

ENGLISH VOCABULARY GAME-BASED INSTRUCTION AND YOUNG EFL LEARNERS' SPEAKING AND READING IN A TAIWANESE AFTER-SCHOOL CLUB

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Abstract

This classroom-based study examined whether English vocabulary game-based instruction can support elementary EFL learners' speaking and reading performance in an after-school program in southern Taiwan. Twenty students in the lower and middle grades of a public elementary school joined an after-school English club and were divided into an experimental group and a comparison group (10 students in each group). Over one semester, both groups met once a week for a 30-minute lesson. The experimental group received vocabulary game-based instruction using spelling, memory, role-play, and reading games, whereas the comparison group followed conventional textbook-based activities. Speaking and reading abilities were assessed with pretests and posttests. Descriptively, the experimental group improved from 60 to 78 in speaking and from 65 to 75 in reading, while the comparison group showed little change in speaking (58 to 60) and no improvement in reading (63 to 62). Because only group means are available, these results are preliminary and should be interpreted cautiously.

Keywords: gamification, game-based learning, vocabulary instruction, elementary EFL learners, speaking, reading, after-school English club

INTRODUCTION

In Taiwan's primary education system, English has become a compulsory subject from Grade 3, and recent curriculum guidelines place increasing emphasis on communicative abilities, including speaking and reading. In practice, however, many classrooms still allocate more time to textbook-based vocabulary and grammar practice than to structured opportunities for oral production or meaningful reading. For young learners, this imbalance can limit chances to develop confidence in speaking and to apply vocabulary knowledge in reading tasks.

Gamification and game-based instruction have been proposed as ways to make language practice more engaging and learner-centered. In general education, gamified approaches use game elements such as points, challenges, and feedback to sustain participation, and several reviews suggest that these elements can support motivation and performance when thoughtfully implemented. Within EFL/ESL contexts, a growing body of research has explored gamified tasks for vocabulary learning and speaking, reporting gains in vocabulary retention, engagement, and positive attitudes, although results are not uniformly positive and depend on context and design.

For elementary EFL learners, vocabulary is central to both speaking and reading. Classroom activities that require learners to retrieve, pronounce, and use words in context may help connect lexical knowledge to real communicative tasks. When such activities are organised as games, they may reduce anxiety, encourage participation, and create more opportunities for practice in a relatively low-stakes

environment. In Taiwan, after-school English clubs provide additional exposure to English, but their content often mirrors regular classes rather than offering more interactive options. This creates an opportunity to explore whether structured vocabulary games can make better use of this supplementary time.

The study reported here responds to this opportunity by implementing a vocabulary game-based intervention in an after-school English club at a public elementary school in Pingtung, Taiwan. The goal is not to offer definitive evidence but to provide small-scale descriptive data on how such an intervention might relate to learners' speaking and reading performance. To this end, the study addresses three questions:

- How does English vocabulary game-based instruction relate to elementary EFL learners' speaking performance in an after-school club?
- How does it relate to their reading performance?
- How do changes in speaking and reading scores in a game-based group compare with those in a group receiving conventional instruction?

LITERATURE REVIEW

Gamification and game-based instruction in language education

Gamification is commonly defined as the use of game design elements in non-game contexts to support motivation or behaviour change. Deterding et al. (2011) describe these elements as points, levels, leaderboards, badges, and rules that can make an activity feel more "gameful." In a review of empirical work, Hamari, Koivisto, and Sarsa (2014) found that gamification tends to have positive effects on engagement and performance but also noted that results vary widely and depend on the context and specific mechanics used. These authors caution that not every gamified design leads to improvement and that careful alignment with learning goals is essential.

In EFL/ESL education, gamified and game-based approaches have been used with a range of skills and learner groups. Zhang and Hasim (2023) reviewed empirical studies on gamification in language learning and reported that feedback, points, quizzes, badges, and leaderboards are among the most frequently used elements. Across the studies they examined, gamified interventions were often associated with improvements in vocabulary, speaking, and learner motivation. At the same time, they highlighted challenges such as technical issues and the risk that competition may discourage some learners, especially those who are less confident. Overall, the review argues that the impact of gamification depends on how game elements are integrated into instruction and on how learners experience them.

Vocabulary games for young EFL learners

Vocabulary learning is a natural focus for game-based activities because words can be presented, practised, and recycled through matching, memory, and simple communicative tasks. Previous studies have reported that vocabulary games can support both retention and willingness to use new words, particularly among young learners for whom play is an important mode of learning. When vocabulary games are designed to involve classification, matching, and basic sequencing, they may also align with the cognitive operations that elementary-age learners are ready to use, making it easier for them to process new words.

In practice, teachers have drawn on a wide range of vocabulary games, from card-based matching and bingo to digital quizzes and role-play activities. Reviews suggest that games that provide immediate feedback, visible progress, and opportunities for peer interaction tend to be especially engaging. However, many published accounts are descriptive or focus on learners' attitudes rather than on measurable performance in speaking or reading. There is therefore a need for small-scale classroom studies that document how simple, low-tech vocabulary games are used with young EFL learners and how they relate to changes in basic performance measures.

Speaking, reading, and affective factors

Speaking and reading are both influenced by learners' affective states, including anxiety, self-confidence, and attitudes toward English. Zeinivand, Azizifar, and Gowhary (2015), for example,

reported that more positive attitudes toward English were associated with higher speaking proficiency among Iranian EFL learners. In an after-school club context, where participation is voluntary and learners may be tired after regular classes, maintaining a positive atmosphere can be especially important. Activities that feel enjoyable and manageable may encourage learners to take more risks in speaking and to persist with reading tasks, even when texts are challenging.

Summary

Taken together, the literature suggests that vocabulary game-based instruction is a promising approach for young EFL learners, but that empirical work in elementary after-school settings remains limited. Existing research points to potential benefits in vocabulary and speaking, but also underscores the importance of context, design, and affective factors. The present study contributes to this area by describing a small-scale intervention in a Taiwanese after-school club and reporting descriptive changes in speaking and reading scores.

RESEARCH METHOD

Research design

The study employed a pretest–posttest quasi-experimental design with a comparison group to explore the effects of English vocabulary game-based instruction on young learners' speaking and reading development. Two intact after-school English club classes at the same school were assigned to an experimental condition and a comparison condition. Because intact classes were used, random assignment at the individual level was not feasible, and the design is best described as quasi-experimental.

Context and participants

The research was conducted at a public elementary school in Pingtung, southern Taiwan. English is taught as a foreign language in this context. The after-school English club provided one additional 30-minute English session per week over one semester and was offered as an optional enrichment activity.

Twenty students in the lower and middle grades of the school joined the club and agreed to take part in the study. Ten students formed the experimental group, and ten formed the comparison group. The original Chinese report indicates that participants were in the lower- to middle-grade range, but precise age and grade distributions were not recorded. For this reason, the sample is described in general terms here. In future versions of the study, more detailed demographic information (such as age, grade, and prior English exposure) should be reported to support interpretations of generalizability.

Instructional treatments

Experimental group: Vocabulary game-based instruction

Students in the experimental group received vocabulary game-based instruction that integrated game-like tasks into each weekly session. Each 30-minute lesson focuses on a small set of target vocabulary items drawn from the school's curriculum and supplementary materials. The teacher used several types of games:

- Spelling and word-building games: Students arranged letters or filled in missing letters to form target words after hearing cues or seeing pictures.
- Memory games: Students played matching games that paired pictures with written words or simple definitions, encouraging repeated retrieval of target items.
- Role-play and speaking games: In pairs or small groups, students used target vocabulary in short dialogues, guessing games, or simple question-and-answer activities.
- Reading games: Students completed crossword-style or fill-in-the-blank tasks where they had to select or recall vocabulary items based on short reading passages or sentences.

These games were designed to provide repeated exposure to the same vocabulary items, immediate feedback from the teacher and peers, and opportunities to speak and read in a relatively

informal, low-pressure environment. At times, the teacher kept informal scores for teams, but these scores were not used for grading.

Comparison group: Conventional instruction

Students in the comparison group followed a more conventional after-school routine using the same vocabulary sets. Lessons involved teacher-led presentation of words, choral repetition, simple sentence practice, and worksheet-based exercises. The content and time-on-task were comparable to the experimental group, but activities did not include explicit game elements such as point systems or structured competitions.

Instruments

The study used separate assessments for speaking ability and reading ability, both administered as pretests at the beginning of the semester and as posttests at the end. The speaking assessment, as described in the original report, focused on fluency, pronunciation, and basic expressive ability in structured classroom tasks. The reading assessment emphasised vocabulary recognition, reading comprehension, and reading fluency through short passages and items requiring learners to identify or supply appropriate words.

Scores for both speaking and reading were reported on a 100-point scale. The original report did not provide detailed information on test formats, example items, scoring rubrics, or interrater reliability. As a result, the present article can only describe the assessments at a general level. In line with TESOL research guidelines, future research should include fuller descriptions of instruments and reliability indices (e.g., internal consistency or interrater agreement) so that readers can better evaluate measurement quality.

Data collection procedures and ethics

Data collection spanned one semester. In the first club session, both groups completed the speaking and reading pretests under the teacher's supervision. Over the following weeks, the experimental group received game-based vocabulary lessons, and the comparison group received conventional lessons, as described above. At the end of the semester, both groups completed the speaking and reading posttests.

The study was conducted as part of the school's regular after-school English club. School administrators reviewed the instructional plan and granted permission for the teacher-researcher to use anonymized pre- and posttest scores for research purposes. Parents were orally informed through school communication channels that the club activities would include classroom-based evaluation of students' speaking and reading, and students participated as part of normal club instruction. No procedures beyond regular teaching activities were introduced, and no identifying information is reported in this article. Given the small, school-based nature of the project, the study followed institutional norms for classroom-based research but did not undergo a separate external ethics review.

Data analysis

The dataset currently available comprises only group-level mean scores for speaking and reading at pretest and posttest for each group. No information is available about standard deviations, individual scores, or distributional characteristics. Consequently, this article reports descriptive patterns only and does not present inferential statistics or effect sizes.

In a more fully developed quantitative report, descriptive statistics (means and standard deviations) and inferential tests (such as mixed ANOVA or t-tests) would be used, along with effect sizes, to assess the magnitude and statistical reliability of any differences observed. Once learner-level data are accessible, such analyses could provide a more rigorous assessment of the intervention's impact.

RESULTS AND DISCUSSION

Results

Descriptive outcomes

The pretest and posttest mean scores for speaking and reading for both groups are summarised in Table 1.

Table 1. Pretest and post test mean scores for speaking and reading

Measure	Experimental group (n = 10)	Comparison group (n = 10)
Pretest speaking	60	58
Posttest speaking	78	60
Pretest reading	65	63
Posttest reading	75	62

As Table 1 shows, the experimental group's speaking mean increased from 60 at pretest to 78 at posttest, a gain of 18 points. The comparison group's speaking mean increased slightly from 58 to 60, a gain of 2 points. For reading, the experimental group's mean increased from 65 to 75 (a gain of 10 points), while the comparison group's mean changed from 63 to 62, indicating a slight decrease.

Interpretation of descriptive patterns

Taken together, these descriptive patterns indicate that the group receiving vocabulary game-based instruction showed larger gains in both speaking and reading scores than the group receiving conventional instruction. The differences are sizable in raw-score terms, especially for speaking. However, without information about variability, individual-level change, or statistical tests, it is not possible to determine whether these differences would be statistically significant or to estimate effect sizes.

Discussion

The aim of this small-scale study was to explore how English vocabulary game-based instruction might relate to elementary EFL learners' speaking and reading performance in an after-school club setting in Taiwan. Within the limits of the available data, the descriptive results suggest that students in the game-based condition experienced greater gains in both speaking and reading than students in the conventional condition. These findings are broadly in line with earlier work suggesting that carefully designed games and game elements can support language learning and engagement when they are aligned with instructional goals.

One plausible explanation for the relatively large speaking gains is that the game-based lessons created more frequent and less intimidating opportunities for oral production. Role-play and speaking games encouraged learners to use target vocabulary in short, meaningful exchanges, possibly lowering anxiety and increasing willingness to speak. This interpretation is consistent with research linking positive attitudes and lower anxiety with better speaking outcomes. For reading, the repeated use of vocabulary in reading games may have helped learners strengthen connections between written forms, meanings, and contexts, supporting both word recognition and basic comprehension.

These results also speak to the importance of design. The vocabulary games in this study involved classification, matching, and simple sequencing tasks that are appropriate for the cognitive development of elementary-age learners. This alignment may have made it easier for students to focus on language practice without being overwhelmed by task demands. Such considerations echo broader findings in the gamification literature: while game elements can be motivating, their impact depends on how they are integrated into age-appropriate learning activities.

At the same time, the study has important limitations. It involved only 20 students from a single school, which limits generalizability. Group assignment was based on intact classes rather than randomization, leaving open the possibility of unmeasured pre-existing differences between groups. The outcome measures were based on classroom tests whose reliability and validity cannot be fully assessed from the available information. Most notably, the absence of standard deviations and learner-level data means that results are descriptive only; no claims can be made about statistical significance or effect sizes.

Despite these limitations, the study offers a concrete example of how vocabulary game-based instruction can be incorporated into a realistic after-school setting and provides initial descriptive evidence that such instruction may be associated with positive changes in speaking and reading scores. The findings can therefore serve as a starting point for more detailed future work rather than as a final verdict on effectiveness.

Implications for practice

For teachers working with young EFL learners, this study suggests that relatively simple, low-tech vocabulary games can be integrated into after-school English clubs without major changes to the existing curriculum. By selecting a small set of target words for each session and designing games that require learners to retrieve, pronounce, and use those words in short speaking and reading tasks, teachers may create more opportunities for active language use.

The study also suggests that teachers do not necessarily need digital tools to benefit from gamification principles. Card-based memory games, team-based spelling challenges, and paper-and-pencil reading games can incorporate core game elements such as challenge, feedback, and visible progress in ways that are manageable in a typical classroom. For schools, this may make vocabulary game-based instruction a more feasible option, especially in contexts where access to technology is limited.

Limitations and directions for future research

Several limitations of the present study point directly to directions for future research. First, the small sample from a single site should be expanded in future work to include more schools and learners, allowing for more robust conclusions and the possibility of subgroup analyses. Second, future studies should collect and report learner-level data, including standard deviations and, where appropriate, inferential statistics and effect sizes, in line with TESOL research guidelines for quantitative reporting.

Third, the assessments used to measure speaking and reading ability should be described in more detail and, where possible, supplemented with established instruments or rubrics. This would help address questions about measurement reliability and validity. Fourth, future research might add qualitative components such as classroom observations or interviews to capture learners' experiences of the vocabulary games and to better understand how perceived enjoyment, confidence, and difficulty interact with performance.

Finally, it would be valuable to compare different types of game designs and mechanics (for example, cooperative versus competitive games, or individual versus team-based scoring) to explore which combinations are most supportive of young learners' speaking and reading development in different cultural and institutional contexts.

CONCLUSION

This small-scale study explored the use of English vocabulary game-based instruction with elementary EFL learners in a Taiwanese after-school English club. Over one semester, the group receiving vocabulary games showed larger descriptive gains in speaking and reading scores than a group receiving conventional instruction. While the absence of learner-level data and inferential statistics means that the findings must be interpreted cautiously, the results are consistent with broader claims that well-designed vocabulary games can support language practice and learner engagement among young EFL learners.

The study therefore contributes to the evolving discussion on how gamification and game-based learning can be adapted for elementary EFL contexts. It highlights both the promise of vocabulary games as a practical classroom tool and the need for more detailed, transparent research on their impact.

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