# A Systemic Literature Review on Ecological Approach in Language Teaching: State of the Art and Future Direction

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| ARTICLE INFO | ABSTRACT |
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| | An ecological perspective on language acquisition emphasizes the complexities of interactions among students, teachers, learning resources, and the learning environment. Teachers can design responsive and inclusive learning practices by paying attention to the diversity of their students and learning situations, allowing each student to develop to their full potential. This study explores how to use this method to provide more contextual and relevant learning experiences for students. The use of an ecological approach in language learning is systematically reviewed in this work using a comprehensive literature review methodology. The review process is methodologically designed as a result of these processes adhering to a clear and transparent framework. The 35 articles found are then selected by inclusion and exclusion categories to produce 7 articles for analysis according to the literature review focusing on language learning both internally and externally. Key findings from the selected studies are examined to acquire a thorough grasp of the impact of ecological techniques in language learning environments. The findings of the analysis demonstrate that an ecological approach to language acquisition has the potential to significantly improve students' learning experiences by using an inclusive, responsive, and holistic approach.<br> |
| **Keywords** | Ecological approach; language learning; Systemic literature review |

## مستخلص البحث

يؤكد المنظور البيئي لاكتساب اللغة على تعقيدات التفاعلات بين الطلاب والمعلمين وموارد التعلم وبيئة التعلم. يمكن للمعلمين تصميم ممارسات تعليمية متجاوبة وشاملة من خلال الاهتمام بتنوع طلابهم ومواقف التعلم، مما يسمح لكل طالب بالتطور إلى أقصى إمكاناته. تستكشف هذه الدراسة كيفية استخدام هذه الطريقة لتوفير تجارب تعليمية أكثر سياقية وذات صلة للطلاب. تمت مراجعة استخدام النهج البيئي في تعلم اللغة بشكل منهجي في هذا العمل باستخدام منهجية مراجعة الأدبيات الشاملة. تم تصميم عملية المراجعة بشكل منهجي نتيجة لهذه العمليات التي تلتزم بإطار واضح وشفاف. ثم يتم اختيار المقالات الـ 35 الموجودة حسب فئات الإدراج والاستبعاد لإنتاج 7 مقالات للتحليل وفقًا لمراجعة الأدبيات التي تركز على تعلم اللغة داخليًا وخارجيًا. يتم فحص النتائج الرئيسية للدراسات المختارة لاكتساب فهم شامل لتأثير التقنيات البيئية في بيئات تعلم اللغة. توضح نتائج التحليل أن النهج البيئي لاكتساب اللغة لديه القدرة على تحسين تجارب التعلم للطلاب بشكل كبير من خلال استخدام نهج شامل ومتجاوب وشامل

| كلمات أساسية | : | المنهج البيئي، تعلم اللغة، المراجعة المنهجية للأدبيات |
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## INTRODUCTION

Ecological approaches to language learning have become an increasingly popular topic in recent years. This is because the ecological perspective offers a broad conceptual framework for understanding the complexity of language learning (Adolph, 2020), taking into account the dynamic interactions between individuals, the environment and culture(Brymer & Davids, 2013). In particular, the ecological approach emphasizes the importance of context in understanding language acquisition and use, and encourages us to see language learning as a process embedded in wider social and cultural networks(Shi, 2005). The first time the ecological approach was applied to language learning was in the 1990s, and since then it has attracted significant attention from researchers and practitioners in this field.

This approach was first introduced by Van lier in 1997(Van Lier, 2012), who proposed the concept of ecological linguistics which emphasizes the importance of social and cultural context in language learning. Since then, various studies have been conducted to explore the application of ecological approaches in language learning, focusing on various aspects such as learner identity, classroom interactions, the role of technology, and language learning in multilingual contexts.

In addition, the ecological approach also highlights the importance of paying attention to linguistic and cultural diversity in language teaching (Kramsch, 2008). This social fact confirms that an inclusive and respectful approach to diversity can enrich students' learning experiences and build a deeper understanding of the complexity of language and culture. Thus, teachers need to consider how to design learning strategies that take into account linguistic and cultural variations in their classrooms. Overall, the ecological approach in language learning shows that language education cannot be separated from the social reality that surrounds it (Lemke, 2002). Recognizing and understanding the complex interactions between individuals, environments, and other social factors is key to creating meaningful, relevant, and effective language learning experiences for students in ever-changing contexts (Wuryaningrum, 2022).

Moreover, an ecological approach to language learning is not only about understanding linguistic aspects (Kramsch & Vork Steffensen, 2008), but also about exploring the social, cultural and technological dimensions that shape language use. This underlines the importance of approaching language learning holistically (Mujahidah, 2015)(Yasida, 2020), which considers the various external factors that influence and shape the way students learn and use language in

everyday life. Thus, the ecological approach provides a strong foundation for creating language learning experiences that are relevant, sustainable, and in line with the demands of the times (Barlian & Yunhendri Danhas, 2022).

The ecological approach to language learning, first proposed by CH van Lier, has been the subject of extensive and in-depth research (Lier, 2010). Previous studies have often highlighted how the physical and social environment influences the language learning process, focusing on the complex interactions between the individual, language, and context. This initial research confirms the importance of understanding language in its broader social and cultural context, and how these external factors influence the depth and success of language learning. These studies have provided a strong theoretical foundation for applying ecological principles in language teaching, enriching understanding of the complexity of the relationship between the individual and the environment in language learning contexts (Naveh & Lieberman, 2013).

Van Lier's thinking about an ecological approach in language learning has inspired various research by experts in various related fields. For example, Ian Tudor (Tudor, 2003) have researched the application of this approach in the context of second language teaching, with an emphasis on how ecological factors influence teaching-learning interactions. Their research results show that integrating ecological principles in the curriculum can increase student motivation and engagement, as well as enrich their learning experience.

In the field of psycholinguistics , Aron Meko Mbete (Mbete, 2017) has studied the impact of ecological factors such as multilingualism and cognitive experience on language development in children. Her research highlights how complex language environments can influence language skills and cognitive processes in individuals. The findings provide a deeper understanding of the relationship between the language environment and cognitive development, as well as its implications in the context of language learning.

Additionally, research by Sune Vork Steffensen (Kramsch & Vork Steffensen, 2008) in the field of applied linguistics has explored how ecological approaches can be applied in second language teaching to strengthen connections between theory and practice. The results of his research show that this approach can improve students' understanding of language and facilitate the development of better communication skills in real-life contexts. Thus, these studies make a valuable contribution in expanding understanding of the applications and benefits of ecological approaches in language learning.

Research by Edith Camilla Cassell (Roberts, 2009) also reflects an in-depth exploration of ecological approaches in language learning contexts. Poudel dkk (Poudel & Baral, 2021) examines how the use of technology in language learning can be viewed from an ecological perspective, with a focus on how the integration

of technology affects social interactions and student learning. The results of his research provide important insights into how the use of technology can be aligned with ecological principles to create supportive and enriching learning environments.
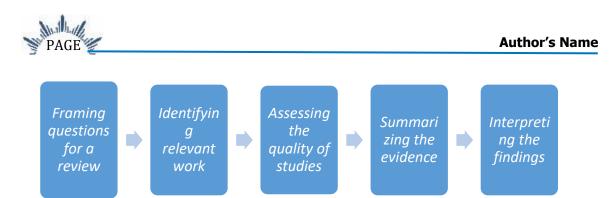
These studies show that an ecological approach to language learning has a significant impact in enriching understanding of the complexity of the relationship between individuals, language and the environment. Through their research, scholars have provided a solid foundation for integrating ecological principles in language teaching practices that can increase student engagement, enrich learning experiences, and promote a deeper understanding of language in broader social and cultural contexts. Thus, the results of this research provide a valuable contribution in developing innovative and inclusive approaches to language learning that are relevant to the demands of the times and students' needs.

The aim of this systematic literature review is to map the development of research on ecological approaches to language learning, as well as to identify areas that require further attention in the future. However, despite increasing interest in ecological approaches, there are still several gaps in the existing literature. One of them is the lack of research that specifically explores the application of the ecological approach in language learning contexts by focusing on language acquisition practices in the classroom.

The focus of previous research is different from the research that we will describe here, first, this research focuses on the study of ecological approaches in the latest developments in the language learning process, especially studies in the last five years, second, researchers use a structured and systematic system to see the development of ecological approach research in language learning.

## METHOD

This research uses a systemic literature review method as a systematic review. The use of this strategy to guide inclusion and exclusion criteria is developed to produce objective and comprehensive findings. This method is considered research that can be replicated and updated, with an explicit and transparent process. In this research, articles were searched via the Publish or Perish page to classify themes related to ecological approaches in language learning. The review stages follow the five steps proposed by Khans (Khan et al., 2003) to ensure that the systematic review process is carried out in a structured and methodological manner and allows for in-depth and comprehensive analysis of relevant research.

| Framing questions for a review | → | Identifying relevant work | → | Assessing the quality of studies | → | Summarizing the evidence | → | Interpreting the findings |
|---|---|---|---|---|---|---|---|---|

1. Framing question for review

Previously, the ecological approach was widely researched in studies other than language learning, but in recent years, many language learning studies have begun to use an ecological approach, but the review is limited only to aspects of how the ecological approach can improve language learning. Therefore, this research aims to review articles published in the 2018-2024 period and this research uses a guide question, namely; how to categorize ecological approach literature in language learning.

2. Identifying relevant work

As the second step in the research, the researcher has selected relevant works that provide important and useful information according to the aim of the review. As a starting point, researchers have collected 35 relevant articles through searches in electronic databases. To reduce potential bias, the search was expanded by checking the reference lists listed in several selected articles. Because research on the ecological approach in language learning is still very limited, the context of the ecological approach in increasing motivation for learning is also included in the categorization. This review includes reputable national and international journal articles, proceedings and books obtained from electronic databases such as publish or perish by categorizing them in the search process such as Google Scholar, Scopus etc.

3. Assessing the quality of studies

To ensure the quality of this review, the articles searched were analysed based on inclusion and exclusion criteria taken and adapted from systematic reviews conducted. The articles selected for this review were selected after ensuring that they met the inclusion and exclusion criteria as listed in the table below.

Table 1

| criteria | include | exclude |
|---|---|---|
| Study focus | Language learning | Non-language learning |
| Field of study | Applied in education | Applied in non-education |
| Language skills | Language skills | Non language skills |
| Year of publication | Published in 2018-2024 | Published in 2018-2024 |

| Study context | Language learners | Non language learners |
|---|---|---|

4. Summarizing the evidence

The database used to search for related articles is publish or perish with the keywords used "ecological approach in language learning" and using the categorization of Google Scholar, Scopus and Web of Science. Of the 1000 articles on Google Scholar which were limited to the search page, categorized again according to studies that focused on language learning, 370 articles were found that were suitable, then the search was continued on the Scopus feature which was only limited to 20 articles and on the WoS page, 30 articles were found. Finally, a total of 35 articles were collected after considering the include and exclude criteria. Of the 35 articles, only 7 articles were most suitable for analysis according to the literature review focusing on language learning both internally and externally.

5. Interpreting the findings

Analysis of the research findings used a mixed methods systematic review approach, which combined the results and generated relevant themes to answer the research questions posed. Table 2 presents an analysis of the database and research methods used in the compiled study. From this table, it can be seen that the majority of studies apply mixed methods, followed by quantitative and qualitative methods. Especially in the context of educational level, most research was conducted at higher education institutions, while a small portion was directed at the school level.

Table 2

| data | Qualitative method | Quantitative method | Mixed method | total |
|---|---|---|---|---|
| Google scholar | 4 | 3 | 2 | 9 |
| Scopus | 1 | 2 | 0 | 3 |
| WoS | 1 | 1 | 0 | 2 |
| total | | | | 14 |

## RESULTS & DISCUSSION

Data was obtained from the results of reviewing articles that met the inclusion criteria, some of the data was mapped and the following results were obtained:

| No | Article | Participants and context | Results |
|----|---------|--------------------------|---------|
| 1 | An Ecological Perspectives on College Students ' Achievement Emotions in Foreign Language Learning (Wang, 2023) | This article is a conceptual review of students' achievement emotions in foreign language learning from an ecological perspective without empirical studies. Gang Wang from Zhejiang Yuexiu University, China, analyzed existing literature and concepts to highlight ways to ecologically enhance the emotion of achievement in foreign language learning. | The emotion of achievement is an important factor in students' foreign language learning. In Chinese higher education, the approach to foreign language education focuses more on cognitive rather than emotional aspects, resulting in a lack of attention to students' emotions of achievement. In this context, the application of an ecological approach in foreign language learning is expected to strengthen emotions of achievement and improve students' independent learning abilities. |
| 2 | Iranian English Language Learners ' Attitude towards their Accent in English Language : An Ecological Approach (Rajablou & Shirvan, 2017) | Participants in this study involved 157 people, with 75% women and 24% men, coming from universities and private institutes in Iran. The majority are English majors, with an age range of 14-50 years, and the majority have an advanced level in English. All speak Persian as a first language. Sixty participants (38 women, 22 men) were involved in the interview sessions, showing diversity in educational background and English language proficiency. | This study explores the attitudes of Iranian English learners towards their accent in English with an ecological approach. The theoretical framework is based on the concepts of World Englishers, English as an International Language, and English as a Lingua Franca. Research questions focused on attitudes toward accents, gender differences, and the relationship of age to attitudes. The questionnaire assesses literacy, clarity, receptivity, affection, and behavior. |
| 3 | Ecological Approach to | Article by Vishnu S Rai from Tribhuvan | In teaching English in Nepal, there is a need to emphasize |

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|---|---|---|
| the Second Language (L2) Teaching and Nepali English Teachers (Rai, 2021) | University, Nepal, discusses English language teaching in Nepal without field research with specific participants. The primary focus is on concepts, theories, and recommendations based on general observations about English language teaching in Nepal, without data from specific research participants. | practice over theory, education about ecological approaches, a shift in teaching focus, understanding variations of English, and the elimination of the pass-fail evaluation system. An ecological approach must take into account local context and linguistic diversity. |

## Application of an ecological approach

In general, most existing research suggests that ecological approaches can offer valuable insights for understanding language learning as a complex (Button et al., 2020) and dynamic phenomenon (Hiver & AL-HOORIE, 2016). The research shows the importance of considering contextual factors, such as socio-cultural background, learner identity, and the role of technology, in understanding the language learning process.

One important finding is that an ecological approach can help identify and promote more holistic and learner-centered language learning practices (Deakin Crick et al., 2007)(Chikwanda, 2020). The ecological approach encourages educators to view language learning as part of a broader ecosystem, which includes various elements such as formal, informal learning, and the learner's life experiences.

In addition, several studies also show that an ecological approach can help facilitate more collaborative and participatory language learning, by actively involving students in their own learning process. Collaborative and participatory language learning is important because it can help students develop skills and confidence in using the target language.

The application of an ecological approach in language learning places emphasis on interactions between students, teachers, learning materials, and the learning environment. In this context, the learning environment is viewed as a complex ecosystem in which factors such as cultural, social, and psychological interact to shape students' learning experiences. By considering these aspects,

language learning becomes more contextual and relevant for students, allowing them to relate knowledge to their real experiences.

An ecological approach also encourages the adoption of learning strategies that are responsive to the diversity of students and their learning contexts. Teachers who implement this approach pay attention to students' individual differences, their learning needs, and their cultural or social backgrounds. By building a bridge between students' learning context and subject matter, language learning can become more inclusive and provide opportunities for all students to develop optimally.

The ecological approach encourages strong collaboration and interaction between students (Bestelmeyer et al., 2015), allowing them to learn from each other and build knowledge together through discussions, group projects, and other collaborative activities. By integrating these social aspects into the learning process, students not only improve their understanding of the language but also strengthen the social, communication, and collaboration skills that are essential in everyday life and in the future workplace.

## Supports collaborative learning

Collaborative learning is an approach where students work together in groups to achieve certain learning goals. In this context, constructivism theory is very relevant, which emphasizes that students actively construct their knowledge through social interaction and collaboration. By engaging students in discussions, joint projects, and group problem solving, collaborative learning allows them to learn from each other, expand their understanding, and develop social skills such as cooperation and communication.

Collaboration in learning can also be strengthened by Vygotsky's Proximal Zone theory (Saksono et al., 2023), which emphasizes a framework in which students can develop optimally with help from others. Through abortation, students can expand their development zone by receiving support and guidance from their peers. This process helps in building deeper understanding and skill development through structured and supportive social interactions.

The implementation of collaborative learning strategies also strengthens the concept of learning through social experiences, which is in accordance with Bandura's social learning theory. In a collaborative environment, students can observe, participate, and get feedback from their peers, which can improve their motivation, self-confidence, and learning outcomes. Through these social interactions, students can form a deeper understanding of the subject matter and develop skills that are relevant for real life.

## CONCLUSIONS

Ecological approaches in language teaching have great potential to increase learning effectiveness. Through applying ecological concepts in the context of language teaching, teachers can pay more attention to the complex interactions between students, the learning environment, and other external factors that influence the learning process. By paying attention to the wider learning ecosystem, learning becomes more holistic, adaptive and responsive to individual student needs. This approach can also help promote learning experiences that are more interesting, relevant and connected to the real world, as well as strengthening students' social and collaborative skills in learning.

In implementing an ecological approach to language teaching, it is important to take into account student diversity, local context, and interactions between various environmental factors. By understanding that learning does not occur in isolation but is influenced by the complex dynamics of the broader learning environment, teachers can create more meaningful and relevant learning experiences for students. Through this approach, language learning becomes not just an academic process, but also functions as a holistic experience that enriches students socially, cognitively, and emotionally, preparing them to face challenges in an increasingly complex and connected world. For further research can try to classify which benefits arise from creativity in the form of ideas, and which ones come from the process so that the output or outcome can be mapped and predicted.

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