

## B-LEARNING IN THE ACQUISITION OF ENGLISH VOCABULARY

### B-Learning en la adquisición de vocabulario en inglés

### Aprendizagem-B na aquisição de vocabulário em inglês

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#### ABSTRACT

Introduction: The integration of information and communication technologies has transformed the teaching of English as a foreign language, giving rise to hybrid models such as blended learning (B-Learning). This study aims to analyze the role of the B-Learning model in English vocabulary acquisition, focusing on teachers' perceptions, curriculum planning, and the identification of pedagogical strategies and interactive activities supported by technology. Materials and methods: The research adopted a qualitative, descriptive-propositive approach with a non-experimental, cross-sectional design. Data were collected through a semi-structured interview with the course teacher, a document analysis of the A1 English program using a checklist, and a literature review supported by a theoretical analysis matrix. Results: The findings reveal a positive perception among teachers regarding B-Learning, highlighting its contribution to vocabulary practice and retention through the integration of digital platforms and multimedia resources. Discussion: The document analysis shows a coherent articulation between face-to-face and virtual activities, although limitations were identified in the systematic use of formative feedback. Furthermore, the theoretical analysis identified strategies such as mobile learning, multimedia resources, gamification, and flipped classroom activities as effective approaches for vocabulary acquisition. Conclusions: These results suggest that blended learning (B-Learning) is a relevant pedagogical model for enhancing English vocabulary development when supported by diverse strategies and structured feedback processes.

**Key words:** B-Learning, vocabulary acquisition, blended learning, English as a foreign language, educational technology.

#### RESUMEN

Introducción: La integración de las tecnologías de la información y la comunicación ha transformado la enseñanza del inglés como lengua extranjera, dando lugar a modelos híbridos como el aprendizaje combinado (B-Learning). Este estudio tiene como objetivo analizar el papel del modelo B-Learning en la adquisición de vocabulario en inglés, centrándose en la percepción del profesorado, la planificación curricular y la identificación de estrategias pedagógicas y actividades interactivas con apoyo tecnológico. Materiales y métodos: La investigación adoptó un enfoque cualitativo, descriptivo-propositivo con un diseño no experimental y transversal. Los datos se recopilaron mediante una entrevista semiestructurada con el profesor del curso, un análisis documental del programa de inglés A1 mediante una lista de cotejo y una revisión bibliográfica con apoyo en una matriz de análisis teórico. Resultados: Los hallazgos revelan una percepción positiva del profesorado sobre el B-Learning, destacando su contribución a la práctica y retención de vocabulario mediante la integración de plataformas digitales y recursos multimedia. Discusión: El análisis documental muestra una articulación coherente entre las actividades presenciales y virtuales, aunque se identificaron limitaciones en el uso sistemático de la retroalimentación formativa. Además, el análisis teórico permitió identificar estrategias como el aprendizaje móvil, los recursos multimedia, la gamificación y las actividades de clase invertida como enfoques eficaces para la adquisición de vocabulario. Conclusiones: Estos resultados sugieren que el aprendizaje digital (B-Learning) constituye un modelo pedagógico relevante para potenciar el desarrollo léxico en inglés cuando se apoya en estrategias

diversificadas y procesos de retroalimentación estructurados.

**Palabras clave:** B-Learning, adquisición de vocabulario, aprendizaje combinado, inglés como lengua extranjera, tecnología educativa.

## RESUMO

**Introdução:** A integração das tecnologias de informação e comunicação transformou o ensino de inglês como língua estrangeira, dando origem a modelos híbridos como o blended learning (B-Learning). Este estudo visa analisar o papel do modelo B-Learning na aquisição de vocabulário em inglês, com foco nas percepções dos professores, no planejamento curricular e na identificação de estratégias pedagógicas e atividades interativas apoiadas pela tecnologia. **Materiais e métodos:** A pesquisa adotou uma abordagem qualitativa, descritiva-propositiva, com delineamento transversal não experimental. Os dados foram coletados por meio de entrevista semiestruturada com o professor da disciplina, análise documental do programa de inglês A1 utilizando um checklist e revisão bibliográfica apoiada por uma matriz de análise teórica. **Resultados:** Os resultados revelam uma percepção positiva entre os professores em relação ao B-Learning, destacando sua contribuição para a prática e retenção de vocabulário por meio da integração de plataformas digitais e recursos multimídia. **Discussão:** A análise documental demonstra uma articulação coerente entre as atividades presenciais e virtuais, embora tenham sido identificadas limitações no uso sistemático do feedback formativo. Além disso, a análise teórica identificou estratégias como aprendizagem móvel, recursos multimídia, gamificação e atividades de sala de aula invertida como abordagens eficazes para a aquisição de vocabulário. **Conclusões:** Esses resultados sugerem que a aprendizagem híbrida (B-Learning) constitui um modelo pedagógico relevante para aprimorar o desenvolvimento do vocabulário em inglês quando apoiada por estratégias diversificadas e processos estruturados de feedback.

**Palavras-chave:** B-Learning, aquisição de vocabulário, aprendizagem híbrida, inglês como língua estrangeira, tecnologia educacional.

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## INTRODUCTION

In the era of globalization, the acquisition of linguistic competencies in the English language has become established as a fundamental necessity to expand employment and educational opportunities (Martínez Hernández, 2023). However, traditional teaching faces challenges that require the search for new pedagogical scenarios. In this context, the advancement of Information and Communication Technologies (ICT) has made it possible to diversify teaching strategies, moving away from the face-to-face classroom as the only possible learning environment (Calderón Rojas & Córdova Esparza, 2020).

One of the alternatives with the strongest theoretical grounding is Blended Learning (B-Learning) or semi-presential learning, defined as the reasoned integration of face-to-face learning experiences with online activities, combining the strengths of synchronous and asynchronous interaction (Martínez Hernández, 2023). This hybrid model, in addition to offering an optimal combination of technological and pedagogical resources, also promotes student autonomy and the personalization of Learning (Semanate-Quiñonez, Upegui-Valencia, & Upegui-Valencia, 2021).

Within the development of linguistic skills, vocabulary acquisition is a critical component that historically has not received sufficient attention, but is now recognized as the core element for understanding and consolidating the form, meaning, and use of words. Technological mediation in this process facilitates the use of diverse strategies, such as the use of various platforms and multimedia resources, which enhance lexical retention and allow students to assume a more active role (Marin-Marin, 2023).

Despite the theoretical benefits of B-Learning, the transition toward effective hybrid models following the global health crisis (COVID-19) has revealed that challenges still exist in the consolidation of tools and competencies among both teachers and students (Calderón Rojas & Córdova Esparza, 2020). For this reason, it becomes imperative to examine how this model impacts specific areas of language learning.

Based on this premise, the present study aims to analyze the role of B-Learning in the acquisition of English vocabulary as a foreign language, taking as a starting point teachers' perceptions regarding its application, the identification of pedagogical and technological elements included in curricular planning, and the exploration of strategies and technological tools that may facilitate vocabulary acquisition.

## MATERIALS AND METHODS

The present study adopted a qualitative approach, with a descriptive–propositional scope, a non-experimental design, and a cross-sectional nature. Creswell (2015) points out that qualitative research allows for the interpretation of meanings and educational processes from the perspective of the actors involved, being especially relevant in descriptive studies applied to the educational field, in this case, focused on a specific subject.

From an educational perspective, the study is oriented toward the understanding and analysis of the B-Learning model in the context of English language teaching, with the purpose of providing reflections and pedagogical proposals based on the review of the literature and the analysis of the educational context. In this sense, the Frascati Manual recognizes that research in education can contribute to the improvement of teaching–learning processes through the systematic analysis of educational practices, without necessarily implying direct intervention or the measurement of quantitative results (OCDE, 2015).

For data collection, qualitative techniques were employed to allow for a comprehensive understanding of the phenomenon under study:

**Semi-structured interview:** An interview guide was used with the course instructor in order to describe their perceptions and level of knowledge regarding the B-Learning model and its application in English vocabulary acquisition.

**Documentary analysis:** This technique was applied to the syllabus or curricular planning of the English course, with the purpose of identifying the incorporation of B-Learning model elements, contents, evaluation criteria, and rubrics. A checklist was used as the instrument, which facilitated the systematic analysis of curricular components.

**Literature review:** The bibliographic review technique was employed using a theoretical analysis matrix as the instrument. This matrix allowed for the organization, comparison, and systematization of contributions from scientific studies related to the B-Learning model and English vocabulary acquisition. This instrument facilitated the identification of recurrent pedagogical strategies and interactive activities reported in the literature, as well as their main contributions to lexical learning in English as a foreign language context.

Creswell (2015) emphasizes that the combined use of documentary analysis, interviews, and literature review strengthens the interpretive validity of qualitative studies by enabling the triangulation of sources and perspectives.

The study was conducted at the Universidad Laica Eloy Alfaro de Manabí (ULEAM), Chone Extension, specifically in the first semester of the Pedagogy of National and Foreign Languages program, considering that this stage represents a fundamental foundation for students to effectively build their lexical competence.

## **RESULTS**

### **Teacher Perception**

The semi-structured interview was divided into three categories of analysis in order to achieve a deeper understanding of each academic aspect, including its application and management, vocabulary acquisition in blended learning environments, and student evaluation and feedback provided by the teacher.

The results of the interview reveal a positive perception on the part of the teacher regarding the use of the B-Learning model in English language teaching, especially in relation to vocabulary practice and retention. The teacher states that this modality favors learning because it allows content to be reinforced both in face-to-face and virtual environments, generating greater opportunities for lexical exposure and practice.

Regarding technological integration, the use of the digital platform associated with the textbook stands out as the main resource for developing classroom activities and autonomous work. This tool allows students to practice vocabulary through structured exercises, which contributes to the consolidation of acquired knowledge. Likewise, the use of multimedia resources such as audio, videos, and interactive activities is valued as an element that facilitates vocabulary comprehension and retention by stimulating constant practice of linguistic skills. Another relevant aspect is that the teacher does not identify significant difficulties in the incorporation of technology, which reflects a favorable experience in the implementation of the B-Learning model.

In terms of vocabulary acquisition and practice, the teacher indicates that the virtual environment plays a fundamental role in the development of students' autonomous work, allowing them to reinforce and

consolidate what has been learned in class. The most effective activities for vocabulary application are practical exercises, as they facilitate the use of lexical items in concrete situations. Similarly, assignments delivered through the digital platform contribute to vocabulary acquisition and strengthening, since they promote continuous practice outside the classroom.

With respect to student assessment, written tests are the main instrument used to measure vocabulary acquisition in English, both in face-to-face activities and those mediated by technology. Feedback is provided continuously through application exercises in each class, allowing the correction and reinforcement of appropriate vocabulary use. Improvements in learning are mainly evidenced in students' performance during practical activities, where a greater command of the taught vocabulary is observed. When difficulties are detected, the teacher resorts to content reinforcement, which contributes to strengthening the vocabulary acquisition process.

### **Documentary Analysis of the Curricular Planning** **Category 1: Technological Integration for Vocabulary Development**

The syllabus of the English A1 course shows a clear integration of technological tools to support vocabulary teaching. In all units, the use of computers and the digital textbook platform is specified, confirming that the planning incorporates technology as a means for lexical learning. Likewise, although videos or audio resources are not explicitly detailed, the use of the textbook platform implies access to multimedia and interactive resources inherent to digital English language teaching materials, which contributes to vocabulary reinforcement.

Technological activities are aligned with the learning objectives, as all units include practice in “grammar, vocabulary and communication,” indicating that work on the platform and with digital resources is directly linked to lexical development. In addition, these resources favor vocabulary practice, memorization, and pronunciation, since digital environments allow repetition, constant exposure to linguistic input, and guided practice essential elements for vocabulary acquisition within a B-Learning model.

#### Category 2: Vocabulary Practice and Application in Face-to-Face and Virtual Environments

The syllabus explicitly proposes face-to-face activities aimed at vocabulary practice, as each unit includes “grammar, vocabulary and communication practice” sessions conducted in the classroom. This ensures that vocabulary is not addressed in isolation but integrated into communicative activities.

Likewise, the planning includes virtual and autonomous learning activities, such as reading level-one books and using the digital platform, which reinforce the vocabulary covered in class. This combination demonstrates a coherent sequence between face-to-face and virtual components, where the classroom introduces and guides content, and the digital environment allows for reinforcement and consolidation.

The thematic units (family, shopping, routines, free time, health, among others) promote the contextualized use of vocabulary in real and communicative situations, which favors meaningful lexical acquisition. This aspect is consistent with the B-Learning approach, which seeks for students not only to memorize words but also to use them in functional contexts through articulated face-to-face and virtual tasks.

### **Category 3: Evaluation and Results of Vocabulary Acquisition**

In relation to assessment, the syllabus includes specific instruments to measure vocabulary mastery, such as written tests and rubrics, which allow the evaluation of students' linguistic performance within academic and communicative activities. This provides formal evidence of students' lexical acquisition level.

However, systematic feedback mechanisms—either face-to-face or virtual—aimed at improving vocabulary use are not explicitly identified. Although rubrics and evaluations may imply some type of implicit feedback, the planning does not detail clear formative feedback processes to guide students regarding errors, progress, or improvement strategies.

From the perspective of this study, this finding suggests that although the B-Learning model is well structured in terms of resources, activities, and assessment, there is a weakness in the feedback component, which could limit the potential of hybrid learning to optimize vocabulary acquisition. Feedback is a key element in B-Learning environments, as it connects autonomous work with teacher guidance and allows for the correction and consolidation of appropriate lexical use.

## **Theoretical Analysis of the B-Learning Model in English Vocabulary Acquisition**

Table 1. Theoretical Analysis Matrix

Author (Year)	Title	Technological Tool / Strategy	Main Contribution to Vocabulary Learning
Moreno Gracia (2021)	B-Learning model mediated by the Lingodeer application for strengthening English vocabulary	Mobile application (Lingodeer)	Demonstrates that M-Learning generates a dynamic environment that strengthens motivation and meaningful learning.
Moreno Cuellar (2013)	Multimedia resources and mnemonics for English vocabulary acquisition	Multimedia resources and mnemonics	Establishes that the combination of visual and auditory stimuli with memory techniques facilitates lexical retention.
Escobar Garzón (2022)	Metacognitive scaffolding to support English vocabulary learning in a B-Learning environment	Metacognitive scaffolding in virtual environments	Highlights the importance of students monitoring their own learning process to ensure retention of basic vocabulary.
Polakova y Klimova (2022)	Vocabulary Mobile Learning Application in Blended English Language Learning	Mobile devices and apps	Explores the natural integration of apps into students' daily lives as a bridge for learning in EFL contexts.
Albatti (2023)	Blended Learning in English Language Teaching and Learning: A Focused Study on a Reading and Vocabulary Building Course	B-Learning platforms (24/7 access)	Emphasizes the flexibility of the model in allowing self-paced study and improving the quality of teacher–student interaction
Rattanasak (2023)	The interplay between the Internet-based reading resources and learner-to-learner interactions in blended language learning	Internet reading resources and social networks	Encourages peer interaction through discussion of topics of interest, expanding contextualized vocabulary
Bravo Bravo y Alves (2024)	Curricular adaptation for increasing English vocabulary	Technological curricular adaptation	Indicates that tools are only effective if there is a solid and adapted curricular foundation from early levels.
Jiménez Carrillo (2024)	Flipped classroom as a proposal for English learning	Flipped classroom	Confirms, through an experimental design, that flipping the classroom significantly improves linguistic performance.
Fierro López et al. (2025)	Gamification and English vocabulary: playful innovation to transform learning	Gamification (playful innovation)	Evaluates the effectiveness of game elements in transforming vocabulary learning into a motivating experience.
Pavón et al. (2025)	Analysis of the impact of project-based learning on communicative competence in English	Project-Based Learning (PBL)	Proposes the use of technology to develop communicative competence and productive skills (speaking/vocabulary).

## DISCUSSION

The analysis of the results obtained in the present study allows us to confirm that the B-Learning model is an effective strategy for English vocabulary acquisition, aligning with current pedagogical trends that integrate face-to-face instruction with virtual learning environments.

The teacher's positive perception of B-Learning is consistent with the findings of Jiménez Carrillo (2024), who argues that hybrid models such as the flipped classroom significantly improve linguistic performance. In this study, the use of the digital platform associated with the textbook as a central resource not only facilitates autonomous practice but also ensures constant exposure to linguistic input. This finding supports the position of Albatti (2023), who highlights that the broad availability of materials on virtual platforms allows students to progress at their own pace, overcoming the temporal limitations of the physical classroom.

Both the interview and the documentary analysis revealed that the use of multimedia resources (audio and video) plays a key role in lexical consolidation. This result is closely related to the work of Moreno Cuellar (2013), who states that the combination of visual and auditory stimuli with mnemonic techniques facilitates long-term memory retention. However, while international literature explores emerging tools such as gamification Fierro López et al., (2025) and specific M-Learning applications (Moreno Gracia, (2021); Polakova y Klimova, (2022)), the institutional context examined in this study shows a marked dependence on the textbook's institutional digital platform. This suggests an opportunity to diversify technological strategies and incorporate playful elements that further enhance student motivation.

The documentary analysis revealed that the English A1 syllabus integrates vocabulary in a contextualized manner, addressing topics that students apply in their daily lives. This approach is consistent with the perspective of Pavón et al. (2025) on project-based learning as a means to develop communicative competence. Nevertheless, it is important to note that the effectiveness of these technological tools is conditioned by pedagogical structure. As warned by Bravo Bravo y Alves (2020), vocabulary growth is only sustainable if there is solid curricular adaptation—an aspect that is fulfilled in this study through the alignment of digital activities with the learning objectives of each unit.

A critical finding of this research was the weakness in systematic feedback mechanisms within curricular planning. Although the teacher provides corrections during class sessions, the absence of detailed formative feedback in digital environments could limit the development of lexical competence. This gap becomes particularly relevant when contrasted with Escobar Garzón (2022), who emphasizes that “metacognitive scaffolding” is essential for students to monitor their own learning processes. Without clear feedback that connects autonomous work with the results of written assessments, the B-Learning model risks becoming a task repository rather than a space for continuous pedagogical dialogue.

Finally, the results related to the use of pedagogical strategies such as the flipped classroom and gamification, as well as technological tools including multimedia resources and mobile applications, align with the findings of Bravo Bravo et. al (2025). These authors identify that hybrid environments foster autonomy, personalization, and the integral development of linguistic skills, including those closely linked to vocabulary, such as reading, writing, and oral production.

## CONCLUSIONS

The use of the B-Learning model in the context of English language learning demonstrates significant potential for fostering lexical development. The articulation of face-to-face activities and virtual environments facilitates exposure to, practice of, and appropriate and contextualized use of vocabulary, allowing for the strengthening of comprehension, retention, and communicative application. When properly implemented, B-Learning not only functions as a technological approach aligned with contemporary educational trends, but also substantially enhances the acquisition of English vocabulary as a foreign language.

The results of the present study reveal that the teacher possesses functional knowledge and a positive perception of B-Learning, recognizing it as a model that effectively integrates blended environments to promote vocabulary practice and retention in English. The consistent use of the textbook’s digital platform, as well as multimedia resources, demonstrates an understanding of the operational logic of the hybrid model and its application to reinforce autonomous learning and lexical exposure. This indicates that the teacher not only understands the model but also applies it coherently in pedagogical practice.

The incorporation of the textbook’s digital platform, computers, and grammar and vocabulary activities across all units reflects planning that articulates technological and pedagogical components. Likewise, the inclusion of both face-to-face and virtual activities ensures a coherent sequence between the introduction, practice, and consolidation of vocabulary, which supports memorization, pronunciation, and the contextualized use of lexis in real communicative situations. These elements reflect an appropriate implementation of the B-Learning approach in vocabulary development.

Within the context presented, the strategies analyzed are primarily reflected in the use of the textbook platform, autonomous reading, and interactive exercises that promote continuous vocabulary practice. However, when contrasted with the reviewed literature, the need emerges to strengthen the model through future research by incorporating more diversified strategies such as gamification, the flipped classroom, and project-based learning as future lines of development. These approaches could further enhance motivation, active use of vocabulary, and learner autonomy.

## REFERENCES

Creswell, J. W. (2015). *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches* (3 ed.). SAGE Publications. Retrieved from [https://www.ucg.ac.me/skladiste/blog\\_609332/objava\\_105202/fajlovi/Creswell.pdf](https://www.ucg.ac.me/skladiste/blog_609332/objava_105202/fajlovi/Creswell.pdf)

Albatti, H. (2023). *Blended Learning in English Language Teaching and Learning: A Focused Study on a Reading and Vocabulary Building Course*. *World Journal of English Language*. Retrieved from <https://doi.org/10.5430/wjel.v13n5p121>

Bravo Bravo, E. R., Verduga Minaya, E. J., & Zambrano Gallardo, G. E. (2025). B-Learning in the development of English language skills: a systematic review. *The 17th International Conference on Educational Technology and Computers* (pp. 696-699). Barcelona: IEEE.

Bravo Bravo, I., & Alves, M. P. (2020). Adecuación Curricular para Incremento del Vocabulario del Idioma Inglés. *Revista Tecnológica- Espol*, 32(2). Retrieved from <http://www.rte.espol.edu.ec/index.php/tecnologica/rte/article/view/781>

Calderón Rojas, B. M., & Córdova Esparza, D. M. (2020). B-learning en la enseñanza del idioma inglés como segunda lengua: una revisión sistemática de la literatura. *EDUTEC. Revista Electrónica de Tecnología Educativa*, 105-121. doi:<https://doi.org/10.21556/edutec.2020.73.1745>

Escobar Garzón, D. P. (2022). Andamiaje metacognitivo para apoyar el aprendizaje de vocabulario en inglés en un ambiente B-Learning.

Fierro López, D., Lara Velarde, A., Guamán Parra, M., & Narvárez Vielma, C. (2025). Gamificación y vocabulario en inglés: innovación lúdica para transformar el aprendizaje. *Revista de Investigación de Ciencias Administrativas y Sociales*. doi:<https://doi.org/10.33996/revistaneque.v8i21.197>

Jiménez Carrillo, J. C. (2024). La clase invertida como propuesta para el aprendizaje del inglés. *Universidad, Ciencia y Tecnología*, 58-66. doi:<https://doi.org/10.47460/uct.v28iSpecial.772>

Marin-Marin, A. (2023). Estrategias de aprendizaje de vocabulario en inglés mediadas por tecnología en contextos universitarios. *CPU-e, Revista de Investigación Educativa*, 54-84. doi:10.25009/cpue.v0i36.2835

Martínez Hernández, R. (2023). Blended Learning en el aprendizaje de idiomas: Una revisión de la literatura académica literaria académica. *Estudios y Perspectivas*. doi:<https://doi.org/10.61384/r.c.a..v3i2.36>

Moreno Cuellar, J. A. (2013). Recursos multimedia y mnemotecnia para la adquisición de vocabulario en inglés. *Revista Virtual Universidad Católica del Norte*. Retrieved from <http://www.redalyc.org/articulo.oa?id=194225730009>

Moreno Gracia, J. H. (2021). Modelo B-Learning mediado por la aplicación Lingodeer para el fortalecimiento del vocabulario en inglés. UDES.

OCDE. (2015). *Manual de Frascati 2015: Guía para la recopilación y presentación de información sobre la investigación y el desarrollo experimental*. OCDE.

Pavón, E. S., Aguilar Paredes, G. I., Quinteros Pesantez, E. S., Cevallos Lavanda, H. S., Ruiz Quizhpe, P. L., Monserrate Miranda, J. A., . . . Monserrate Miranda, J. A. (2025). Análisis del impacto del aprendizaje basado en proyectos en la competencia comunicativa en inglés. *South Florida Journal of Development*, 01-15. doi:10.46932/sfjdv6n5-036

Polakova, P., & Klimova, B. (2022). Vocabulary Mobile Learning Application in Blended English Language Learning. *Frontiers in Psychology*. doi:10.3389/fpsyg.2022.869055

Semanate-Quiñonez, H., Upegui-Valencia, A., & Upequi-Valencia, M. (2021). Blended learning, avances y tendencias en la educación superior: una aproximación a la literatura. *Informador Técnico*, 86(1), 46-68. doi:<https://doi.org/10.23850/22565035.3705>

### **Conflict of interest**

The authors declare that they have no conflicts of interest.

### **Declaration of responsibility of authorship**

We, the authors of the aforementioned manuscript, DECLARE that we have directly contributed to its intellectual content, as well as to the genesis and analysis of its data; therefore, we are able to take public responsibility for it and accept that their names appear on the list of authors in the order indicated. Furthermore, we have complied with the ethical requirements of the aforementioned publication, having consulted the Declaration of Ethics and Publication Malpractice.

Katheryn Nayely Loor Heredia, Genny Elizabeth Zambrano Gallardo y Javier Antonio Zambrano Mero: Literature review and article writing process.