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A systematic literature review of factors influencing English learning among Chinese undergraduates: An ecological systems theory

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Abstract

With the increasing significance of English proficiency in academic and professional fields, educators are looking for innovative language learning methods in the English learning ecosystem and trying to incorporate ecosystem theory into English learning in higher education. This paper aims to identify and analyze the various ecological elements that affect the English learning outcomes of Chinese university students by synthesizing existing research. This review adheres to the 2020 Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines. Articles from 2003 to 2023 were retrieved from Google Scholar and China National Knowledge Infrastructure (CNKI). A total of 20 relevant articles were extracted and analyzed to explore the interactions between micro, meso, exo, and macro-level factors influencing the English learning abilities of Chinese university students. Through the in-depth analysis of the 20 selected articles, the study has comprehensively discussed the influencing factors of English learning abilities among Chinese university students. Based on the research findings, the study concludes with insights for educators and offers recommendations for further research on enhancing the English learning abilities of Chinese university students under the guidance of ecosystem theory. The insights provided can help educators design more effective English teaching strategies. The recommendations for further research can guide future studies to better improve the English learning environment and outcomes for Chinese university students in the context of ecosystem theory.

Keywords: Chinese undergraduates, ecological systems theory, English learning, influencing factors.

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1. Introduction

As an international language, English is of indisputable importance in today's globalized world. In China, the education of the English language has always been widely valued because it is considered to be the key to connecting with the international community, obtaining international career opportunities, and improving comprehensive competitiveness. There are around 400 million English learners in China, which is even greater than the total population of the United States [1]. Most of them are college students who make arduous efforts in the field of English learning every year. However, English learning for different students is often influenced by many factors, which may have a profound impact on their English language abilities and academic achievements. In China, great attention is paid to English language learning, but there is a typical English learning problem that exists there. Although people work diligently in English learning in China, only a few English learners can competently master the foreign language [2]. This phenomenon is especially obvious for undergraduates. Based on the five-level self-assessment scale of China's Standards of English Language Ability (CSE), Gu and Liu [3] investigated the English abilities of 1,815 non-English major undergraduates from different provinces in China (Beijing, Jilin, Xinjiang, etc.) [3]. It was found that non-English major undergraduates' English abilities only reach the average level described in the CSE five-level self-assessment form, and students' evaluation of their English abilities is low ($M=3.10$). Meanwhile, according to the 2022 global IELTS data report, the average score of Chinese IELTS candidates is 6.1 points, and Chinese mainland candidates rank 29th in the A-level IELTS test (Wechat: bltxjy, 2023). Based on the above description, both the English abilities reflected in China's own scale of China's Standards of English (CSE) and the English abilities reflected in the world's recognized IELTS scores show that English learning is difficult for Chinese college students.

In fact, many researchers have carried out studies and concluded some factors: (1) students' individual factors, such as learning motivation Li [4]; Fu, et al. [5]; Chen, et al. [6] and Li [7]; learning strategies Li [7]; Fu, et al. [8]; and emotional factors Luo, et al. [9]; Chen, et al. [6]; Hu [10] and Fu, et al. [11]; (2) family background, such as family socioeconomic status Jiang [12] and the educational function of family and society [13]. The Ecological Systems Theory provides a comprehensive research method, which can deeply explore various factors affecting English learning, including multi-level and multi-angle influencing factors such as individual internal factors, family, school, society, and culture. In this model, students' English learning is influenced by many factors, which interact with each other to form a complex ecosystem. Therefore, the study of English learning among Chinese undergraduates from the perspective of Ecological Systems is helpful to understand how various factors affect students' English learning more comprehensively.

This paper attempts to systematically review the specific influencing factors from the four ecological levels of ecosystem theory and fill the gap in factors that affect overall English learning abilities among students in Chinese higher education.

2. Research Questions

This study aims to conduct a comprehensive analysis of the existing literature regarding the factors that influence English language learning among Chinese university students. In the context of globalization and the increasing importance of English proficiency, understanding these factors is crucial for improving educational practices and outcomes. To achieve this objective, two key research questions have been formulated:

Q1: What ecological system factors influence English language learning among Chinese university students?

Q2: Guided by ecological system theory, which areas of English language proficiency do studies primarily focus on?

3. Methodology

This section outlines the methodology employed to retrieve articles related to the factors influencing English learning among Chinese university students. The researchers utilized the PRISMA framework, which provides essential resources for conducting systematic reviews, including guidelines for eligibility and exclusion criteria, as well as structured steps in the review process—namely identification, screening, qualification, and data abstraction and analysis.

PRISMA is particularly valuable as it includes a flowchart that visually represents the analysis of empirical studies included in this systematic review. This flowchart illustrates the progression of information through various stages of the review process, detailing the number of publications identified, included, and excluded based on predefined criteria, along with the specific reasons for exclusion [14]. Organizing data in this systematic manner not only enhances the efficiency of the review process but also facilitates the accurate presentation of results.

The PRISMA framework, which stands for Preferred Reporting Items for Systematic Reviews and Meta-Analyses, includes an updated checklist designed to guide researchers in conducting systematic reviews. Originally developed for health-related research, the checklist has been broadened to encompass social and educational research [15]. By employing this checklist throughout the planning and execution of the systematic review, the researchers ensured a rigorous approach to collecting, organizing, and analyzing the reviewed articles.

The methodology reflects a commitment to transparency and replicability, ensuring that each stage of the review is documented and justifiable. By following the PRISMA guidelines, the study aims to produce reliable findings that contribute to a deeper understanding of the factors influencing English learning in the context of Chinese higher education. This systematic approach not only enhances the credibility of the research but also serves as a model for future studies in the field.

4. Resources

In conducting this study, two pivotal databases were selected: Google Scholar (GS) and the China National Knowledge Infrastructure (CNKI). Google Scholar is widely recognized as a reputable and comprehensive database that encompasses a vast array of academic topics. Its citation indexing capabilities allow researchers to assess the impact of specific research

areas effectively, thereby enhancing the visibility of influential studies [16]. This database covers major high-quality journals related to social media and English language learning, which are characterized by high impact factors and significant core citations. The replicability of search results within GS not only facilitates the validation of previous studies but also provides a robust framework for understanding emerging trends and developments in the field.

In alignment with the study's objective to explore the factors influencing English learning among Chinese university students, the China National Knowledge Infrastructure (CNKI) was selected as an essential database. CNKI serves as a premier platform for accessing a wide range of knowledge and information resources, enabling efficient dissemination of research findings and promoting digital learning across various educational contexts. The platform is particularly valuable for its extensive collection of empirical research in educational technology that is frequently cited in leading journals. By focusing on this high-impact literature, the review aims to reveal unique insights and discernible trends regarding the factors that influence language learning, specifically through the lens of ecological systems theory within the Chinese educational context.

Thus, CNKI is not only an effective resource for academic literature but also a reliable source for understanding the nuances of English learning factors in China, making it an integral part of this systematic review. Together, GS and CNKI provide a comprehensive foundation for the research, ensuring a thorough exploration of the relevant literature and contributing to a richer understanding of the topic.

5. Qualification and Exclusion Criteria

To ensure the selection of articles aligns with the review framework, specific qualification and exclusion criteria have been established. Articles included in the final review must focus on analyzing and researching factors influencing English learning among Chinese university students in higher education. Only articles published within the last twenty years, specifically between 2000 and 2023, will be considered. Furthermore, selected articles must have undergone peer review and be available in full text to guarantee the quality and reliability of the research.

The accepted research designs can encompass a variety of methodologies, including quantitative, qualitative, or mixed methods approaches. This diversity allows for a comprehensive understanding of the factors at play in English learning within this demographic.

Exclusion criteria are equally stringent. Items such as books, book chapters or series, articles from conference proceedings, theses, and literature review articles will not be included. Additionally, articles published before 2003 are excluded from consideration, as well as general articles sourced from social media platforms, which may not provide rigorous academic insights.

Given the specific focus of this review, only articles indexed in the Social Sciences Citation Index (SSCI) will be selected, ensuring that the research is grounded in reputable and relevant scholarly work. A summary of these qualification and exclusion criteria is presented in Table 1, providing a clear outline of the standards used in the selection process. This meticulous approach aims to create a robust foundation for analyzing the critical factors influencing English learning among Chinese university students, ultimately contributing to more effective educational strategies and outcomes in higher education contexts.

Table 1.
Qualification and exclusion criteria.

Criteria	Inclusion	Exclusion
Article Type	Research articles from Journal	Books, book chapters, book series, journals (systematic reviews), conference proceedings.
Language	Chinese & English	Non-Chinese and Non-English
Timeline	2003-2023	Before 2003
Open Access	All open access	Others
Indexes	Science Citation indexed	Science Citation Index Expanded

6. Systematic Review Process

The systematic review process began in March 2024 and consists of several stages to ensure thoroughness and rigor. The first stage is the identification phase, which involves selecting the keywords that will guide the search for relevant literature. For this review, keywords related to ecological systems theory, English learning, and various influencing factors were utilized. Researchers drew upon insights from previous studies and consulted relevant dictionaries to ensure the appropriateness and comprehensiveness of the keywords (see Table 2). This careful selection process aims to capture a wide range of relevant articles, facilitating a deeper understanding of the factors influencing English learning among Chinese university students. By systematically identifying and refining these keywords, the foundation is laid for an effective literature search that adheres to the review's criteria and objectives.

Table 2.

The search string used for the systematic review process.

Databases (DB)	Keywords
GS	TS= ((“English learning*” OR “foreign language learning”) AND (“ecological systems theory*” AND (“influencing factors*” OR “affecting factors”) AND (“undergraduate*” OR “college students” “first year” OR “second year” OR “third year” OR “fourth year” OR “higher education”)) OR “tertiary education”)) AND (“China*” OR “Chinese”)
CNKI	#FT= ((“YINGYUXUEXI*” OR FT= “WAIYUXUEXI”) AND (FT= “SHENGTAIXITONGLLUN*” AND (FT= “YINGXIANGYINSU*” OR FT= “YINSU” AND (FT= “BENKESHENG*” FT=OR “DAXUESHENG” OR FT= “GAOXIAO” FT=OR “DAXUE”)) OR “GAODENGJIAOYU”))

The second stage of the systematic review process is screening. From an initial pool of 76 articles that met the review criteria, 42 were excluded based on relevance and quality. In the subsequent third stage, qualification, the full texts of the remaining articles were accessed for thorough examination. During this review, 14 articles were deemed ineligible for inclusion, primarily due to their insufficient context regarding Chinese higher education. Ultimately, the final stage of the review yielded 20 articles, which were retained for qualitative analysis (see [Figure 1](#) for details). This systematic approach ensures that only the most relevant and contextually appropriate research contributes to the review’s findings.

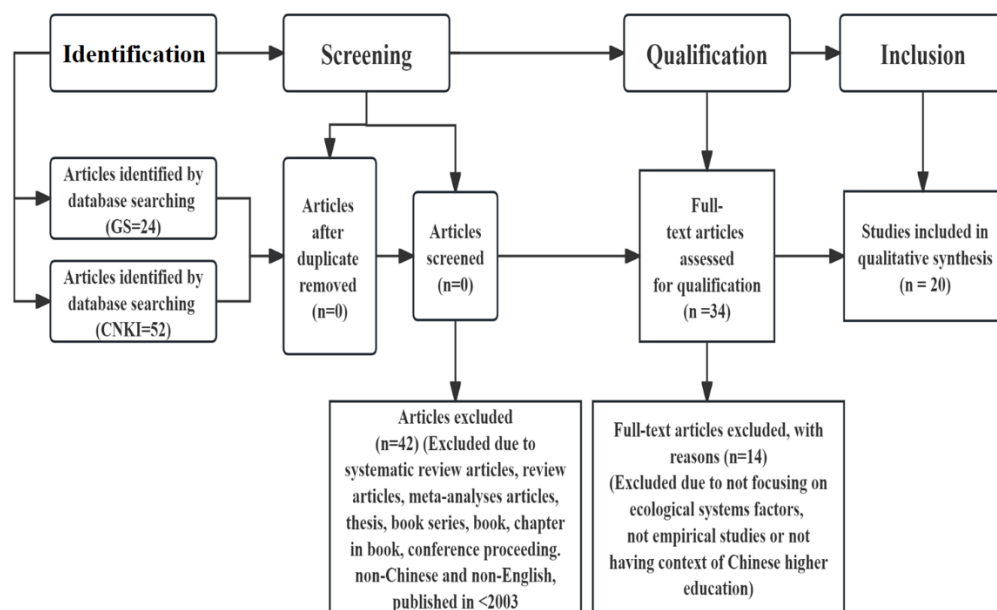


Figure 1.
The flow diagram of the study.
Source: Moher, et al. [14].

7. Data Extraction and Analysis

In this study, a thorough evaluation and analysis were conducted on all 20 selected articles, with a particular emphasis on how each study addressed the formulated research questions. The primary focus of the data extraction was on the factors influencing English language learning among Chinese university students within the context of higher education in China. The analysis involved a systematic examination of the influencing factors and the specific areas of English proficiency assessed in each study. The findings were organized into a structured format, as illustrated in [Table 3](#), which provides a comprehensive overview of the results. Descriptive summaries were crafted to encapsulate the core insights derived from the articles, effectively synthesizing the data for clearer understanding.

In systematic reviews, descriptive summaries serve as a valuable tool, facilitating the amalgamation of narrative, quantitative, and qualitative data. This approach enhances the clarity and comprehensiveness of the evidence presented, making it more accessible for interpretation [17, 18]. By consolidating the findings, this study aims to highlight patterns and trends in the research, offering a more nuanced perspective on the influencing factors at play.

The resulting table succinctly summarizes the integrated findings, showcasing key themes and trends observed across the literature. This systematic extraction and presentation of data not only elucidate the current state of research on English learning among Chinese university students but also identify gaps and areas for further exploration. By capturing the multifaceted influences affecting English proficiency, the study contributes to a deeper understanding of how various ecological factors interact and impact students’ language learning experiences.

The insights garnered from this analysis can inform educators and policymakers, guiding them in developing targeted interventions and support mechanisms that address the specific needs of students in their English learning journeys. Ultimately, this study underscores the importance of a comprehensive approach to understanding the ecological influences on language acquisition, paving the way for future research in this vital area.

Table 3.

Summary of the previously reviewed studies.

	Mi-O/Me-O/ Ex-O/Ma-O/AES	Focused English ability	Methodology	Empirical/Non-
Cheng, et al. [19]	Mi-O	Learning satisfaction	Quantitative	Empirical
Dong [20]	Mi-O/Ma-O	English writing	Mixed	Empirical
Xie and Guo [21]	Me-O	English learning academic performance	Quantitative	Empirical
Guo and Lee [22]	AES	Informal digital learning of English	—	Non-
Yuan [23]	Mi-O/Me-O/Ex-O	English communication language learning	Action research	Empirical
Hu [10]	Ex-O	English learning	—	Non-
Chen [24]	Mi-O	English learning strategy	—	Non-
Zhou, et al. [25]	Mi-O	Bilingual ability	Mixed	Empirical
Niu [2]	AES	English speaking ability	Qualitative	Empirical
Zhan [26]	AES	College English learning	Qualitative	Empirical
Wang [27]	Mi-O	English learning effect	—	Non-
Han [28]	AES	English learning	Qualitative	Empirical
Jiang and Zhang [29]	Mi-O	English language learning	Mixed	Empirical
Liu and Chao [30]	Mi-O	English learning	—	Non-
Kasbi and Elahi Shirvan [31]	AES	English speaking ability	Qualitative	Empirical
Zhan [26]	Ma-O	College English learning	—	Non-
Peng [32]	AES	English communication ability	Qualitative	Empirical
Cao [33]	Mi-O	English speaking	Qualitative	Empirical
Youens-Clark, et al. [34]	Mi-O	English learning	—	Non-
Cheng, et al. [19]	AES	English learning	—	Non-

Mi-O=Micro-system Only, Me-O=Meso-system Only, Ex-O=Exo-system Only, Ma-O=Macro-system Only, AES=All Ecological Systems;

8. Results

8.1. Descriptive Analysis

All selected 20 articles were reviewed, of which 12 articles were classified into four research methods, including quantitative research (n = 2), qualitative research (n = 6), mixed-method research (n = 3), and action research (n = 1). In addition, 8 articles did not mention specific research methods. The geographical scope of the study was from mainland China (n = 20). Among the numerous studies, nearly half of the researchers (9 articles) focused on the influencing factors of the micro-ecological system. Some researchers analyzed and explored the influencing factors from the four levels of the micro-ecological system, meso-ecological system, external ecosystem, and macro-ecological system (7 research articles). Additionally, the researchers only paid attention to the influencing factors of the meso ecosystem, the influencing factors of the external ecosystem, and the influencing factors of the macro ecosystem. At the same time, in the selected research literature, the researchers studied different English abilities, such as general English learning (7 articles), English communicative ability (oral expression) (5 articles), English learning effect (satisfaction, academic achievement) (3 articles), English writing ability (1 article), bilingual ability (1 article), and informal digital learning of English (1 article). This section will discuss in detail the statistical results of the selected studies in the past. Although there may be differences in research methods and focused English abilities, all the selected studies are based on the exploration of the influencing factors under the guidance of ecosystem theory in Chinese higher education. The results of the review were organized into the following two main themes: specific influencing factors and the analysis of concentration ability.

8.2. Ecological System Factors Influencing English Language Learning

8.2.1. Micro-Ecological System Influencing Factors

Cheng, et al. [19] pointed out that the classroom is an ecosystem, which consists of teachers, students, teaching events, and the environment. Guo and Lee [22] focused on the micro level of educational ecology, studying the individual ecological environment of foreign language learners, including learners' interest, strategy, method, purpose, attitude, and motivation Guo and Lee [22]. Cao [33] analyzed the combined effects of micro-ecology, such as individual characteristics (including self-confidence, personality, emotion, and perceived communication opportunities) and classroom environmental conditions (such as topic, task, communication object, teacher, and group size) along with language factors Cao [33]. Liu and Chao [30], from the perspective of teachers at the micro-ecological level, explored teachers' practices in computer-assisted language

learning, aiming to encourage learners' subjectivity [Liu and Chao \[30\]](#). [Wang \[27\]](#) regards the language teaching and learning process as a micro-ecological system, conducting a comprehensive and dynamic survey of English teaching and studying the interaction between various elements within the system, such as learners, teachers, language, and the learning environment [Wang \[27\]](#). [Chen \[24\]](#) believes that the micro-classroom environment includes classroom equipment, teaching philosophy, teacher-student relationships, and classroom discipline. The successful integration of these elements with information technology is the key to a healthy and sustainable teaching ecology [Chen \[24\]](#). [Zhou, et al. \[25\]](#) studied the micro-ecological research of financial classrooms [Zhou, et al. \[25\]](#). [Jiang and Zhang \[29\]](#) demonstrated the influence of micro-ecological factors on English learners' intrinsic initiative and affordance [\[29\]](#). The performance and development of intrinsic initiative change due to variations in environmental and individual factors.

8.2.2. Factors from Other Ecological Systems (Meso-, Exo-, & Macro-)

Despite the emphasis on micro-ecological factors, research on meso-, exo-, and macro-ecological influences remains relatively limited among Chinese scholars. Most of the existing literature has concentrated on meso-level influences, such as the campus cultural atmosphere ([Xie and Guo \[21\]](#)) and institutional management and support [\[23\]](#). At the exo-system level, factors like social support ([Yuan \[23\]](#)) and family environments ([Hu \[10\]](#)) have been examined [\[10\]](#). Macro-level influences, including educational policies and systems ([Han \[28\]](#)) as well as international and cross-cultural communication dynamics ([Dong \[20\]](#)), have also been addressed, though to a lesser extent.

A summary of the specific influencing factors identified at each ecological level is presented in [Table 4](#).

Table 4.

The specific influencing factors.

Micro-/Meo-/Exo/Macro-system	Themes	References
Micro-	Individual characteristics and attitudes.	Cao [33] ; Jiang and Zhang [29] ; Liu and Chao [30] and Guo and Lee [22] .
	Interaction between educators and learners; peer relationships.	Cheng, et al. [19] ; Wang [27] ; Chen [24] ; Hu [10] ; Zhou, et al. [25] .
Meso-	School cultural atmosphere, management and support.	Xie and Guo [21] and Yuan [23] .
Exo-	Social support and family environment.	Yuan [23] and Hu [10] .
	Media and technology.	Hu [10] ; Chen [24] and Liu and Chao [30] .
Macro-	Education policies and systems.	Guo and Lee [22] .
	International communication and cross-cultural communication.	Dong [20] .

8.2.3. Focus Areas of English Language Abilities in Relation to Ecological System Theory

The descriptive statistics from the reviewed studies indicate a predominant focus among Chinese scholars on general English learning (7 articles) and English communicative ability, particularly oral expression (5 articles). Additional areas of interest include English learning outcomes, such as satisfaction and academic achievement (3 articles), with fewer studies addressing English writing ability (1 article), bilingual ability (1 article), and informal digital learning (1 article).

This trend suggests a gradual shift in research focus from generalized influencing factors to more nuanced investigations into specific English language competencies. For example, English oral expression has emerged as a prominent research area, attracting significant attention from scholars, while other competencies like English reading and writing have also been explored. However, it is noteworthy that listening skills, one of the four fundamental language competencies (listening, speaking, reading, and writing), have received insufficient attention in the literature.

Given the critical importance of listening skills in language acquisition, it is imperative for future research to address the factors influencing the development of listening competencies among Chinese university students. Enhancing the understanding of this skill will contribute to a more comprehensive perspective on English language learning and provide a foundation for targeted instructional strategies.

9. Findings

The Ecological Systems Theory emphasizes the intricate relationships between individuals (ecological subjects) and their environments. Over recent years, its principles and methodologies have gained significant traction, finding applications across various fields within the social sciences. This approach plays an essential role in understanding complex interactions and dynamics, particularly in educational contexts. The ongoing extension and expansion of Ecological Systems within the field of education not only enrich educational ecology but also serve as a bridge for interdisciplinary research from an ecological perspective. This theoretical framework provides fresh insights into the enhancement and cultivation of college students' English language abilities, capturing the attention of English educators, experts, and scholars alike. Researchers have increasingly applied relevant principles of Ecological Systems to investigate the factors influencing English language competencies among college students from micro-, meso-, and exo-system perspectives.

Through an extensive literature search, careful reading, organization, and statistical analysis, this study identifies a trend in recent research—most existing studies are journal articles published within the last five years, demonstrating a rising interest in the subject. This analysis focuses on the influencing factors across the micro-, meso-, exo-, and macro-ecosystems

in relation to college students' English abilities. The overall findings are categorized into three main aspects: the theoretical research level, the empirical research level concerning language abilities, and the empirical research level addressing broader competencies.

9.1. Key Ecological System Factors Affecting English Language Learning

At the theoretical research level, Bronfenbrenner [35] work in the Ecology of Human Development marks a pivotal moment in the integration of ecological principles into human behavioral studies. Bronfenbrenner posited that the environment significantly impacts individual behavior and psychological development [35]. He emphasized that individuals exist within a complex web of interactions with their families, schools, societies, and natural environments. This interdependence shapes their growth and development, leading to the establishment of the Ecological Systems framework [36].

Further contributions to this theory have come from scholars such as Zastrow and Kirst-Ashman [37], who conceptualized the living environment as a comprehensive hierarchical social ecosystem [37]. This perspective highlights the continuous interactions individuals maintain with various systems, including family, friends, educational institutions, and government entities. It becomes apparent that the Ecological Systems framework is an integrated whole, challenging the notion prevalent in earlier research that treated individual development in isolation. Many prior studies overlooked the vital connections between human development and environmental contexts, leading to a reductionist view that simplified the complexities of individual growth.

This study aims to fill this gap by conducting a thorough analysis of the influencing factors affecting Chinese undergraduates' English language abilities, guided by the four ecological dimensions of the Ecological Systems framework. By positioning individuals within their ecological contexts, the research seeks to illuminate the multifaceted influences that contribute to language learning outcomes.

9.2. Predominant Areas of English Language Proficiency Identified in Studies

At the empirical research level, the literature reveals that many researchers tend to analyze the influencing factors of college students' English abilities primarily from a single ecosystem level, predominantly focusing on the micro and meso-system levels. This narrow focus has resulted in a scarcity of studies addressing the exo- and macro-system levels. Most existing research highlights the influences of classroom dynamics, peer interactions, and individual learner characteristics, often neglecting the broader contextual factors that play a crucial role in shaping language learning.

Moreover, the construct of "English abilities" has typically been assessed through five key components: learning efficiency, listening, speaking, reading, writing, and translation. While these studies provide valuable insights into learners' linguistic skills, they frequently miss out on exploring critical dimensions such as cultural competencies, critical thinking abilities, and other essential skills necessary for holistic language proficiency. Consequently, there is a pressing need to expand the focus of research to encompass these additional competencies, recognizing that language learning is not solely about mastering linguistic skills but also about developing a broader skill set that includes cultural understanding and critical engagement.

Thus, in addition to exploring the influences of language skills and learning strategies, this study emphasizes the importance of examining four broader competencies: critical thinking, cultural awareness, creativity, and collaborative abilities. These competencies are vital for students to navigate the complexities of communication in an increasingly interconnected world and can significantly enhance their overall English language proficiency.

Finally, under the guidance of the Ecological Systems framework, researchers have delved into the influencing factors at each of the four ecosystem levels. However, much of this research has primarily centered on language abilities such as listening, speaking, reading, writing, and translation, as well as teachers' instructional styles and classroom environments. This tendency towards single-factor analysis results in a limited understanding of how various influencing factors interact with one another across the different ecological levels.

The lack of research that integrates all aspects of students' English competencies is particularly concerning. A comprehensive approach is essential to understanding how micro-level factors—such as individual motivation and classroom engagement—interact with meso-level influences, including the teaching methodologies employed and the learning environment. Furthermore, exo-level factors such as institutional policies and community support systems, as well as macro-level influences encompassing cultural attitudes toward English learning, should not be overlooked.

The existing body of research frequently fails to address the dynamic interplay between these factors, resulting in a fragmented understanding of the ecological influences on language learning. By adopting a holistic perspective that acknowledges the interdependencies among all four ecological levels, this study aims to present a more integrated view of the factors affecting college students' English abilities.

In conclusion, while significant progress has been made in understanding the factors influencing English language learning among Chinese university students through the lens of Ecological Systems Theory, there is still much to explore. Future research should aim to bridge the gaps identified in the current literature by employing a more holistic and integrative approach. This would not only enhance our understanding of the complexities of language learning but also inform the development of targeted educational interventions that effectively support students in their pursuit of English proficiency.

10. Conclusion

In recent years, research on the factors influencing English language learning among Chinese undergraduates, framed within the context of Ecological Systems Theory, has made significant strides. Scholars have identified various micro and

macro-level factors that play a crucial role in shaping students' language acquisition experiences. These factors include the learning environment, the characteristics of teachers, the motivations of learners, and the broader sociocultural and institutional contexts. Additionally, valuable and constructive suggestions have emerged from this body of work, highlighting potential strategies for improving English education at the university level. However, despite these achievements, the current research landscape remains relatively limited and somewhat fragmented. There is a pressing need for more comprehensive and systematic investigations into the diverse factors that influence English learning outcomes among Chinese university students.

One of the key limitations of existing research is its tendency to focus narrowly on specific aspects of language learning rather than adopting a holistic approach. Most studies primarily emphasize theoretical frameworks, with empirical research being relatively scarce. This imbalance leaves a gap in understanding how various factors interconnect and influence each other within the ecological system. Furthermore, many investigations concentrate on a select number of English competencies, often overlooking the interconnectedness of these skills and the broader context in which they are learned. For example, while there is ample research on reading comprehension or speaking skills in isolation, studies that examine the interplay between different competencies, such as how speaking influences listening or writing, are less common. This lack of comprehensive exploration limits the potential for developing a well-rounded understanding of the factors that affect English language proficiency among Chinese undergraduates.

From a micro-ecological perspective, existing studies have demonstrated that factors such as the learning environment and teacher-student dynamics significantly impact the key competencies of college English learners in China. However, there is a noticeable scarcity of research that integrates all four ecological factors—individual, interpersonal, institutional, and cultural—into a unified framework. The majority of studies tend to operate in silos, focusing on isolated components of the ecological system rather than acknowledging the complexity of interactions among these components. This oversight can hinder the development of effective educational practices and policies that account for the multifaceted nature of language learning.

Considering these limitations, it is evident that there remains considerable room for further development and exploration within this research domain. The author posits that future studies should strive to examine the influencing factors of English language competencies from a holistic perspective that encompasses all four levels of the ecological system. By employing Ecological Systems Theory as a guiding framework, researchers can conduct more in-depth investigations into how these factors collectively shape students' language learning experiences and outcomes.

In pursuing this research direction, scholars can seek to identify the intricate relationships among various ecological factors. For instance, understanding how the individual learner's background interacts with the instructional practices of teachers, the resources available in the learning environment, and the broader cultural and institutional expectations can provide a richer understanding of English language acquisition. Such an integrated approach would not only enhance the theoretical foundations of language learning research but also offer practical implications for educators and policymakers.

Moreover, by emphasizing empirical research, future studies can provide robust evidence to support the theoretical insights gained from previous work. Conducting longitudinal studies that track students' progress over time, as well as cross-sectional studies that capture a diverse range of learners across different contexts, can yield valuable data on how ecological factors influence English language competencies. This empirical foundation can lead to more effective measures and strategies for enhancing English language instruction and supporting students' learning journeys.

In summary, while significant progress has been made in understanding the influencing factors of English learning among Chinese undergraduates within the framework of Ecological Systems Theory, much work remains to be done. The call for more comprehensive, integrative, and empirical research is crucial for advancing this field. By addressing the gaps identified in the existing literature and adopting a holistic approach that considers the interplay of multiple ecological factors, researchers can contribute to a deeper understanding of English language learning dynamics. Ultimately, this work can inform the development of targeted interventions and strategies that support Chinese university students in achieving their English language proficiency goals, thereby enhancing their academic and professional prospects in an increasingly globalized world.

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