the Seewo game teaching platform, with the entire learning process lacking real-time monitoring by instructors. Consequently, teachers were unaware of the amount of time students dedicate to authentic practice or whether they engage in unrelated activities while learning online. The educational principles advocated by the POA necessitate a considerable focus on autonomous learning, yet some students, particularly those with poor study habits and a strong sense of inertia, exhibit significant resistance during the initial stages of self-directed learning. This underscored the need for educators to provide enhanced psychological guidance and monitoring throughout the teaching process.

Secondly, as POA represents an innovative language teaching theory with a relatively brief history of development, the insufficient availability of pertinent literature and theoretical resources poses challenges for researchers in designing pedagogical approaches and refining the overall teaching procedures. Moving forward, the author intends to closely monitor the evolution and enhancement of POA, integrating the latest theories and research findings into the forefront of theoretical discourse and textbook development.

Thirdly, while Seewo IWB English oral game activities via POA presented highly practical teaching interventions, limited teaching conditions and class hours restricted the efficiency of classroom evaluation, particularly neglecting a comprehensive evaluation within authentic language contexts via digital games. Looking ahead, the author advocates for the integration of online testing, the creation of additional game simulation scenarios, online homework, and a concerted emphasis on targeted thematic practice to facilitate a more diversified and all-encompassing assessment of individual oral proficiency.

V. CONCLUSION

This study applied POA to the Seewo IWB English oral game teaching activities and conducted a comprehensive evaluation of the teaching effectiveness in terms of language abilities. The results revealed that both the experimental group and the control group students showed further improvement in their oral communication skills. The students in the experimental group made greater progress, particularly in pronunciation and intonation, as well as in coherence and cohesion. They displayed increased confidence and logical rigor during communication. Furthermore, the analysis of the assignment outputs of the students in the experimental group across different units indicated that high-level students (oral post-test scores ≥ 80 points) were able to quickly engage with the intended communication purposes, expand on related topics, and complete communication tasks both inside and outside the classroom. They demonstrated strong self-monitoring and error-recognition abilities in terms of vocabulary, grammar, and semantics. While they encountered difficulties in fluently expressing highly specialized terms and long sentences, high-level students could still articulate their opinions relatively fluently in English, indicating strong English thinking capabilities. On the other hand, low-level students (oral post-test scores ≤ 60 points) often struggled to comprehend the questions in oral exercises, even after repeating numerous words and phrases, finding it challenging to complete tasks and express themselves completely in English during communication. The issues they presented in communication were mainly attributed to insufficient vocabulary, consisting of isolated simple sentences and non-cohesive discourse, lacking self-monitoring abilities in grammar, and being heavily influenced by their native language thinking, leading to a higher frequency of errors in their output expressions. Do individual differences in language output suggest that POA may not be suitable for low-level students? On which English proficiency level does POA have a more significant impact? Compared to TBLT, why can POA significantly boost students' oral scores? These questions could serve as important topics for further in-depth exploration to develop a more complete and suitable English teaching method with Chinese characteristics for secondary school students.

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