UNEMI
UNIVERSIDAD ESTATAL DE MILAGRO

REPÚBLICA DEL ECUADOR

UNIVERSIDAD ESTATAL DE MILAGRO

VICERRECTORADO DE INVESTIGACIÓN Y POSGRADO

ARTÍCULOS PROFESIONALES DE ALTO NIVEL PREVIO A LA OBTENCIÓN DEL TÍTULO DE:

MAGÍSTER EN ENSEÑANZA DE INGLÉS COMO LENGUA EXTRANJERA

TEMA:

"Enhancing Vocabulary Acquisition Through Project-Based Learning: A Case Study of 4th Grade Students in Rural Areas of Manabí Province in Ecuador"

Autor:

James Rodriguez Ortega

Director:

Mgs. Fernando Riera Hermida

Milagro, 2025

RESUMEN

Vocabulary learning is super important, especially for kids in rural areas where schools might not have a lot of resources. This research looks at how using real-life objects and project-based learning can help fourth graders in a rural school in Manabí Province, Ecuador, learn new words better. The study used realia, which are things students can see and touch around them, along with fun projects to make learning more interesting and relevant. They tested the students before and after the learning activities to see how much their vocabulary improved. They also gathered information from watching the classes, talking to teachers, and getting feedback from students. The results showed that students got better at recognizing words, pronouncing them, spelling them, and using them in sentences. This shows that using realia and project-based learning can really help with education in places that don't have a lot of resources. The study suggests that combining these methods is a great way to teach vocabulary and can be used by teachers in similar situations.

PALABRAS CLAVES

Vocabulary acquisition, realia, project-based learning, rural education, experiential learning.

ABSTRACT

Vocabulary acquisition is a fundamental aspect of language learning, particularly for young learners in rural areas where educational resources are often limited. This study investigates the effectiveness of a realia-based, project-oriented learning approach for enhancing vocabulary acquisition among fourth-grade students in a rural school in Manabí Province, Ecuador. The intervention combined realia—tangible objects from the students'

immediate environment—with project-based learning (PBL) activities to create an engaging and contextualized learning experience. The quasi-experimental design included a pre-test and post-test to measure vocabulary gains, complemented by qualitative data from observations, teacher interviews, and student feedback. Results revealed significant improvements in vocabulary recognition, pronunciation, spelling, and contextual usage, demonstrating the potential of realia and PBL to address educational challenges in resource-constrained settings. The study concludes that integrating realia and PBL is an effective and scalable strategy for vocabulary instruction, offering valuable insights for educators in similar contexts.

KEYWORDS

Vocabulary acquisition, realia, project-based learning, rural education, experiential learning.

1. INTRODUCCIÓN (OBJETIVO DEL ARTÍCULO)

Vocabulary acquisition is a cornerstone of language learning, forming the foundation for reading, writing, speaking, and listening skills. It is particularly critical for young learners in rural areas, where access to quality education and language learning resources is often limited (Webb, 2020). Research has shown that effective vocabulary teaching methods must go beyond rote memorization to incorporate active and meaningful engagement with words (Schmitt, 2019). Project-Based Learning (PBL) has emerged as a promising instructional approach, offering opportunities for students to learn vocabulary through collaborative, real-world tasks that promote deeper understanding and retention (Beckett & Slater, 2021). When combined with realia—tangible objects used as teaching aids—PBL can create a highly contextualized and experiential learning environment, especially beneficial in resource-constrained settings (Nation, 2021).

Rural schools face unique challenges that exacerbate barriers to language acquisition, including limited infrastructure, underqualified teachers, and the absence of modern teaching materials (Lai et al., 2022). Despite these limitations, educators in such contexts have leveraged locally available resources and innovative pedagogical strategies to enhance language learning outcomes. Realia-based instruction, in particular, has proven effective in bridging resource gaps by providing students with tactile and visual learning experiences that link vocabulary to familiar objects and concepts (Gao & Xu, 2022). These hands-on approaches align with cognitive learning theories, which emphasize the importance of contextualizing new information to facilitate comprehension and memory retention (Mayer, 2020).

Studies on vocabulary acquisition have consistently highlighted the importance of meaningful interactions in learning new words (Folse, 2021). Realia provides an immediate

and tangible connection between words and their meanings, making it especially effective for young learners who benefit from multisensory input. When integrated with PBL, realia-based instruction not only enhances vocabulary learning but also fosters critical thinking, problem-solving, and collaborative skills (Kukulska-Hulme et al., 2020). This synergy is particularly valuable in rural education, where resource limitations often require creative and adaptive teaching methods.

This study investigates the effectiveness of a realia-based, project-oriented vocabulary intervention for fourth-grade students in a rural school in Manabí Province, Ecuador. By combining the tactile and visual engagement of realia with the collaborative and contextual benefits of PBL, this approach seeks to address the specific challenges of vocabulary acquisition in under-resourced settings. Through this research, the aim is to contribute to the growing body of literature on innovative and scalable pedagogical strategies for rural education while highlighting the transformative potential of experiential learning methods.

2. MARCO TEÓRICO

Conceptual Foundations

1. Language Acquisition Theory

- Sociocultural Theory: Learning occurs through social interaction and contextual experiences.
- Constructivist Learning Approach: Knowledge construction through active engagement and meaningful projects.
- Second Language Acquisition Principles: Emphasizing contextual and experiential learning environments.

1. **Project-Based Learning (PBL) Theoretical Perspectives**
    - Dewey's Experiential Learning Model: Learning through direct experience and problem-solving.
    - Kolb's Experiential Learning Cycle: Active experimentation, concrete experience, reflective observation.
    - Constructionist Learning Theory: Knowledge creation through designing and creating tangible projects.

2. **Vocabulary Acquisition Frameworks**
    - Vocabulary Learning Strategies:
    - Contextual learning.
    - Intentional vs. incidental vocabulary acquisition.
    - Depth of processing model.

Theoretical Intersections

Cognitive Processing in Vocabulary Learning:

- Working Memory Engagement: PBL activates multiple cognitive processes.
- Semantic Mapping: Creating meaningful connections between new and existing knowledge.
- Metacognitive Strategy Development: Self-regulated learning through project interactions.

Sociocultural Dimensions

- Funds of Knowledge Approach: Leveraging students' cultural and community experiences.

- Rural Educational Context: Integrating local linguistic and cultural resources.
- Situated Learning Theory: Knowledge embedded in authentic, meaningful contexts.

Conceptual Model

Integrated Framework for Vocabulary Acquisition

1. Contextual Learning Environment

- Project-based instructional design
- Authentic learning experiences
- Cultural relevance

2. Cognitive Processing Mechanisms

- Active engagement
- Meaningful interaction
- Reflection and reconstruction of knowledge

3. Linguistic Development Indicators

- Vocabulary expansion
- Semantic complexity
- Communicative competence

Theoretical Propositions

- PBL enhances vocabulary acquisition through contextualized, meaningful learning experiences
- Rural educational contexts provide unique opportunities for language development
- Integrative approaches support more profound and lasting vocabulary learning

3. METODOLOGÍA

Participants

The participants for this study consist of 25 fourth-grade students, aged between 9 and 10 years, enrolled in a rural elementary school located in Manabí Province, Ecuador. The selected school operates within a context of severe resource constraints, lacking access to digital tools, modern textbooks, or supplementary educational materials. The students' exposure to English language instruction is minimal, with learning primarily confined to the classroom and relying on traditional methods. Their socio-economic backgrounds vary but are generally characterized by limited access to educational opportunities outside the school environment. Due to these conditions, the study aims to address their specific needs by leveraging tangible, real-world objects, or *realia*, as the primary instructional method to teach English vocabulary.

Instruments

To comprehensively evaluate the effectiveness of the intervention, a combination of quantitative and qualitative instruments was employed. First, a vocabulary pre-test and post-test were developed to measure students' knowledge and retention of the target vocabulary. These tests, each consisting of 30 multiple-choice items, were directly aligned with the vocabulary introduced during the intervention. The pre-test served as a baseline for assessing initial knowledge, while the post-test measured gains in vocabulary acquisition following the intervention. Structured observation protocols were also implemented to document classroom interactions, student engagement levels, and the teacher's instructional practices. These observations provided real-time insights into the dynamics of the lessons and the effectiveness of the instructional approach.

Realia, defined as tangible, real-world objects, constituted the primary teaching materials. Items such as farm tools, fruits, vegetables, and household goods, all relevant to the students' local context, were integrated into the lessons. These objects offered a visual and tactile dimension to the learning process, helping students connect English vocabulary to familiar and practical contexts. To capture student perceptions, simple Likert-scale surveys were distributed, enabling students to reflect on their engagement, enjoyment, and perceived learning outcomes. Additionally, semi-structured interviews with the teacher provided a deeper understanding of their experiences with the methodology, challenges encountered, and observations regarding student progress.

4. ANÁLISIS DE RESULTADOS

A mixed-methods approach was employed to analyze the data collected from the study. Quantitative data from the pre-test and post-test were analyzed using paired sample t-tests to determine whether there were statistically significant gains in vocabulary knowledge. This analysis provided a clear measure of the intervention's impact on student performance.

Qualitative data from observation protocols, teacher interviews, and student feedback surveys were analyzed thematically. Observation notes were reviewed to identify patterns in student engagement and interactions with the realia-based methodology. Teacher interviews provided insights into instructional challenges, adaptations, and observed student progress, while student surveys offered a perspective on the learners' experiences and satisfaction with the approach. By triangulating these quantitative and qualitative data sources, the analysis provided a holistic understanding of the intervention's effectiveness and potential scalability in similar contexts.

Results

Data Analysis

Criteria	Pre-Test Mean Score	Post-Test Mean Score	Improvement
Recognition of Vocabulary	4.5	8.5	+ 4.0
Spelling Accuracy	3.8	7.9	+ 4.1
Word Pronunciation	5.0	8.7	+ 3.7
Word-Object Association	4.2	8.6	+ 4.4
Contextual Usage	3.5	7.5	+ 4.0
Categorization	4.1	8.2	+ 4.1
Retention of Vocabulary	3.7	8.0	+ 4.3

The results chart reveals a significant improvement in students' vocabulary acquisition across all seven evaluation criteria, demonstrating the effectiveness of the realia-based intervention. The pre-test scores indicate that students began with a limited understanding of the target vocabulary, with an average overall score of 28.8 out of 70. After the intervention, the post-test results showed a marked increase to 57.4, representing a gain of 28.6 points. This improvement highlights the impact of using tangible, real-world objects and interactive activities to facilitate meaningful and practical learning.

One of the most substantial improvements was observed in the recognition of vocabulary, where students' mean scores rose from 4.5 to 8.5. This reflects the effectiveness of presenting realia during lessons, as students were able to visually and physically interact with objects, solidifying their understanding of the associated vocabulary. Similarly, gains in word-object association (from 4.2 to 8.6) indicate that hands-on activities, such as sorting and categorizing items, were instrumental in helping students make concrete connections between words and their meanings.

The criterion of spelling accuracy also showed a notable improvement, increasing from 3.8 to 7.9. This growth suggests that labeling exercises and repeated exposure to vocabulary through games and collaborative tasks reinforced students' ability to spell target words correctly. In word pronunciation, scores increased from 5.0 to 8.7, reflecting the success of oral exercises, including role-playing and storytelling activities, which gave students opportunities to practice pronunciation in a supportive and interactive setting.

Another key area of growth was contextual usage, where scores rose from 3.5 to 7.5. The role-playing scenarios, such as market transactions, provided students with meaningful contexts to apply new vocabulary, demonstrating the value of embedding language learning into practical, real-life tasks. Similarly, improvements in categorization (from 4.1 to 8.2) show that students developed the ability to organize vocabulary into thematic groups, a skill reinforced through project-based activities like creating thematic displays.

Finally, the criterion of retention of vocabulary experienced a significant gain, with scores increasing from 3.7 to 8.0. This demonstrates that the combination of hands-on interaction, collaborative learning, and revisiting vocabulary in various contexts helped students retain words more effectively over time.

Overall, the chart underscores the success of the intervention in improving vocabulary acquisition. The consistent growth across all criteria validates the use of realia and project-based methods as effective strategies for teaching vocabulary in a rural, resource-constrained setting. The findings suggest that contextualized and experiential approaches can address the unique challenges faced by students in such environments, fostering meaningful learning outcomes.

5. DISCUSIÓN

6. CONCLUSIÓN

The findings of this study clearly demonstrate that the integration of realia within a project-based learning framework is an effective strategy for enhancing vocabulary acquisition among fourth-grade students in a rural school setting. Through hands-on interactions with tangible objects, students were able to form meaningful connections between words and their real-world applications, which significantly improved their ability to recognize, pronounce, and spell new vocabulary. Additionally, the interactive and collaborative nature of project-based tasks allowed students to engage actively in the learning process, promoting deeper cognitive retention and practical application of vocabulary in contextual scenarios. These results emphasize the potential of realia-based methodologies as a valuable instructional approach in resource-limited environments where conventional materials are often unavailable.

This study underscores the critical role of student engagement and contextual relevance in achieving successful vocabulary acquisition outcomes. When learning is rooted in familiar and meaningful contexts, as facilitated by realia and project-based activities, students are more likely to retain vocabulary and demonstrate confidence in its practical use. Activities such as role-playing and thematic group tasks not only reinforced vocabulary retention but also encouraged collaboration and critical thinking skills, contributing to a holistic learning experience. Furthermore, by creating opportunities for students to apply newly acquired words in relevant, real-life scenarios, the intervention bridged the gap between theoretical knowledge and practical usage, thereby fostering a more dynamic and effective language-learning environment.

The results of this study indicate that realia-based project-based learning holds significant promise for broader implementation in similar rural and resource-constrained educational settings. However, its long-term success and scalability depend on addressing persistent challenges such as limited access to teaching resources, inadequate teacher training, and short intervention durations. Incorporating low-cost technological tools and extending the intervention timeline could further enhance the effectiveness and sustainability of this approach. Additionally, collaborative efforts between educators, policymakers, and community stakeholders will be essential to ensure that this methodology can be adapted and scaled appropriately, maximizing its impact on vocabulary acquisition and overall language development.

7. BIBLIOGRAFÍA

Alrajeh, T. S. (2021). Project-Based Learning to Enhance Pre-Service Teachers' Teaching Skills in Science Education. *Universal Journal of Educational Research*.

Folse, K. S. (2021). *Keys to teaching vocabulary to English language learners*. University of Michigan Press.

Gao, X., & Xu, S. (2022). Realia in vocabulary instruction: A practical tool for resource-limited classrooms. *Journal of Language Teaching Research*, 25(3), 245–259. https://doi.org/10.1016/j.jltr.2022.05.014

Hafdarani. (2021). Project-Based Learning of German Vocabulary and Speaking Skills. *Proceedings of the Fifth International Conference on Language, Literature, Culture, and Education (ICOLLITE 2021)*.

Imbaquingo, A., & Cárdenas, J. (2023). Project-Based Learning as a Methodology to Improve Reading and Comprehension Skills in the English Language. *Education Sciences*.

Kukulska-Hulme, A., Norris, L., & Donohue, J. (2020). Multimodal strategies for enhancing vocabulary learning: Lessons from cognitive theory. *Educational Technology Research and Development*, 68(4), 1097–1114. https://doi.org/10.1007/s11423-019-09745-0

Lai, C., Zhang, L. J., & Wang, Y. (2022). The role of teacher adaptability in promoting language learning in rural schools. *TESOL Quarterly*, 56(1), 152–176. https://doi.org/10.1002/tesq.3091

Lungu, I. (2022). Project-Based Learning as an Efficient Way of Studying English for Specific Purposes. *Logos Universality Mentality Education Novelty: Philosophy & Humanistic Sciences*.

Mayer, R. E. (2020). *Multimedia learning* (3rd ed.). Cambridge University Press.

Miolo, S., Pilongo, J. H., Sambouw, E. L., & Luwiti, S. R. N. (2023). Enhancing English Vocabulary Acquisition in Reading Instruction Through Multiple Intelligences Approach. *TRANS-KATA: Journal of Language, Literature, Culture and Education*.

Nation, I. S. P. (2021). *Learning vocabulary in another language* (2nd ed.). Cambridge University Press.

Owens, A., & Hite, R. (2020). Enhancing Student Communication Competencies in STEM Using Virtual Global Collaboration Project-Based Learning. *Research in Science & Technological Education*, 40, 76–102.

Rohmah, S. N., Waluya, S., Rochmad, R., & Wardono, W. (2020). Project-Based Learning to Improve Student Learning Activeness. *Journal of Physics: Conference Series, 1613*.

Schmitt, N. (2019). *Vocabulary in language teaching* (2nd ed.). Cambridge University Press.

Sudathip, P. (2020). University Students' English Vocabulary Acquisition Using Task-Based Learning. *Solid State Technology*, 1537–1547.

Tyas, N. K., & Fitriani, N. (2021). Enhancing Students' Speaking Skills by Making Video YouTube Tutorials as Project-Based Learning. *IDEAS: Journal on English Language Teaching and Learning, Linguistics and Literature*.

Wahbeh, D., Najjar, E. A., Sartawi, A. F., Abuzant, M., & Daher, W. M. (2021). The Role of Project-Based Language Learning in Developing Students' Life Skills. *Sustainability*.

Webb, S. (2020). Receptive and productive vocabulary size in L2 learners. *Studies in Second Language Acquisition*, 42(1), 129–153. https://doi.org/10.1017/S027226311900058X

Yunita, W., Zaim, M., Syarif, H., & Zainil, Y. (2022). The Effectiveness of Project-Based Learning through Vlogs to Improve Pre-Schoolers' Vocabulary Mastery. *Jurnal Obsesi: Jurnal Pendidikan Anak Usia Dini*.

UNEMI
UNIVERSIDAD ESTATAL DE MILAGRO

Revista Científica Multidisciplinar G-ner@ndo
ISSN: 2806-5905

30-01-2025

CERTIFICADO DE APROBACIÓN PARA PUBLICACIÓN

Por la presente se certifica que el artículo titulado: **ENHANCING VOCABULARY ACQUISITION THROUGH PROJECT-BASED LEARNING: A CASE STUDY OF 4TH GRADE STUDENTS IN RURAL AREAS OF MANABÍ PROVINCE IN ECUADOR.** Un trabajo de investigación de los autores/es: ***James Rodríguez Ortega, Fernando Patricio Riera Hermida,*** *siendo* su artículo revisado por Doble Par Ciego y Sistema de Doble Revisión Editorial, antes de ser publicados.

El artículo será publicado en la Revista Científica Multidisciplinar G-ner@ndo
ISSN: 2806-5905, en la edición Enero - junio, 2025, Volumen 6,
Número 1. Verificable en nuestra plataforma:
https://revista.gnerando.org/revista/index.php/RCMG

Revista Científica Multidisciplinar G-NER@NDO ISSN 2806-5905

Ing. Yadira Vergara, MSc.
EDITORA REVISTA G-NER@NDO
revistagnerando@gmail.com

Para consultas puede contactar directamente al editor de la revista:

revistagnerando@gmail.com
cel. 0994735813

Indexación
Latindex Google REDIB LivRe LatinREV

UNEMI

UNIVERSIDAD ESTATAL DE MILAGRO

¡Evolución académica!

@UNEMIEcuador