

## ASSISTING SECOND LANGUAGE ACQUISITION THROUGH ARTIFICIAL INTELLIGENCE: EFFECTIVE INSTRUCTIONAL STRATEGIES FOR NON-NATIVE ENGLISH SPEAKERS IN ANGLOPHONE CONTEXTS

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### Abstract

*This qualitative study explores the linguistic challenges faced by international students in Australian universities, examining language-related difficulties and the impact of institutional support on their language learning experiences. A sample of 30 international students from diverse linguistic and cultural backgrounds participated in semi-structured interviews. Thematic analysis, grounded in the Ecological Model of Language Learning (van Lier, 2004), revealed significant language-related challenges, including limited language practice opportunities, difficulties understanding lecturer accents and pronunciation, and language anxiety. The study highlights the importance of targeted language support services, including AI-driven instructional strategies, and institutional support, such as language tutoring and mentoring programs. Recommendations for universities include providing language support programs, training lecturers in inclusive teaching practices, and promoting awareness of linguistic and cultural challenges faced by international students. This study addresses a significant research gap, contributing to the field of applied linguistics and providing valuable insights into the linguistic challenges faced by international students.*

**KeyWords:** applied linguistics, international students, linguistic challenges, AI-driven instructional strategies, language learning experiences.

### Introduction

The globalization of higher education has fueled a significant increase in international student enrollments in English-speaking countries, such as the US, UK, Canada, Australia, and New Zealand (Australian Government Department of Education, Skills and Employment, 2020). Australia, a prime example of an Anglophone nation, has witnessed remarkable growth, with international students now accounting for approximately 30% of all higher education enrollments (Australian Government Department of Education, Skills and Employment, 2020). This notable demographic shift highlights the imperative need for tailored language support systems to address the diverse linguistic requirements of international students.

As an educator who has personally navigated the challenges of learning English as a second language, the researcher possesses unique insight into the difficulties international students face in Australian academia. Drawing from their own experience as a Pakistani expatriate in Australia, the researcher is intimately aware of the obstacles non-native English speakers encounter, including struggles with effective communication, comprehension of complex texts, and production of coherent written work (Kettle, 2009; Read, 2015). These linguistic challenges can have far-reaching consequences, impacting not only academic performance but also social relationships, mental health, and overall well-being (Andrade, 2006; Marginson, 2012).

The integration of Artificial Intelligence (AI) in various aspects of life has sparked expectations of its transformative potential in language teaching and learning. AI-powered language learning systems offer personalized, adaptive, and immersive experiences tailored to individual learning styles, pace, and proficiency levels (Chapelle, 2003; Gruba, 2006). Recognizing AI's pervasive

impact, researchers are exploring its potential to address the linguistic challenges faced by non-native English speakers in Australian universities, with theoretical foundations and empirical evidence supporting its effectiveness (Garcia, 2013; Li et al., 2019). This research aims to explore these challenges through interviews with international students from diverse non-native English speaking backgrounds, enrolled in Australian universities. Furthermore, this study focuses on devising strategies to overcome these challenges, leveraging AI's potential to enhance language teaching and learning. A closely related study by Li et al. (2019) investigated the impact of AI-powered language learning on the linguistic proficiency of international students in China. The study found significant improvements in language skills, particularly in grammar, vocabulary, and pronunciation, among participants who used AI-powered language learning systems.

This study aims to investigate the linguistic challenges faced by international students in Australian universities and develop and evaluate AI-driven instructional strategies tailored to their diverse linguistic needs. Specifically, the research objectives are:

### **Aims and Objectives**

This study aimed to:

- To investigate the linguistic challenges encountered by international students in learning English in an Anglophone context.
- To design, develop, and evaluate AI-driven instructional strategies tailored to address the diverse linguistic needs of international students.

### **Research Questions**

The following research questions guided this study:

**RQ1:** What are the primary linguistic challenges faced by international students in learning English in an Anglophone context?

**RQ2:** How can AI-driven instructional strategies be effectively designed, implemented, and evaluated to enhance the language skills of international students in Australian universities?

### **Statement of the Problem**

The increasing enrollment of international students in Australian universities has accentuated the substantial linguistic challenges faced by non-native English speakers (Arkoudis et al., 2013). These challenges not only impede academic performance but also hinder social integration, as existing language support systems often fall short in addressing the diverse linguistic needs of international students (Kettle, 2009). A significant disparity exists between the language proficiency of international students and the linguistic demands of Australian academia (Read, 2015). This study seeks to bridge this gap by investigating the linguistic challenges encountered by international students and developing AI-driven instructional strategies to support their language learning needs.

### **Significance of the Study**

This study has significant implications for developing effective language support systems tailored to international students' diverse linguistic needs in Australian universities (Arkoudis et al., 2013). Addressing linguistic challenges is crucial for enhancing academic performance, as language proficiency is a key determinant of academic success (Read, 2015). The findings can contribute to improved social integration, a more inclusive educational experience, and ultimately, the well-being and success of international students (Andrade, 2006). This research

also informs the development of innovative AI-driven language learning solutions, contributing to the growing body of literature on AI in language learning (Garcia, 2013; Li et al., 2019).

## **Literature Review**

### **1. The Linguistic Challenges Faced by International Students in Anglophone Contexts**

International students in Anglophone contexts face a multitude of linguistic challenges that can impact their academic success, social integration, and mental health.

#### **i. Language proficiency and academic success**

Language proficiency is a crucial determinant of academic success for international students in Anglophone contexts. Research has consistently demonstrated that students with higher levels of language proficiency tend to perform better academically (Arkoudis et al., 2013; Read, 2015). For instance, Arkoudis et al. (2013) found a positive correlation between International English Language Testing System (IELTS) scores and academic grades.

Other studies have also highlighted the importance of language proficiency for academic success. Kettle (2009) found that language proficiency struggles were linked to higher stress and anxiety levels, ultimately affecting academic performance. Moreover, research has shown that language proficiency is essential not only for academic success but also for social integration and overall well-being (Andrade, 2006).

Furthermore, language proficiency has been linked to employability after graduation. Birrell (2012) found that international students with higher language proficiency levels had better job prospects and were more likely to secure employment in their field of study. The literature suggests that language proficiency is a critical determinant of academic success, social integration, and employability for international students in Anglophone contexts.

#### **ii. Challenges in academic writing, reading comprehension, and oral communication**

International students in Anglophone contexts often encounter significant challenges in academic writing, reading comprehension, and oral communication, which can hinder their academic success and overall educational experience (Hinkel, 2002; Leki, 2007). Academic writing is a critical skill for international students, as it enables them to express their ideas, arguments, and research findings effectively. However, linguistic and cultural differences can impede their writing abilities (Hinkel, 2002; Leki, 2007).

Reading comprehension is another area where international students face challenges, as they may struggle to understand complex academic texts due to linguistic and cultural barriers (Grabe, 2009; Koda, 2005). Prior knowledge, linguistic proficiency, and cultural background can influence their reading comprehension (Grabe, 2009). Oral communication is also a critical skill for international students, enabling them to participate in class discussions, present their research, and interact with peers and instructors.

Targeted support and instruction can address these challenges. For example, explicit instruction on academic writing can improve international students' writing skills significantly (Leki, 2007). Training on reading comprehension strategies can also enhance their reading comprehension (Grabe, 2009). Furthermore, technology can play a crucial role in addressing these challenges. Computer-assisted language learning (CALL) can provide international students with opportunities to practice their language skills in a more interactive and engaging way (Chapelle, 2003).

#### **iii. The impact of linguistic challenges on social integration and mental health**

Linguistic challenges can have a profound impact on the social integration and mental health of international students in Anglophone contexts. Research has consistently shown that language

barriers can lead to feelings of isolation, loneliness, and anxiety, negatively affecting students' mental health and well-being (Andrade, 2006; Marginson, 2012). One of the primary ways linguistic challenges affect social integration is by limiting opportunities for social interaction.

Linguistic challenges can also have a negative impact on mental health. Language barriers can lead to increased stress, anxiety, and depression among international students (Andrade, 2006; Marginson, 2012). Andrade (2006) found that international students who experienced language difficulties reported higher levels of stress and anxiety than those who did not.

Language support services can mitigate the negative impacts of linguistic challenges on social integration and mental health. Arkoudis et al. (2013) found that international students who received language support services reported improved language proficiency, increased confidence, and better social integration. Technology can also play a crucial role in supporting international students' language learning and social integration.

## **2. The Role of Artificial Intelligence in Language Learning**

The integration of Artificial Intelligence (AI) in language learning has revolutionized the way learners acquire and develop language skills, offering personalized, adaptive, and immersive learning experiences that cater to diverse learning needs and styles.

### **i. Overview of AI-powered language learning systems**

The integration of Artificial Intelligence (AI) in language learning has transformed the way languages are taught and learned. AI-powered language learning systems have emerged as a promising tool for language instruction, offering personalized, adaptive, and immersive learning experiences. One of the key features of AI-powered language learning systems is their ability to provide personalized feedback and assessment.

Another significant advantage of AI-powered language learning systems is their ability to adapt to learners' needs and proficiency levels. Chen et al. (2016) found that an AI-powered language learning system that adapted to learners' proficiency levels and learning styles significantly improved their language learning outcomes. The system employed machine learning algorithms to analyze learners' behavior and adjust the difficulty level of the learning materials accordingly.

AI-powered language learning systems also offer immersive learning experiences through interactive games, simulations, and virtual reality environments. Wang et al. (2019) found that an AI-powered language learning system that used virtual reality to simulate real-life scenarios significantly improved learners' language proficiency and cultural awareness. The system utilized AI-powered chatbots to provide learners with feedback and guidance on their language use.

### **ii. Personalized, adaptive, and immersive learning experiences**

The concept of personalized, adaptive, and immersive learning experiences has garnered significant attention in recent years, driven by advances in technologies such as artificial intelligence, machine learning, and virtual reality. This literature review provides an overview of the current state of research on personalized, adaptive, and immersive learning experiences, focusing on studies published in Google Scholar.

Personalized learning experiences involve tailoring learning content, pace, and style to individual learners' needs, abilities, and preferences (Hartley & Bendixen, 2001). Research has demonstrated that personalized learning experiences can lead to improved learning outcomes, increased learner engagement, and enhanced learner satisfaction (Kumar et al., 2018; Song & Keller, 2001). For example, Kumar et al. (2018) found that personalized learning experiences

based on learners' cognitive styles and prior knowledge significantly improved learning outcomes in a mathematics course.

Adaptive learning experiences utilize technology to adjust the difficulty level, content, and pace of learning materials in real-time, based on learners' performance, behavior, and learning needs (Brusilovsky et al., 2011). Research has shown that adaptive learning experiences can lead to improved learning outcomes, increased learner engagement, and reduced learner frustration (Brusilovsky et al., 2011; Wang et al., 2017). Wang et al. (2017) found that an adaptive learning system based on machine learning algorithms significantly improved learning outcomes in a computer science course.

### **iii. Empirical evidence supporting the effectiveness of AI-powered language learning**

The integration of Artificial Intelligence (AI) in language learning has gained significant attention in recent years, with numerous studies investigating its effectiveness. This literature review aims to provide an overview of the empirical evidence supporting the effectiveness of AI-powered language learning, with a focus on research works from Google Scholar.

One of the earliest studies on AI-powered language learning was conducted by Heilman and Eskenazi (2013), who developed an intelligent tutoring system for language learning. The study found that learners who used the system showed significant improvements in their language proficiency, particularly in grammar and vocabulary (Heilman & Eskenazi, 2013). Another study by Chen et al. (2016) investigated the effectiveness of an AI-powered language learning system that used speech recognition technology to provide learners with feedback on their pronunciation.

A more recent study by Li et al. (2019) explored the effectiveness of an AI-powered language learning system that used machine learning algorithms to adapt to learners' needs and proficiency levels. The study found that learners who used the system showed significant improvements in their language proficiency, particularly in terms of reading comprehension and vocabulary (Li et al., 2019). Overall, the empirical evidence suggests that AI-powered language learning can be an effective way to improve language proficiency.

## **3. Instructional Strategies for Supporting Language Learning in International Students**

Effective instructional strategies tailored to the unique needs of international students are crucial for fostering a supportive language learning environment, promoting academic success, and enhancing the overall educational experience in Australian universities.

### **i. Traditional language support systems and their limitations**

The integration of Artificial Intelligence (AI) in language learning has garnered significant attention in recent years, with numerous studies investigating its effectiveness. This literature review aims to provide an overview of the empirical evidence supporting the effectiveness of AI-powered language learning, focusing on research works from Google Scholar.

One of the pioneering studies on AI-powered language learning was conducted by Heilman and Eskenazi (2013), who developed an intelligent tutoring system for language learning. The study revealed that learners who utilized the system demonstrated significant improvements in language proficiency, particularly in grammar and vocabulary (Heilman & Eskenazi, 2013). A subsequent study by Chen et al. (2016) examined the effectiveness of an AI-powered language learning system that employed speech recognition technology to provide learners with feedback on their pronunciation.

A more recent study by Li et al. (2019) explored the effectiveness of an AI-powered language learning system that utilized machine learning algorithms to adapt to learners' needs and proficiency levels. The findings indicated that learners who used the system demonstrated significant improvements in language proficiency, particularly in reading comprehension and vocabulary (Li et al., 2019). The empirical evidence collectively suggests that AI-powered language learning can be an effective means of improving language proficiency, particularly in grammar, vocabulary, pronunciation, reading comprehension, and speaking and listening.

### **ii. Innovative approaches to language instruction, including AI-driven strategies**

The field of language instruction has undergone significant transformations in recent years, driven by advances in artificial intelligence (AI) and machine learning. This literature review aims to provide an overview of innovative approaches to language instruction, focusing on AI-driven strategies and AI-powered language learning.

One key area of innovation is the use of AI-driven strategies to personalize language learning. Heilman and Eskenazi (2013) found that an AI-powered language learning system that adapted to learners' needs and proficiency levels significantly improved language proficiency. The system provided tailored instruction and feedback, addressing individual learning needs. Another area of innovation is the use of AI-powered language learning platforms to provide immersive and interactive experiences.

AI-powered language learning systems have also improved pronunciation and speaking skills. Chen et al. (2016) found that a system using speech recognition technology to provide feedback on pronunciation significantly improved pronunciation accuracy. Learners identified and corrected errors, improving overall speaking skills. The literature suggests that AI-driven strategies and AI-powered language learning platforms have the potential to revolutionize language instruction, providing personalized, immersive, and interactive experiences.

### **iii. The importance of culturally responsive and inclusive language instruction**

Culturally responsive and inclusive language instruction is vital for promoting linguistic and cultural diversity, equity, and social justice in educational settings. Research has consistently shown that culturally responsive and inclusive language instruction can have a positive impact on learners' language proficiency, cultural awareness, and academic achievement (Gay, 2000; Ladson-Billings, 1995). For instance, Gay (2000) found that culturally responsive teaching practices significantly improved learners' language proficiency and academic achievement.

Moreover, culturally responsive and inclusive language instruction can help address issues of linguistic and cultural diversity, equity, and social justice in educational settings. Li et al. (2019) found that culturally responsive and inclusive language instruction practices can promote learners' cultural awareness and appreciation. Furthermore, culturally responsive and inclusive language instruction can also promote learners' identity and sense of belonging.

Technology can also facilitate culturally responsive and inclusive language instruction. Chen et al. (2016) found that culturally responsive and inclusive language instruction practices can promote learners' language proficiency and cultural awareness. The literature emphasizes the importance of culturally responsive and inclusive language instruction in promoting linguistic and cultural diversity, equity, and social justice in educational settings.

#### **4. Gaps and Limitations in Current Research**

##### **i. The need for more research on AI-powered language learning in Anglophone contexts**

The integration of Artificial Intelligence (AI) in language learning has gained significant attention in recent years, particularly in Anglophone contexts. Despite the growing interest in AI-powered language learning, there remains a need for more research in this area. Research has demonstrated the effectiveness of AI-powered language learning in improving language proficiency, particularly in areas such as grammar, vocabulary, and pronunciation (Heilman & Eskenazi, 2013; Chen et al., 2016).

Existing research on AI-powered language learning has primarily focused on the technical aspects of AI, such as natural language processing and machine learning algorithms (Li et al., 2019; Wang et al., 2020). While these studies have provided valuable insights into the technical capabilities of AI-powered language learning, further research is needed to investigate the pedagogical and social implications of AI-powered language learning in Anglophone contexts.

The increasing use of AI-powered language learning in Anglophone contexts raises important questions about the role of human teachers and the potential impact on language teaching and learning. For instance, Li et al. (2019) found that AI-powered language learning can be effective in improving language proficiency, but it also raises concerns about the potential replacement of human teachers. Therefore, further research is needed to investigate the impact of AI-powered language learning on language teaching and learning in Anglophone contexts.

##### **ii. Limited understanding of the impact of AI-driven instructional strategies on international students' language learning outcomes**

The increasing use of Artificial Intelligence (AI) in language instruction has raised important questions about its impact on international students' language learning outcomes. Regardless of growing interest in AI-driven instructional strategies, there is a limited understanding of their effectiveness in promoting language learning among international students. Research has demonstrated that AI-driven instructional strategies, such as personalized learning and adaptive assessment, can be effective in promoting language learning among international students (Heilman & Eskenazi, 2013; Chen et al., 2016).

Existing research on AI-driven instructional strategies has primarily focused on their technical aspects, such as natural language processing and machine learning algorithms (Li et al., 2019; Wang et al., 2020). While these studies have provided valuable insights into the technical capabilities of AI-driven instructional strategies, they have neglected the social and cultural contexts in which international students learn. Furthermore, the limited understanding of the impact of AI-driven instructional strategies on international students' language learning outcomes is compounded by the lack of research on the specific challenges faced by international students in AI-driven language learning environments.

Overall, the limited understanding of the impact of AI-driven instructional strategies on international students' language learning outcomes highlights the need for further research in this area. Future studies should investigate the social and cultural contexts in which international students learn, the specific challenges faced by international students in AI-driven language learning environments, and the role of human teachers in supporting international students' language learning in these environments.

##### **Research Gap**

A significant research gap exists in addressing the linguistic challenges that hinder international students' academic success and social integration in Australian universities (Arkoudis et al.,

2013; Kettle, 2009). In spite of the growing importance of this issue, the existing literature has only begun to explore the complex relationship between linguistic challenges, academic success, and social integration.

The intersection of AI-driven instructional strategies and language learning outcomes for international students remains a largely uncharted territory (Read, 2015). The scarcity of empirical studies in this area is concerning, particularly given the increasing reliance on technology-enhanced language learning solutions (Chapelle, 2003).

Therefore, it is imperative that we prioritize research in this area to better understand the linguistic challenges faced by international students and to develop effective AI-driven instructional strategies that support their academic success and social integration in Australian universities.

### **Methodology**

This study employed a qualitative research design, to explore the linguistic challenges faced by international students in Australian universities and the potential of AI-driven instructional strategies to enhance their language skills. Data collection methods included semi-structured interviews with international students and language instructors, as well as observations of language classes and analysis of relevant documents and policies. Data analysis procedures involved thematic analysis.

### **Participants and Data Collection Methods**

This study employed a purposive sampling approach, recruiting 20 international students enrolled at a prominent Australian university. To gather rich, qualitative insights, semi-structured interviews were conducted with participants, exploring their experiences with AI-driven instructional strategies and their perceptions of the linguistic challenges encountered during their academic pursuits.

### **Thematic Analysis**

A thematic analysis approach was utilized to analyze the data, informed by Leo van Lier's Ecological Model of Language Learning (2004), as referenced by Kramersch (2002). This theoretical framework facilitated an in-depth examination of the dynamic interplay between individual learners, their learning environments, and broader social contexts, shedding light on the complex factors contributing to the linguistic challenges encountered by international students (van Lier, 2004). The analysis yielded a rich, contextualized understanding of the data, capturing the subtleties and complexities of international students' language learning experiences.

The Ecological Model of Language Learning was selected as the theoretical framework for this study due to its holistic approach to understanding language learning as a dynamic, context-dependent process (van Lier, 2004). This framework's emphasis on the interconnectedness of learner, environment, and social context aligns with the study's focus on exploring the linguistic challenges faced by international students in Australian universities (Kramersch, 2002).

### **Theoretical Framework**

The Ecological Model of Language Learning, proposed by Leo van Lier (2004), provides a holistic framework for understanding the intricate relationships between learners, teachers, and the learning environment in language learning contexts. This model's emphasis on the interconnectedness of learner, learning environment, and social context factors aligns with the thematic analysis approach, allowing for a rich and detailed exploration of the data (Braun & Clarke, 2006).



The Ecological Model of Language Learning comprises three key dimensions:

1. **Learner Factors:** This dimension encompasses the learner's prior experiences, motivations, cognitive abilities, and emotional states, which collectively influence their language learning processes (van Lier, 2004).
2. **Learning Environment:** This component refers to the physical, social, and cultural context in which language learning occurs, including the classroom setting, instructional materials, and technological resources (Kramsch, 2002).
3. **Social Context:** This dimension involves the social relationships and interactions that learners engage in with their peers, teachers, and the broader community, including social support networks, power dynamics, and cultural norms (van Lier, 2004).

The Ecological Model of Language Learning recognizes that language learning is a dynamic and complex process influenced by the interplay between these three components (van Lier, 2004). By considering the learner, learning environment, and social context as interconnected elements, this model provides a comprehensive framework for understanding language learning and informing instructional practices, including the role of AI-driven instructional strategies in supporting language development (Chapelle, 2003).

### **Data Analysis**

**Data Analysis** The semi-structured interviews with international students in Australian universities generated rich, nuanced, and contextualized data, revealing a multifaceted array of factors influencing their linguistic challenges. Through the theoretical lens of the Ecological Model of Language Learning (van Lier, 2004), a thematic analysis of the interview data identified 10 key themes. These themes emerged from the dynamic interplay between learner factors, learning environments, and social contexts, providing valuable insights into the linguistic challenges faced by international students. The thematic analysis involved a systematic and iterative process of coding, categorizing, and identifying patterns in the data. The 10 extracted themes offer a comprehensive understanding of the complexities surrounding language learning in Australian university settings. The following analysis will elaborate on these themes, shedding light on the intricate relationships between learner factors, learning environments, and social contexts that shape international students' language learning experiences.

### **Theme 1: Limited Opportunities for Language Practice**

**Extracted Challenge:** "I struggle with pronunciation because I don't have many opportunities to practice speaking with native speakers."

### **Addressing this Challenge through the Ecological Model of Language Learning**

1. **Learner Factor:** Motivation to improve pronunciation can be fostered through personalized learning plans and incentives.
2. **Learning Environment:** Limited opportunities for speaking practice can be addressed by providing access to language exchange programs, conversation clubs, and online language learning platforms.

**3. Social Context:** Lack of interaction with native speakers can be mitigated by organizing cultural events, social gatherings, and mentorship programs that facilitate interactions between international students and native English speakers.

### **AI-Driven Instructional Strategies to Enhance Language Skills**

1. AI-Powered Language Learning Platforms: Utilize platforms that provide opportunities for speaking practice with native speakers or language exchange partners.
2. AI-Driven Conversation Analysis Tools: Implement tools that provide feedback on pronunciation, grammar, and vocabulary usage.
3. AI-Powered Language Learning Apps: Develop apps that offer personalized language learning plans, interactive exercises, and access to native speaker interactions.

### **Theme 2: Challenges with Accent and Slang**

**Extracted Challenge 2: "I find it hard to understand Australian accents and slang, it's very different from what I'm used to."**

Addressing this Challenge through the Ecological Model of Language Learning

1. **Learner Factor:** Prior language learning experiences can influence learners' ability to adapt to new accents and slang.
2. **Learning Environment:** Exposure to diverse accents and slang can be increased through multimedia materials, language classes, and online resources.
3. **Social Context:** Cultural differences in communication styles can be addressed by promoting cross-cultural understanding and awareness.

### **AI-Driven Instructional Strategies to Enhance Language Skills**

1. AI-Powered Accent and Slang Recognition Tools: Utilize tools that provide personalized feedback and support for understanding diverse accents and slang.
2. AI-Driven Multimedia Resources: Implement multimedia resources, such as videos and podcasts, that expose learners to diverse accents and slang.
3. AI-Powered Language Learning Apps: Develop apps that offer interactive exercises, quizzes, and games to practice understanding diverse accents and slang.

### **Theme 3: Need for Institutional Support**

**Extracted Theme 3: "I wish there were more language support resources available on campus, it would make a big difference for me."**

Addressing this challenge through the Ecological Model of Language Learning:

1. **Learner factor:** Need for language support can be addressed through personalized language learning plans and targeted support services.
2. **Learning environment:** Availability of resources can be increased by providing access to language learning centers, tutors, and online resources.
3. **Social context:** Institutional support for language learners can be promoted through awareness campaigns, support services, and inclusive policies.

### **AI-driven instructional strategies to enhance language skills:**

1. Utilize AI-powered language learning platforms that provide personalized language learning plans, interactive exercises, and access to language support resources.
2. Implement AI-driven language analysis tools that help learners identify areas of improvement and provide feedback.

3. Develop AI-powered language learning apps that offer virtual language support, interactive exercises, and access to institutional resources.

#### **Theme 4: Balancing Language Learning with Other Responsibilities**

**Extracted Theme 4:** "I've been trying to watch more Australian TV shows and movies to improve my listening skills, but it's hard to find the time."

#### **Addressing this Challenge through the Ecological Model of Language Learning**

**1. Learner Factor:** Motivation to improve listening skills can be fostered through personalized learning plans, incentives, and feedback.

**2. Learning Environment:** Access to media resources can be increased by providing streaming services, language learning apps, and online resources.

**3. Social Context:** Balancing language learning with other responsibilities can be addressed by promoting time management skills, flexible learning options, and support services.

#### **AI-Driven Instructional Strategies to Enhance Language Skills**

1. AI-Powered Language Learning Platforms: Utilize platforms that offer flexible learning options, personalized learning plans, and access to media resources.

2. AI-Driven Time Management Tools: Implement tools that help learners manage their time effectively, set goals, and track progress.

3. AI-Powered Language Learning Apps: Develop apps that provide interactive listening exercises, quizzes, and games, and offer personalized feedback and support.

#### **Theme 5: Benefits of Language Exchange Programs**

**Extracted Theme 5:** "I've joined a language exchange club on campus, it's been really helpful to practice speaking with other language learners."

#### **Addressing this opportunity through the Ecological Model of Language Learning:**

**1. Learner factor:** Initiative to seek out language practice opportunities can be fostered through personalized learning plans and incentives.

**2. Learning environment:** Availability of language exchange programs can be increased by providing access to language exchange clubs, online platforms, and social events.

**3. Social context:** Social support from peers can be promoted through language exchange programs, social gatherings, and online communities.

#### **AI-driven instructional strategies to enhance language skills**

1. Utilize AI-powered language exchange platforms that connect learners with native speakers or language exchange partners.

2. Implement AI-driven conversation analysis tools that provide feedback on pronunciation, grammar, and vocabulary usage.

3. Develop AI-powered language learning apps that facilitate language exchange, provide personalized feedback, and offer social support from peers.

#### **Theme 6: Language Anxiety and Self-Consciousness**

**Extracted Theme 6:** "I feel anxious when speaking in class because I'm worried about making mistakes and being judged by my peers."

#### **Addressing this Challenge through the Ecological Model of Language Learning:**

**1. Learner Factor:** Language anxiety can be addressed through personalized learning plans, relaxation techniques, and positive self-talk.

**2. Learning Environment:** Classroom dynamics can be improved by promoting a supportive and inclusive learning environment, encouraging peer feedback and self-assessment.

**3. Social Context:** Peer feedback and judgment can be mitigated by promoting cross-cultural understanding, empathy, and constructive feedback.

**AI-Driven Instructional Strategies to Enhance Language Skills:**

1. Utilize AI-powered language learning platforms that provide personalized feedback, relaxation techniques, and positive reinforcement.
2. Implement AI-driven speech analysis tools that provide constructive feedback on pronunciation, grammar, and vocabulary usage.
3. Develop AI-powered language learning apps that offer anonymous peer feedback, self-assessment tools, and relaxation techniques to reduce language anxiety.

**Theme 7: Effective Use of Technology for Language Learning**

**Extracted Theme 7:** "I've been using a language learning app on my phone to practice vocabulary and grammar, it's really convenient and fun."

**Addressing this opportunity through the Ecological Model of Language Learning:**

1. **Learner factor:** Motivation to practice language skills can be fostered through personalized learning plans, incentives, and feedback.
2. **Learning environment:** Access to technology and digital resources can be increased by providing devices, internet connectivity, and online resources.
3. **Social context:** Self-directed learning and autonomy can be promoted through flexible learning options, online communities, and peer support.

**AI-driven instructional strategies to enhance language skills:**

1. Utilize AI-powered language learning apps that offer personalized learning plans, interactive exercises, and adaptive feedback.
2. Implement AI-driven language analysis tools that provide feedback on pronunciation, grammar, and vocabulary usage.
3. Develop AI-powered virtual learning environments that facilitate self-directed learning, peer collaboration, and teacher support.

**Theme 8: Challenges with Lecturer Accents and Pronunciation**

**Extracted Theme 8:** "I've had trouble understanding some of the lecturers' accents and pronunciation, it's made it hard for me to follow the lectures."

**Addressing this Challenge through the Ecological Model of Language Learning:**

1. **Learner Factor:** Prior experience with diverse accents can be leveraged to help learners adapt to new accents and pronunciation.
2. **Learning Environment:** Academic setting and lecturer styles can be improved by providing support for lecturers to develop inclusive teaching practices.
3. **Social Context:** Institutional support for language learners can be promoted through awareness campaigns, support services, and inclusive policies.

**AI-Driven Instructional Strategies to Enhance Language Skills:**

1. **AI-Powered Accent and Pronunciation Recognition Tools:** Utilize tools that provide personalized feedback and support for understanding diverse accents and pronunciation.
2. **AI-Driven Lecture Transcripts and Subtitles:** Implement AI-driven lecture transcripts and subtitles to help learners follow lectures more easily.
3. **AI-Powered Language Learning Apps:** Develop apps that offer interactive listening exercises, quizzes, and games to practice understanding diverse accents and pronunciation.

**Theme 9: Benefits of Collaborative Learning and Peer Support**

**Extracted Theme 9:** "I've joined a study group with other international students, we help each other with language-related tasks and provide feedback."

**Addressing this Opportunity through the Ecological Model of Language Learning:**

**1. Learner Factor:** Initiative to seek out language support can be fostered through personalized learning plans, incentives, and autonomy.

**2. Learning Environment:** Collaborative learning and peer support can be facilitated through group projects, peer review, and online discussion forums.

**3. Social Context:** Social relationships and community building can be promoted through social events, language exchange programs, and online communities.

**AI-Driven Instructional Strategies to Enhance Language Skills:**

1. Utilize AI-powered collaborative learning platforms that facilitate peer review, feedback, and language support.

2. Implement AI-driven language analysis tools that provide constructive feedback on language use, grammar, and vocabulary.

3. Develop AI-powered language learning apps that offer social learning features, peer support, and community building tools.

**Theme 10: Need for Institutional Commitment to Language Learner Support**

**Extracted Theme 10:** "I wish the university offered more language support services, such as language tutors or mentors, it would really help me improve my language skills."

**Addressing this Challenge through the Ecological Model of Language Learning:**

**1. Learner Factor:** Need for language support and guidance can be addressed through personalized language learning plans, mentoring programs, and tutoring services.

**2. Learning Environment:** Institutional resources and support services can be increased by providing access to language learning centers, tutors, mentors, and online resources.

**3. Social Context:** Institutional commitment to language learner support can be promoted through policies, awareness campaigns, and funding for language support initiatives.

**AI-Driven Instructional Strategies to Enhance Language Skills:**

1. Utilize AI-powered language learning platforms that provide personalized language learning plans, interactive exercises, and access to language support resources.

2. Implement AI-driven language analysis tools that help learners identify areas of improvement and provide feedback.

3. Develop AI-powered language learning apps that offer virtual mentoring, tutoring, and support services, and facilitate connections with peers and language support staff.

**Discussion**

The findings of this study highlight the complexities of language learning in a foreign academic setting. The themes that emerged from the data analysis, such as limited opportunities for language practice, challenges with lecturer accents and pronunciation, and language anxiety and self-consciousness, underscore the need for a supportive learning environment that addresses the diverse needs of international students.

One of the key findings of this study is the importance of providing opportunities for language practice. As Theme 1: Limited Opportunities for Language Practice highlights, international students often struggle to find opportunities to practice their language skills outside of the classroom. This is consistent with the literature, which suggests that language learners need opportunities to engage in authentic language use in order to develop their language skills (Ellis, 2008). To address this challenge, universities can provide language exchange programs,

conversation clubs, and online language learning platforms that facilitate language practice and feedback.

Another significant finding of this study is the impact of lecturer accents and pronunciation on international students' ability to understand and engage with course material. As Theme 8: Challenges with Lecturer Accents and Pronunciation highlights, international students often struggle to understand lecturers with strong accents or unfamiliar pronunciation. This is consistent with the literature, which suggests that language learners may experience difficulties understanding non-standard accents or pronunciation (Jenkins, 2000). To address this challenge, universities can provide support for lecturers to develop inclusive teaching practices, such as providing transcripts or subtitles for lectures, and encouraging lecturers to speak clearly and at a moderate pace.

Language anxiety and self-consciousness were also significant themes that emerged from the data analysis. As Theme 6: Language Anxiety and Self-Consciousness highlights, international students often experience anxiety and self-consciousness when speaking in class or interacting with native speakers. This is consistent with the literature, which suggests that language anxiety can have a negative impact on language learning outcomes (Horwitz, 2001). To address this challenge, universities can provide support services, such as language tutoring or mentoring programs, that help international students build confidence and develop their language skills.

The findings of this study also highlight the importance of providing institutional support for language learners. As Theme 10: Need for Institutional Commitment to Language Learner Support highlights, international students often feel that universities do not provide sufficient support for language learners. This is consistent with the literature, which suggests that institutional support is critical for language learners' success (Arkoudis, 2014). To address this challenge, universities can provide language support services, such as language tutoring or mentoring programs, and promote awareness of the importance of language support among faculty and staff.

Finally, the findings of this study highlight the potential of technology to support language learning. As Theme 7: Effective Use of Technology for Language Learning highlights, international students often use technology, such as language learning apps or online resources, to support their language learning. This is consistent with the literature, which suggests that technology can provide opportunities for language practice, feedback, and self-directed learning (Chapelle, 2003). To address this challenge, universities can provide access to technology, such as language learning platforms or apps, and promote the use of technology to support language learning.

In conclusion, the findings of this study highlight the complexities of language learning in a foreign academic setting. Through providing opportunities for language practice, addressing challenges with lecturer accents and pronunciation, supporting language learners, and leveraging technology, universities can help international students overcome the challenges of language learning and achieve their academic goals.

## **Results**

The findings of this study revealed that international students in Australian universities face significant linguistic challenges, including pronunciation difficulties, limited vocabulary, and grammatical inaccuracies. Additionally, cultural and social factors, such as differences in communication styles, social norms, and learning expectations, were found to exacerbate these

challenges. These findings highlight the need for targeted support strategies to address the complex linguistic needs of international students.

To address these challenges, this study proposes the development of AI-driven instructional strategies that provide personalized, adaptive, and immersive language learning experiences. For instance, AI-powered speech recognition tools can be used to improve pronunciation, while adaptive vocabulary building software can help learners expand their lexical repertoire. Moreover, AI-driven chatbots and virtual learning environments can facilitate authentic communication practice and provide culturally sensitive feedback. Leveraging these AI-based strategies, educators can create more effective and supportive language learning environments for international students

### **Key Findings**

#### **i. Language-Related Challenges**

International students encounter significant language-related challenges, including limited opportunities to practice language skills outside the classroom (van Lier, 2004). They struggle to comprehend lecturers with strong accents or unfamiliar pronunciation and experience anxiety and self-consciousness when speaking in class or interacting with native speakers (Kramsch, 2002). Furthermore, they find it challenging to understand Australian accents and slang.

#### **ii. Institutional Support and Resources**

International students require tailored institutional support and resources to succeed in their language learning (Garcia, 2013). Personalized language learning plans can address their individual needs, while support services can facilitate adaptation to Australian culture and academic expectations (Li et al., 2019). Universities can provide language support services, academic advising, and cultural adaptation programs to help international students overcome language-related challenges.

#### **iii. Social and Learning Environment**

The social and learning environment significantly influences international students' language learning experiences (Chapelle, 2003). Collaborative learning and peer support foster language skills development and confidence building. Technology offers flexible and accessible learning opportunities (Garcia, 2013), but international students often struggle to balance language learning with other academic and personal responsibilities. This highlights the need for universities to provide support services that cater to their diverse needs.

#### **Future Recommendations**

Universities play a crucial role in enhancing international students' linguistic and academic experiences (Garcia, 2013). To achieve this, universities should implement targeted support services and inclusive teaching practices (Li et al., 2019). Effective support services, such as language tutoring and mentoring programs, can help international students overcome linguistic challenges (Chapelle, 2003). Lecturer training programs can also promote inclusive teaching practices. Furthermore, universities can leverage Artificial Intelligence (AI) to provide personalized language learning support, adaptive assessments, and real-time feedback (Chapelle, 2003). Strategic integration of AI-powered tools, cultural adaptation programs, and online platforms can foster a supportive and inclusive learning environment, ultimately enhancing the experiences of international students (Kramsch, 2002).

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