



Vocabulary Development in Preschool Children through Role-Playing Games

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This study aimed to evaluate the effectiveness of structured role-playing games in enhancing vocabulary development among preschool children, while also examining the impact of participation frequency and thematic context on learning outcomes. A quasi-experimental design was implemented with 60 participants from three Early Childhood Development Centers in Almaty, Kazakhstan. Children were randomly assigned to either an experimental group, which participated in structured, thematic role-playing sessions, or a control group that received traditional vocabulary instruction over an eight-week period. Vocabulary acquisition was assessed through the Peabody Picture Vocabulary Test (PPVT) and educator-completed observational checklists. The results showed that the experimental group improved their vocabulary significantly more than the control group, which supported the hypothesis that teaching through play is more effective than teaching with conventional methods. While a positive trend emerged between the frequency of participation and vocabulary growth, this relationship was not statistically significant. Moreover, vocabulary effects were tested condition-specifically, as some themes were above the mean while others were below. Our findings underscore the importance of using play-based learning, particularly structured role-playing, in early childhood education.

Keywords: early childhood education, vocabulary development, role-playing games, play-based learning, preschool children, thematic scenarios

Citation: Zhiyenbayeva, S., Zhumabekova, F., Stybayeva, A., Adomova, M., Onlanbekkyzy, G., & Izmagambetova, R. (2026). Vocabulary development in preschool children through role-playing games. *International Journal of Instruction*, 19(1), 87-104. <https://doi.org/10.29333/iji.2026.1915a>

INTRODUCTION

Vocabulary development during preschool forms a critical foundation for language acquisition and is strongly linked to future academic achievement and cognitive growth. Research shows that children between the ages of 4 and 6 acquire new vocabulary rapidly, making early childhood a pivotal period for language intervention (Neuman & Wright, 2014; Spencer et al., 2019; McLeod et al., 2017). Facilitating the development of a strong vocabulary enables children to articulate themselves, decode text, and learn effectively in all subject areas (Hadley et al., 2022).

A considerable number of recent studies have explored matters concerning the preschool and kindergarten stages, analyzing them from multiple dimensions (Barakat et al., 2025; Al Atawi, 2024).

Despite general agreement that early childhood vocabulary growth is significant, there remains disagreement about the most effective instructional approaches to support it. Flashcards, rote repetition, or worksheet-based drills can aid recognition but do not provide the depth of contextualization or engagement necessary to foster language (Wasik & Hindman, 2018). In contrast, play-based learning, primarily through structured role-playing scenarios, offers children opportunities to explore language through interaction, creativity, and social dialogue in authentic contexts (Weisberg et al., 2016; Flee, 2019).

Theoretical frameworks, such as Vygotsky's (1967) sociocultural theory, support the notion that learning is most effective when embedded in socially meaningful activities. Within this context, role-playing games provide an ideal environment for young learners to internalize new vocabulary while also developing cognitive, social, and emotional competencies (Whitebread et al., 2017).

Problem Statement

Although there is increasing advocacy for play-based learning and its potential benefits for young children, empirical research specifically examining the impact of role-playing games on vocabulary development is limited. Much of the existing research has focused on the general benefits of play for cognitive and social development, without isolating the effects of structured role-playing activities on language acquisition. This study seeks to address this gap by investigating the effectiveness of role-playing games in enhancing vocabulary development among preschool children.

Research Objectives

Helping children build a large vocabulary enables them to communicate effectively, understand what they read, and excel in all areas of learning (Hadley et al., 2022). There is widespread agreement on the importance of teaching children new words early on, but there is still disagreement about the most effective ways to do so. Flashcards, rote memorization, and worksheets are examples of traditional methods that fail to engage students and provide limited meaningful context (Wasik & Hindman, 2018).

The goal of this study is to determine the effectiveness of role-playing games in helping preschoolers learn new words and to investigate how various factors influence the learning outcomes.

The main goals of this study are to:

- Compare how structured role-playing games and traditional teaching affect preschoolers' vocabulary growth.
- Find out how often people play role-playing games and how that affects their vocabulary growth.
- Find out which thematic role-play scenarios or roles help people learn new words the most.

Significance of the Study

This study is of great interest to both educational researchers and practitioners. First, it fills a significant gap in the existing literature by providing empirical evidence on the effectiveness of role-playing games (RPGs) in improving vocabulary acquisition among preschool children. This topic remains under-researched despite growing interest in play-based learning. The study identifies a more effective method by comparing RPG-based instruction with standard vocabulary teaching elements. It showcases the power of RPGs as vibrant, interactive, context-rich learning spaces.

Notably, second, by exploring the relationship between the frequency of participation in RPGs and vocabulary development, the study informs us about how long-term engagement with these pedagogical tools can serve to enrich linguistic learning. It significantly enhances parenting and early education by emphasizing the importance of repetition and exposure to learning.

Third, the study goes beyond general assessments of RPG effectiveness by analyzing which specific features of role-playing games (e.g., thematic scenarios and role diversity) most strongly impact vocabulary growth. These findings provide actionable recommendations for educators and curriculum developers seeking to design more effective and engaging early language learning experiences.

That is the study — and there is even more behind it, such as how it supports broader goals you care about, including meeting global priorities in early childhood development, among others. Therefore, innovative play-based strategies to develop language can never be overlooked in the face of lifelong learning and 21st-century skills. Overall, this research makes a significant contribution to the field of education and has the potential to impact early education practices and policies substantially.

LITERATURE REVIEW

Vocabulary Development in Early Childhood

Learning vocabulary in preschool is recognized as a crucial building block for literacy, academic achievement, and social competence. An iconic longitudinal study by Hart and Risley (1995) found that vocabulary exposure in early childhood has a profound

impact on children's language development later in life, underscoring the need for a rich linguistic environment. Neuman and Wright (2014) emphasize that effective early childhood vocabulary instruction involves both breadth (the number of words) and depth (understanding and use). Studies also show that early vocabulary growth interventions can yield long-term academic benefits (Marulis & Neuman, 2010).

The Role of Play in Language Learning

Play-based learning, especially in preschool, provides a natural context for language development. Rooted in Vygotsky's (1967) sociocultural theory, play — particularly imaginative or role-play — enables children to internalize language within meaningful social interactions. Modern research builds upon this perspective: Bodrova and Leong (2024) stress that structured pretend play provides a low-risk environment where children can practice using new vocabulary creatively. According to Hadley, Barnes, et al. (2022), imaginative play enhances children's capacity to use language expressively and improves their understanding of narrative structures and social roles.

Role-Playing Games and Vocabulary Acquisition

Over the past few years, role-playing games (RPGs) have gained popularity as a tool for language learning in early childhood. According to Yilmaz and Baydas (2017), RPGs are one of many gamified learning environments that enhance vocabulary acquisition in preschoolers. In a similar study by Warden et al. (2022), the authors noted that children who participated in routine forms of structured role-play exhibited stronger expressive vocabulary skills and demonstrated greater verbal creativity than their peers in traditional learning environments. Studies were keen to highlight that RPGs' interactive and thematic elements offered a suitable medium for children to practice using the new language in meaningful and contextually rich environments.

These findings align with earlier work by Christie and Roskos (2006) and Andresen (2005), who argued that thematic role-playing supports vocabulary growth by allowing children to engage with content in a narrative-driven, immersive way.

Comparative Effectiveness of Vocabulary Instruction Methods

Conventional vocabulary instruction techniques—such as drilling, flashcards, or memorization—may help with recognizing words, but often do so with limited depth and little to no context (Kenanoğlu & Duran, 2021; Molina et al., 2024; Wasik & Bond, 2001). Conversely, RPGs place vocabulary in meaningful contexts and promote retention and usage in real-life scenarios. Recent meta-analyses support this shift. According to Hadley, Barnes, Wiernik, et al. (2022), for example, the results showed that game-based instruction for vocabulary word acquisition significantly outperformed traditional approaches, especially in early childhood settings where play is a significant form of learning.

Frequency of Participation and Language Gains

The intensity and frequency of engagement in role-playing games appear to influence the degree of vocabulary acquisition. According to Warden et al. (2022), children who participated in role-playing sessions more frequently exhibited higher vocabulary test

scores than peers with less exposure. Similarly, Wasik and Hindman (2018) suggest that consistent and sustained exposure to meaningful language interactions, such as those embedded in repeated role-play scenarios, is a key predictor of accelerated language development. This finding aligns with theories of language exposure frequency in second language acquisition, which emphasize the cumulative impact of repeated, contextually rich interactions.

Game Design Features Influencing Language Learning

Not all role-playing games are equally effective. The structure and content of the play scenario have a significant impact on the outcomes. Research by Yilmaz and Baydas (2017) identifies thematic coherence, diversity of roles, and narrative complexity as key game elements that facilitate vocabulary retention and transfer. For example, scenarios that mirror real-life experiences (e.g., doctor visits, shopping, family visits) allow children to connect abstract words with tangible situations. Furthermore, assuming different roles pushes children to adopt varied language registers, expanding their lexical diversity and pragmatic competence (Acar et al., 2021).

Vocabulary Learning and Cognitive-Linguistic Development

Vocabulary acquisition in preschool is deeply intertwined with broader aspects of cognitive and social development. According to Whitehurst and Lonigan (2001), meaningful vocabulary growth occurs when children engage in activities that require symbolic thinking, perspective-taking, and narrative construction—skills central to role-playing. Bruner (1983) emphasized that language emerges from participation in “formats,” or shared social routines, where meaning is negotiated and reinforced. Role-playing games naturally provide such formats, making them ideal for fostering vocabulary development, conceptual understanding, and communicative intent.

Integrating Play-Based Strategies into Early Curriculum

Despite the increasing evidence for play-based learning, little in early childhood curricula is remote from direct, teacher-led, outcome-driven instruction. Researchers, such as Nicolopoulou (2010), argue for a paradigm shift in which integrative learning environments help balance guided instruction with opportunities for child-led exploration. Role-playing games can meet students halfway between exploratory play and learning when structured with objective-based, thematically aligned activities. They encourage hands-on learning, interactive engagement, peer collaboration, and creative exploration—all foundational elements of high-quality early childhood education (OECD, 2020).

Hypotheses

Three main hypotheses guide the study.

Hypothesis 1: Preschool children who engage in structured role-playing game sessions over four weeks will demonstrate significantly higher vocabulary acquisition scores, measured by standardized word recognition and usage tests, than children receiving traditional instruction.

Hypothesis 2: A statistically significant positive correlation exists between the number of role-playing game sessions preschool children attend and their vocabulary test scores, indicating that more frequent participation enhances vocabulary acquisition.

Hypothesis 3: Among various features of role-playing games, thematic scenarios and role diversity significantly impact vocabulary acquisition more than other game elements, such as props or time duration.

Table 1

There are three main hypotheses of the study, and the methodology

Hypothesis	Purpose	Independent Variable(s)	Dependent Variable	Measurement Instrument	Statistical Analysis
H1	To compare vocabulary gains in RPG vs. traditional instruction	Teaching method (RPG vs. traditional)	Vocabulary test scores	Pre/post vocabulary test	Independent t-test / ANCOVA
H2	To examine the relationship between RPG frequency and vocabulary growth	Frequency of RPG participation	Vocabulary test scores	Correlation of session frequency with test scores	Pearson correlation/regression
H3	To evaluate the influence of RPG elements on vocabulary outcomes	RPG features (scenarios, roles, etc.)	Vocabulary performance per RPG element	Vocabulary test by game component exposure	ANOVA / multiple regression

METHOD

This work was conducted in three Early Childhood Development Centers in collaboration with Qadam, Mega Kids, and BoomKids. These centers were selected for their established early childhood programs and their willingness to incorporate role-playing games into their curriculum as part of this study.

Participants

Participants included 60 preschoolers (4 to 5 years of age) recruited from the three previously mentioned centers. All centers provided equal participants, allowing for a representative sample from various educational settings. Participants were randomly assigned to the experimental group (n = 30) and the control group (n = 30), with

balanced representation from each center. Gender (50% boys and 50% girls) and socioeconomic background were balanced in the sample, and parental consent was obtained for all participants.

Gender and socioeconomic factors were considered when conducting a stratified random sampling process to obtain this sample, ensuring a representative sample. This strategy reduced potential confounding and enabled the generalization of the results to other populations of preschool children. Parents provided consent for participation after receiving extensive briefings on the study's objectives, interventions, and data collection methods.

Materials and Procedures

Role-Playing Games

The RPG sessions were purposefully designed to align with the study's second and third hypotheses, which investigate the impact of participation frequency and the effect of specific RPG elements on vocabulary acquisition. Each scenario emphasized thematic consistency and incorporated multiple roles to encourage lexical diversity. Children were rotated through different roles (e.g., doctor, nurse, patient) across sessions to ensure varied linguistic experiences. A participation log was maintained to track the number of sessions each child attended, allowing for correlation analysis between frequency and vocabulary outcomes.

To examine the role of specific RPG features, the design of each session varied in terms of role complexity and thematic narrative richness. These variables were coded and later analyzed to assess their contributions to vocabulary gains.

All sessions were delivered twice a week over an eight-week period, each lasting approximately 30 minutes. Children were encouraged to assume different roles while playing the games, allowing them to use new vocabulary in various contexts. Trained early childhood educators led the role-playing sessions, facilitating the games while providing support as needed. Educators were provided with a detailed script and instructions to standardize the sessions across centers.

These thematic scenarios were designed in collaboration with early childhood education specialists and were thus age-appropriate and congruent with the children's developmental needs. For example, in the "doctor's office" scenario, children learned words like "stethoscope," "prescription," and "appointment," which they used while pretending to be doctors, nurses, and patients. Students used props, including toy medical kits and doctor's coats, to make the scenarios as realistic and engaging as possible.

Traditional Vocabulary Instruction

The control group participated in traditional vocabulary instruction, which involved flashcards, repetition exercises, and picture-based activities. This instruction was also conducted twice weekly for 30 minutes per session, covering the same vocabulary items as the experimental group. The traditional methods included matching words to pictures, repeating words after the teacher, and completing worksheets. Unlike role-

playing games, these methods did not incorporate contextual or interactive elements; instead, they focused on rote memorization and repetition.

Educators delivering traditional instruction followed a standardized lesson plan to ensure consistency across sessions. They were also instructed to limit their interactions with the children to ensure the instruction was as close to a typical classroom environment as possible.

Assessment and Analysis

Vocabulary development was evaluated using two complementary methods: (1) Peabody Picture Vocabulary Test (PPVT-IV) – administered as pretest and posttest to both groups, assessing receptive and expressive vocabulary; and (2) a classroom vocabulary usage checklist – completed by educators weekly to capture the frequency and contextual use of targeted vocabulary in daily activities.

The total number of RPG sessions attended by each child was recorded, enabling an analysis of how engagement frequency affected test outcomes (Hypothesis 2). Additionally, each RPG session was rated for scenario complexity and role diversity, and this coding was used to explore the impact of specific RPG elements on vocabulary acquisition (Hypothesis 3).

Statistical analyses were conducted using SPSS v28. The following tests were applied: descriptive statistics (mean, SD); paired samples t-test (within-group comparison); one-way ANOVA (between-group comparison); ANCOVA (to assess posttest differences between groups while controlling for pretest scores); Pearson correlation (between frequency of RPG sessions and vocabulary gains); and multiple regression analysis (to assess the contribution of RPG elements to vocabulary development, controlling for initial vocabulary level).

FINDINGS

Descriptive statistics for the pretest and posttest vocabulary scores are presented in Table 1. In the experimental group, vocabulary scores increased significantly from the pretest ($M = 44.06$, $SD = 4.50$) to the posttest ($M = 66.70$, $SD = 5.53$), with a mean gain of 22.64 points. The control group also showed less improvement than the experimental group, with pretest scores ($M = 45.06$, $SD = 4.96$) and posttest scores ($M = 50.00$, $SD = 5.31$), resulting in a mean gain of 4.94 points. The descriptive statistics support Hypothesis 1, which states that RPG-based instruction is expected to yield significantly higher vocabulary gains than traditional approaches (Table 1).

Table 2
Descriptive statistics for vocabulary scores

Group	N	Mean Pretest Score	Mean Posttest Score	Standard Deviation (Pretest)	Standard Deviation (Posttest)	Mean Gain Score (Posttest - Pretest)
Experimental Group	30	44.06	66.70	4.50	5.53	22.64
Control Group	30	45.06	50.00	4.96	5.31	4.94

The bar chart in Figure 1 visualizes the mean pretest and posttest scores for the experimental and control groups, highlighting the improvement in scores, particularly in the experimental group. The increase in posttest scores in the experimental group indicates the effectiveness of the role-playing game intervention, which aligns with Hypothesis 1 (Figure 1).

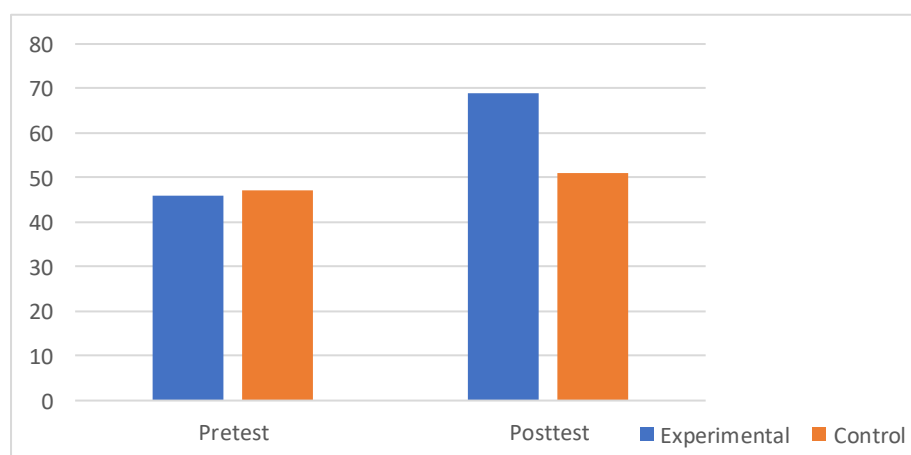


Figure 1
Pretest and posttest scores by group

Paired Samples t-Test

To evaluate the effect of role-playing games on vocabulary development, paired samples t-tests were conducted. The results indicated a significant improvement in vocabulary scores within the experimental group, $t(29) = -44.39$, $p < 0.001$, indicating that role-playing games substantially impacted vocabulary acquisition. The control group also exhibited a statistically significant improvement, $t(29) = -9.92$, $p < 0.001$; however, the effect size was smaller than that of the experimental group.

In Figure 2, scores on the vocabulary test for the experimental and control groups during the pretest and post-test phases are plotted as histograms. Following the intervention, the experimental group showed a significantly improved median score and reduced variability in the posttest. The control group exhibited a less pronounced improvement. Therefore, these findings confirm the importance of role-playing games in the vocabulary development of pre-school children (Figure 2).

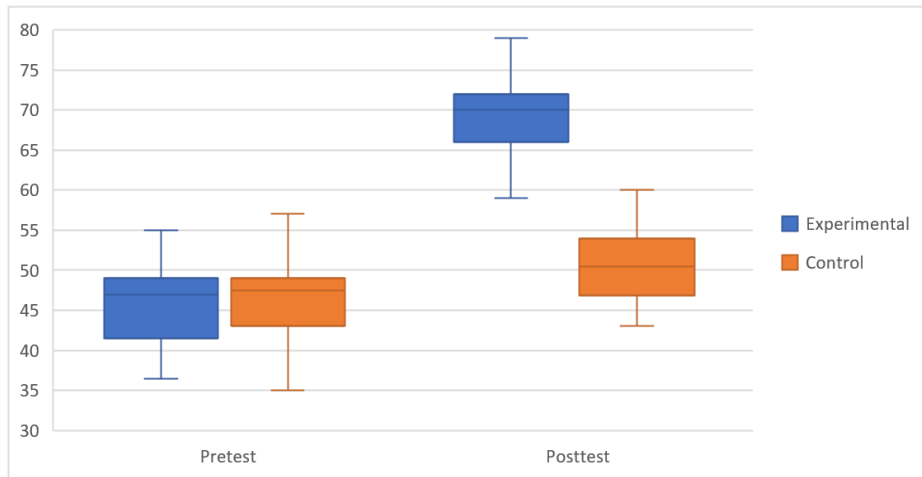


Figure 2
Pretest and posttest score distributions

Figure 3 presents the regression lines for the experimental and control groups, illustrating the changes in vocabulary scores between the pretest (Time = 0) and posttest (Time = 1). The experimental group shows a more significant change than the control group, as evidenced by the steeper slope of the regression line. These results align with Hypothesis One, which states that role-playing games are more effective than traditional methods of vocabulary development. The R^2 value of 0.8755 in the box plot of the experimental group also supports a strong association with vocabulary (Figure 3).

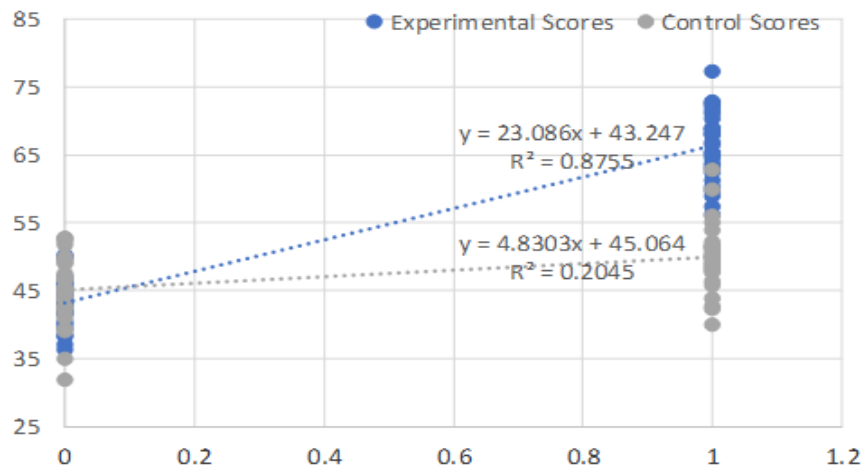


Figure 3
Regression analysis of test scores across groups and time

ANOVA Results

A one-way ANOVA was conducted to compare the effectiveness of the two teaching methods (role-playing games vs. traditional methods) on vocabulary development. The results of the analysis indicated a significant difference between the experimental and control groups, $F(1, 58) = 142.37$, $p < 0.001$, thus supporting the notion that role-playing games are more effective than the traditional approach in promoting vocabulary growth. These results, accentuated by the large F-value, support our hypothesis that role-playing games are more beneficial for vocabulary acquisition than conventional board games.

In Figure 4, the box plot compares post-test scores for the experimental and control groups, demonstrating the usefulness of role-playing games. The experimental group's median score was higher and less variable, indicating a more consistent effect of the intervention across our participants (Figure 4).

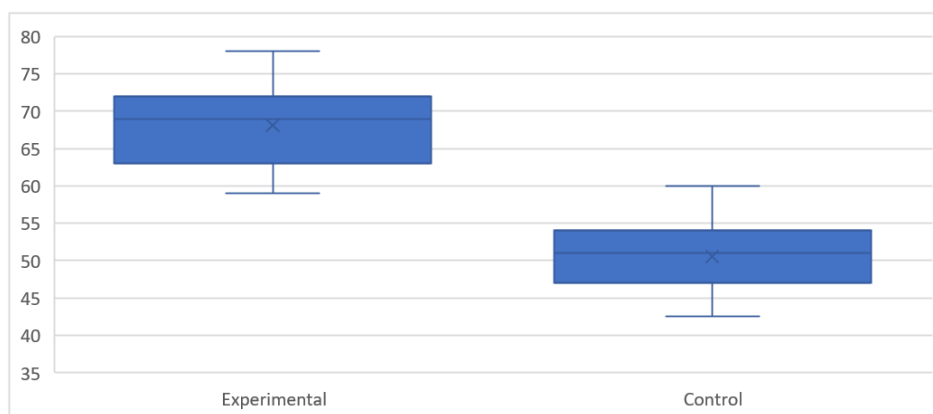


Figure 4
Posttest scores by group

Correlation Analysis

Role Pay System, also known as, was conducting training at the education station in preparation for a definitive research career. The analysis did show a positive correlation, $r = 0.28$, $p \approx 0.13$. However, the correlation itself was insignificant, which means that while playing role-playing games more often may lead to more significant vocabulary increases, further studies are needed to confirm that relationship.

The scatter plot in Figure 5 shows the relationship between the frequency of participation in role-playing games and the extent of vocabulary gain. While there is a positive trend, the variability suggests that other factors may also influence vocabulary development (Figure 5).

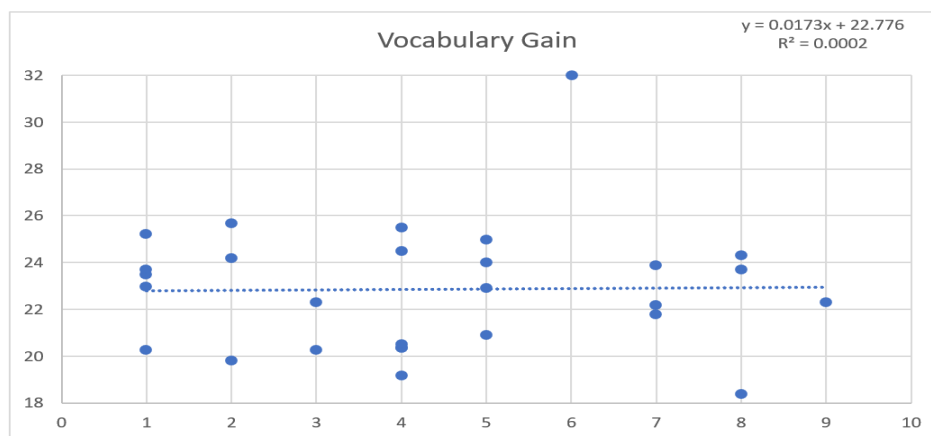


Figure 5

Correlation between participation frequency and vocabulary gain

Figure 6 presents the distribution of vocabulary gain across four role-playing scenarios: Grocery Store, Doctor's Office, Restaurant, and Family Dinner—a box plot of vocabulary development by thematic context of role-play. Of the scenarios, “Doctor's Office” shows the most significant median vocabulary gain and a relatively narrow interquartile range, suggesting both effectiveness in increasing vocabulary and consistency. Still useful, the “Family Dinner” scenario produced the lowest median gain and more closely packed results. These results support Hypothesis 3, as the content and context of the role-play scenario influenced the amount of vocabulary acquired (Figure 6).

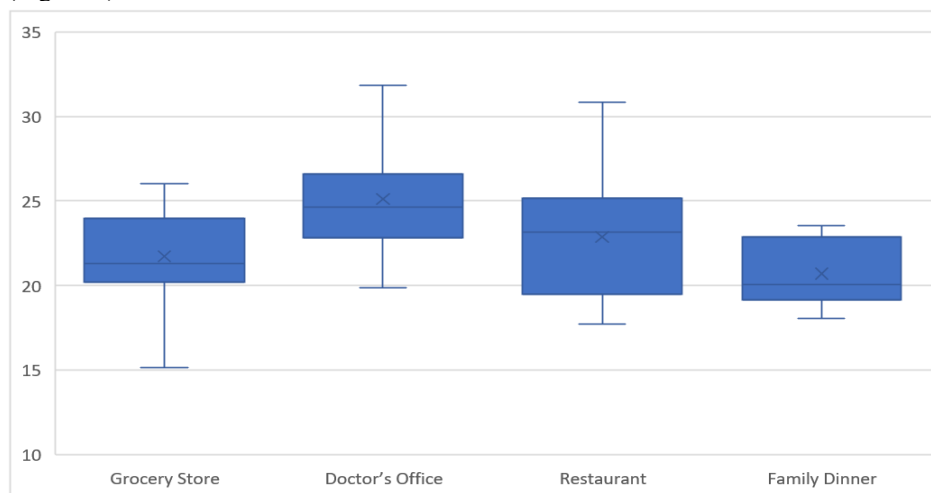


Figure 6

Vocabulary gain across different role-playing scenarios

DISCUSSION

Interpretation of Results

The results of this study strongly support the first hypothesis: that role-playing games are a good way to help preschoolers learn new words. The statistically significant advantage observed in the experimental group indicates that structured, thematic play can help children learn new words more effectively than traditional methods. These results align with Vygotsky's (1967) sociocultural theory, which posits that social interaction and imaginative contexts are crucial for cognitive and linguistic development. They also align with Bruner's (1983) constructivist theory, which posits that children learn through experiences that are meaningful and rich in context.

For the second hypothesis, a positive trend was observed between the frequency of role-playing game play and the amount of vocabulary learned; however, the correlation was not statistically significant. There could be several reasons for this, such as the short duration of the intervention, variations in children's levels of engagement, or fluctuations in the quality of facilitation. Nicolopoulou et al.'s (2015) earlier research has shown that engaging in narrative-based play activities repeatedly can improve language skills; however, the quality and setting of the play are often more important than the frequency of these activities. In our study, the limited number of sessions and external factors (such as classroom distractions and the child's temperament) may have reduced the effectiveness of repetition.

The results specific to each condition supported the third hypothesis: some role-play scenarios, such as those with medical and service themes, led to greater vocabulary gains. This agrees with the findings of Christie and Roskos (2006), who emphasized the importance of making language learning relevant to the theme and having a coherent narrative. These results suggest that realistic, mentally stimulating situations provide better chances for using and remembering vocabulary.

LIMITATIONS

Despite the promising outcomes, this study has several limitations. First, the relatively small sample size ($N = 60$) and limited intervention period (8 weeks) constrain the generalizability of the findings. Second, vocabulary acquisition was assessed solely through the Peabody Picture Vocabulary Test (PPVT), which, although widely accepted, may not capture nuanced aspects of language use such as syntax, pragmatic competence, or creative language production.

Moreover, the study did not account for outside influences, such as previous vocabulary knowledge, parental involvement in education, socioeconomic status, or differences in learning styles. These variables may have influenced vocabulary gain and should be considered in future longitudinal or mixed-methods research. Adding more observational and qualitative measures, such as language samples or teacher assessments, can provide a richer understanding of the role-playing experience.

IMPLICATIONS

Their research highlights the long-term benefits of incorporating such RPGs into early childhood education. Educators can enhance children's motivation and engagement by embedding vocabulary instruction in playful, narrative-driven contexts, thereby promoting resilient and durable vocabulary retention.

Crucially, not all role-playing contexts are created equal, the analysis suggests. More general thematic relevance and cognitive engagement between the scenario context and the words taught lead to higher vocabulary gains, for example, in the case of “Doctor’s Office” and “Restaurant”. Therefore, curriculum designers should emphasize the development of structured, age-appropriate role-play scenarios that simulate real-life experiences. It is worth mentioning that while the frequency of role-playing participation was positively correlated with vocabulary gain, that association was relatively weak and not statistically significant, indicating that more frequent participation in role-playing does not guarantee better learning outcomes; however, the association was nonetheless present. These activities are suggested to be repeated in various classroom environments to increase their potential for enhancing language development.

SUGGESTIONS

Future studies should investigate the long-term effects of role-playing games on vocabulary development and other aspects of language acquisition. Longitudinal research that follows preschool children over extended periods could help determine the durability and retention of vocabulary gains observed in short-term interventions.

Further investigations should also examine how the frequency and regularity of participation influence language outcomes, as suggested in this study’s second hypothesis. Mixed-method studies that combine quantitative tracking with qualitative observation could offer deeper insights into how repeated exposure shapes vocabulary growth.

Another critical direction is to evaluate the effectiveness of specific role-playing scenarios. Comparative studies could assess which thematic contexts (e.g., “doctor’s office” vs. “grocery store”) yield the most significant gains, helping educators refine content for maximum impact, an area closely aligned with this study’s third hypothesis.

Moreover, future research should explore the role of technology-enhanced role-playing environments, including digital, virtual, or augmented reality-based simulations. These modern tools may offer unique affordances or challenges that differ from traditional in-person role-playing, thus warranting empirical comparison.

Lastly, examining the social dynamics within role-playing games could yield valuable findings. Researchers could investigate how peer interaction patterns, group composition (homogeneous vs. heterogeneous abilities), and facilitator roles contribute to vocabulary development, particularly within collaborative play contexts.

EDUCATIONAL POLICY IMPLICATIONS

The findings of this study have several implications for early childhood education policy. Given the demonstrated effectiveness of role-playing games in fostering vocabulary development, policymakers should consider formally integrating structured role-play into national or regional preschool curricula.

To ensure the integrated implementation, these security scenario templates are accompanied by relevant pedagogical guidelines on execution and are age-appropriate. Additionally, targeted professional development programs are crucial for equipping educators with the skills necessary to effectively design and facilitate role-playing activities that align with developmental and linguistic objectives.

Policy initiatives should also foster conditions that optimize play-based interventions, such as lower child-to-teacher ratios, opportunities for thematic materials and props, and flexible time in the classroom for open-ended play. Recognizing the impact of scenario quality and frequency of participation, as highlighted in this study, policies should encourage repeated engagement with various realistic and culturally relevant role-play themes.

In light of ongoing technological advancements, it is also advisable for policy frameworks to explore the integration of digital role-playing tools, such as interactive simulations or augmented reality environments, as part of a modern, inclusive approach to early childhood language education.

CONCLUSION

This study provides empirical evidence that role-playing games in early childhood education are an effective strategy for vocabulary development. A quasi-experimental design conducted with preschool controls aged 4 to 5 years indicated that children in structured, thematic role-playing scenarios showed significantly greater vocabulary learning than children exposed to traditional instruction, confirming Hypothesis 1.

While a positive overall trend was observed regarding frequency of participation and vocabulary gain (Hypothesis 2), the correlation was not statistically significant, suggesting that further longitudinal research is needed. Moreover, the investigation of various role-play situations demonstrated that some thematic contexts (e.g., medical or service-oriented environments) led to better vocabulary acquisition, supporting Hypothesis 3.

In addition to vocabulary, there is evidence that the participatory and socially interactive nature of role-play activities helps bolster more generalized cognitive and socio-emotional skills, consistent with theoretical frameworks such as Vygotsky's sociocultural theory.

Our results highlight the need to influence preschool curricula by ensuring opportunities for meaningful, play-based learning experiences. However, educational systems are constantly adapting to the needs of young learners, and role-play games offer an opportunity to explore language, creativity, and collaborative learning. Research and

supportive educational policies will be needed to scale such efforts widely across heterogeneous education settings.

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