

Survey And Recommendations On The Usage Of Chinese Learning Apps

Yu Dai

College Of Teacher Education, Quzhou University, Quzhou, Zhejiang, China

Abstract

Sinology originates from China yet belongs to the world, representing a shared spiritual treasure of all humanity^[1]. Against the backdrop of the convergence between the “Chinese language boom” and the information age, mobile learning plays a vital role in international Chinese language education^[2], necessitating further refinement and development of Chinese learning apps. Concurrently, the 2024 World Chinese Language Conference hosted a parallel session titled “New Era, New Opportunities: Promoting High-Quality Development of ‘Chinese + Vocational Skills’ Education” in Beijing. This forum focused on overseas demand, platform development, opportunities, and challenges within “Chinese + Vocational Skills” education, thereby broadening the application scope of Chinese learning apps^[3]. Therefore, gaining a deep understanding of Chinese learners’ educational needs and usage feedback to provide higher-quality personalized learning services is particularly crucial for the dissemination of the Chinese language. This study aims to comprehensively collect psychological perceptions and objective suggestions from the primary group of Chinese learners—university students—regarding Chinese learning apps. These areas include learning content arrangement, overall interface design, course service functions, advertising and payment methods, and specific learning outcomes, utilizing research methods such as questionnaires and interviews. Finally, based on the survey findings, this study synthesizes and analyzes the data to propose actionable recommendations for improving Chinese learning apps in two key areas: user feedback and usage needs. These insights aim to provide developers with design guidance while equipping learners with more efficient and convenient learning tools. This approach aligns with policy directives to accelerate digital transformation and build more precise, effective international communication capabilities^[4], thereby advancing the exchange and progress of the Chinese language and culture.

Keywords: Chinese learning app; questionnaire survey; interview survey

Date of Submission: 01-01-2026

Date of Acceptance: 11-01-2026

I. Introduction

Research Background and Significance

Research Background

In the course of globalization, international Chinese language education has ushered in unprecedented development opportunities. Through Sino-foreign cooperation, China has established 533 Confucius Institutes

and 1,140 Confucius Classrooms in 150 countries and regions, continuously enhancing the influence of Chinese culture^[5]. Data indicates that by the end of 2023, 85 countries worldwide had incorporated Chinese into their national education systems, with over 190 countries offering Chinese language instruction. Globally, more than 30 million people outside China are currently learning Chinese^[6]. The surging enthusiasm among global Chinese learners and the continuous growth of international Chinese language education create an urgent need for expanded educational resources.

Mobile learning represents an innovative educational model in the internet era. Specifically, learning via smartphone apps not only supports teachers in conducting diverse teaching activities but also aids Chinese learners in self-study and practice outside of class—advantages unattainable through traditional teaching methods^[7]. Furthermore, leveraging smartphones as mobile platforms offers significant convenience and innovation. For Chinese learners, whether driven by professional or exam requirements, or simply by personal interest, Chinese learning apps have become essential tools in their studies. Therefore, gaining a deep understanding of Chinese learning apps to identify the feedback and needs of different types of learners during their usage is particularly important. This study aims to analyze the perceptions and suggestions of international university students regarding Chinese learning apps through questionnaire surveys and interviews. While providing more convenient services for Chinese learners, it also offers references and suggestions for the future design and improvement of Chinese learning apps, further promoting the international dissemination and development of the Chinese language.

Research Significance

The international status of Chinese continues to rise. Since 2021, Chinese has officially become an official language of the United Nations World Tourism Organization^[8]. Amidst the “Chinese language boom” and the wave of social informatization, Chinese learning apps have played a significant role in the development of international Chinese. Therefore, research and surveys on the target users, feedback, and needs of Chinese learning apps will help refine and improve app design, provide users with more comprehensive features and services, deepen international learners' understanding of Chinese and appreciation of Chinese culture, and promote the development of international online Chinese education.

Research Methods

Questionnaire Survey Method

The questionnaire survey method is a form of social research that involves designing detailed questionnaires to collect data and employing sociological statistical methods to quantitatively describe and analyze respondents' genuine answers, thereby obtaining survey results^[9].

Interview Survey Method

Interview survey method refers to a research approach where interviewers conduct face-to-face oral conversations with respondents using a structured questionnaire. This method collects objective and accurate behavioral and psychological responses from respondents during the interview process, with the respondents serving as a representative sample of the population^[9].

II. Design And Survey Of Chinese Learning App Usage

Survey Questionnaire Design and Implementation

Survey Questionnaire Design

This study first identified college students as the target group for the questionnaire survey. Subsequently, it developed a questionnaire primarily consisting of objective questions supplemented by subjective ones, covering four aspects: personal information, usage motivation, specific usage patterns, and feedback/suggestions. The survey was conducted via online distribution to collect data on college students' frequency of use and effectiveness of Chinese learning apps. Finally, the data was organized and analyzed to understand the overall perceptions of college students toward Chinese learning apps.

Survey Results and Analysis

After excluding a small number of invalid questionnaires, this study collected approximately 100 valid samples. The following presents the survey results and analysis for single-choice questions (Questions 1-8), multiple-choice questions (Questions 9-10), and open-ended questions (Question 11):

Question 1: What is your grade level?

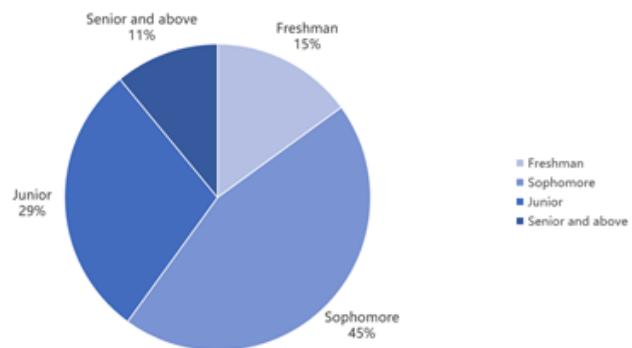


Figure 2-1: What grade are you in?

Considering that users from different grade levels may have varying interpretations and requirements for product design, this questionnaire includes grade-specific questions. As shown in Figure 2-1, the majority of respondents were second-year students (45%), followed by third-year students (29%), first-year students (15%), and fourth-year students and above (11%).

Question 2: What is your purpose for learning Chinese?

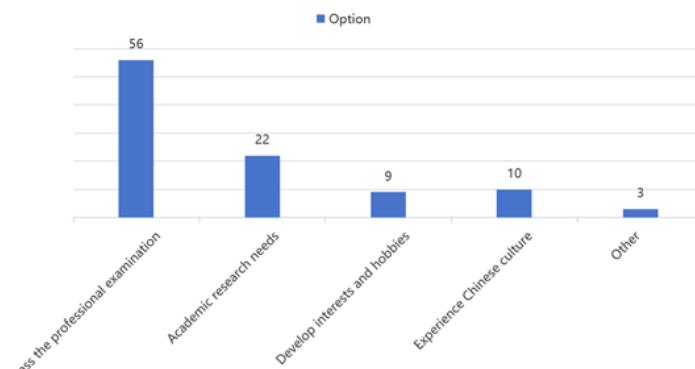


Figure 2-2: What is your purpose for learning Chinese?

Different learners have different learning objectives. As shown in Figure 2-2, the primary purpose for 78 university students learning Chinese is to pass professional exams or meet academic research requirements, which falls under non-voluntary learning. This indicates that university students' motivation for learning Chinese is relatively low.

Question 3: Have you used Chinese learning apps (e.g., Duolingo, Pleco) to study Mandarin?

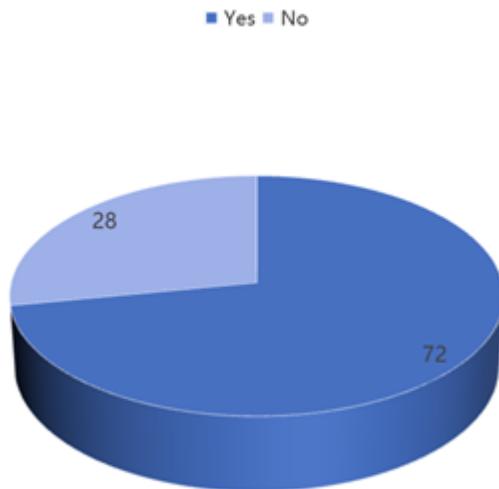


Figure 2-3: Have you used Chinese learning apps (e.g., Duolingo, Pleco) to study Mandarin?

Figure 2-3 data indicates that the vast majority of Chinese learners utilize Chinese learning apps for their studies, with only 28 individuals having never used one. This highlights the popularity of Chinese learning apps among college students.

Question 4: How frequently do you use Chinese learning apps?

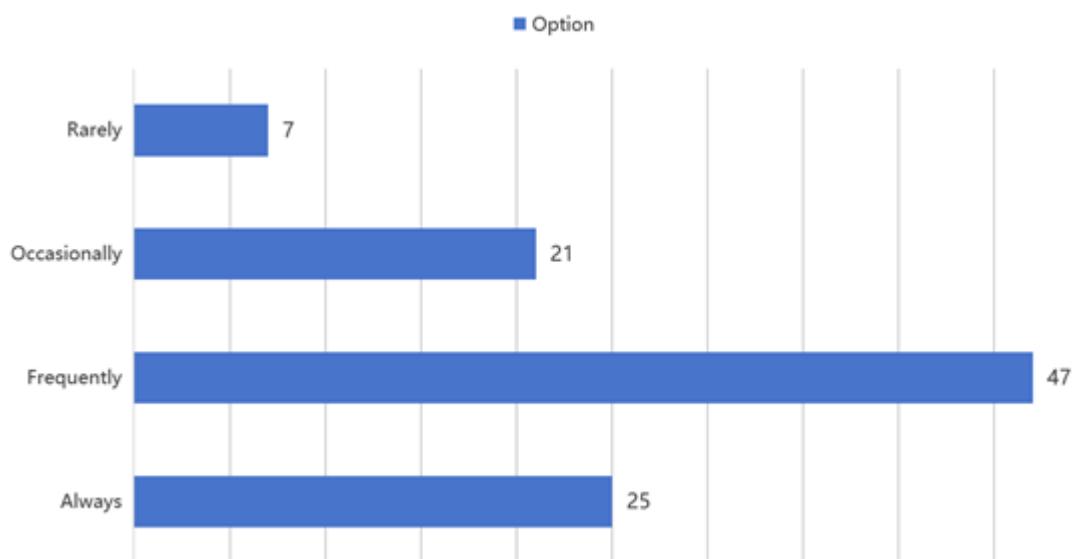


Figure 2-4: How often do you use Chinese learning apps?

According to the data in Figure 2-4, 72 college students use Chinese learning apps more than three times per week, with 25 students using them five or more times weekly. Only seven students use them less than once per week. This indicates that while college students may lack initiative in Chinese learning, the monitoring capabilities of Chinese learning apps can effectively support self-disciplined study.

Question 5: Which of the following Chinese learning apps have you used?

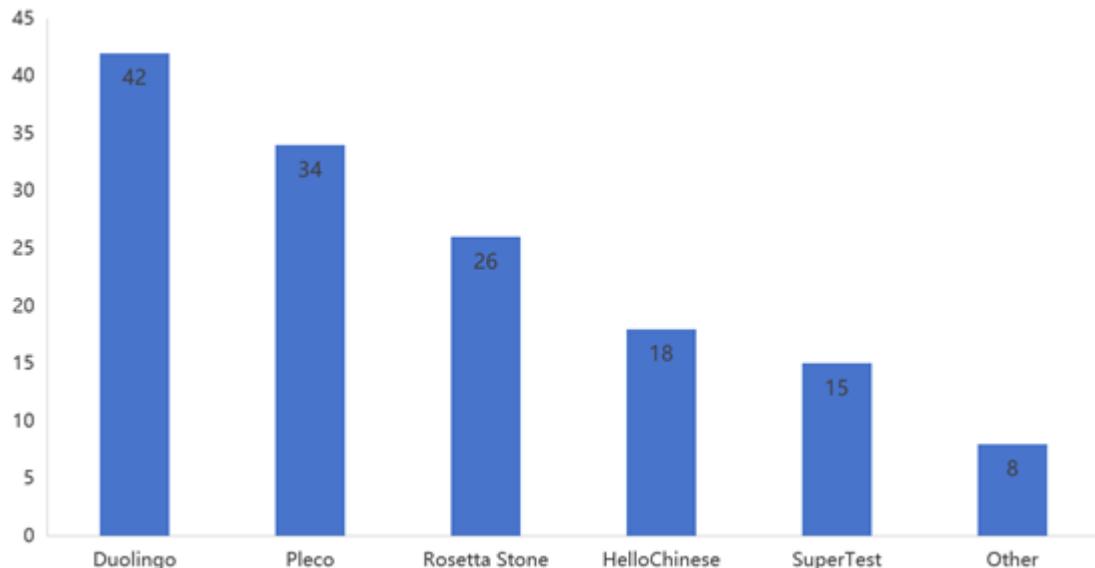


Figure 2-5: Which of the following Chinese learning apps have?

As shown in Figure 2-5, the most popular Chinese learning app among college students is Duolingo, followed by Pleco, Rosetta Stone, HelloChinese, SuperTest, or other Chinese learning apps. Duolingo offers a highly engaging learning experience, while Pleco provides more professional learning and review features. This indicates that college students place high value on both the fun and professional aspects of Chinese learning apps.

Question 6: In what ways do you find the Chinese learning app you use most helpful?

Option	Vocabulary memory	Listening comprehension	Grammatical parsing	Chinese character writing	Oral pronunciation	Chinese culture
Number of people	55	12	14	5	17	4

Figure 2-6: In which aspects do you find the Chinese learning app you use most helpful ?

Figure 2-6 shows that 55 respondents believe Chinese learning apps are highly effective for vocabulary memorization, indicating a strong demand among college students for vocabulary retention. These apps demonstrate robust functionality in vocabulary acquisition, review, and practice. Regarding listening comprehension, grammar analysis, and spoken pronunciation, the assistance provided by various Chinese learning apps varies. Only 5 and 4 respondents, respectively, found significant help with Chinese character writing and Chinese culture, indicating functional gaps in these areas for Chinese learning apps.

Question 7: In which aspects do you feel the aforementioned methods still fall short in assisting you?

Option	Vocabulary memory	Listening comprehension	Grammatical parsing	Chinese character writing	Oral pronunciation	Chinese culture
Number of people	9	16	37	18	20	24

Figure 2-7: In what aspects do you feel the above approaches still fall short in helping you?

The survey revealed that 37 respondents felt the grammar analysis features of Chinese learning apps were insufficient, indirectly highlighting the significant demand among college students for grammar instruction and the current inadequacy of such functions in these apps. Additionally, 24 respondents noted a lack of support for Chinese cultural aspects, indicating that the cultural depth of these apps requires improvement. Regarding listening comprehension, grammar analysis, and pronunciation practice, Chinese learning apps can further refine these areas. Only 9 respondents felt vocabulary memorization support was inadequate, indicating most apps already provide solid assistance in this domain.

Question 8: What approach do you believe would most effectively address the issues mentioned above?



Figure 2-8: What do you believe would be the most effective way to help you resolve the above issues?

According to Table 2-8, 53 respondents expressed a desire to resolve their challenges by enhancing the functionality of Chinese learning apps themselves, indicating a certain degree of reliance on such apps among college students. Approximately 30 individuals believed that intensifying Chinese practice or enrolling in Chinese courses could effectively address these difficulties, revealing a strong utilitarian mindset focused on efficiency and rapid mastery. Meanwhile, 19 respondents would opt for entertainment activities related to Chinese culture, such as watching Chinese films or listening to Chinese music, to subtly cultivate Chinese-language thinking.

Question 9: If you were to develop a Chinese learning app today, which features would you prioritize? Why?



Figure 2-9: Word Cloud of Subjective Questions in the Survey Questionnaire

By extracting keywords from subjective responses and plotting their frequency, the word cloud above reveals that terms like “vocabulary memorization,” “past exam practice,” “grammar,” “course study,” and “Chinese culture” appear most frequently, each occurring 10 times or more. Keywords like “social interaction,” “accountability check-ins,” “listening practice,” “speaking practice,” and “mock exams” appeared next most frequently, each occurring 5 to 10 times. Keywords such as “writing practice,” “translation,” “entertainment,” “idioms,” and “AI practice partners” appeared least frequently, each occurring fewer than 5 times. In summary, most college students desire a Chinese learning app that combines efficient test-prep learning with cultural, entertainment, and social features.

Design and Implementation of Interview Questionnaires

Interview Questionnaire Design

This study first identified international students who frequently or infrequently use Chinese learning apps as interview subjects. Subsequently, a structured interview outline was developed covering three dimensions: usage needs, user experience, and suggestions. Interviews were conducted to gather international students' responses regarding interface design, content organization, technical difficulties, functional features, and pricing models of Chinese learning apps. Finally, the findings were synthesized and analyzed to discuss the overall perceptions of international students toward Chinese learning apps.

Interview Questionnaire Findings and Analysis

Interviews with four high-frequency and four low-frequency users revealed distinct patterns: High-frequency users primarily engaged with academic-oriented apps like Pleco and HelloChinese at least five times weekly. Their main challenges centered on Chinese phonetics and intonation, idioms, proverbs, and cultural narratives. Low-frequency learners typically used fun apps like Duolingo, with usage frequency at or below four times per week. Their learning challenges were mostly superficial aspects like vocabulary, writing, and grammar. High-frequency learners had higher demands for app professionalism and learning content, were

willing to pay for premium features, and were also willing to recommend their apps to others. Low-frequency learners prioritize app entertainment value, interface design, and ad-free environments, showing less willingness to pay extra. Some recommend their apps, while others deem it unnecessary. Both groups share two common suggestions for existing Chinese learning apps: first, enrich learning content and features; second, avoid excessive pricing and offer free access to core services.

Summary and Analysis of Survey Findings

Feedback on Chinese Learning Apps

Most users exhibit low engagement levels, struggling to sustain consistent motivation and enthusiasm. They desire enhanced incentive and reward systems to promote self-directed learning.

Apps perform well in vocabulary memorization, pronunciation practice, grammar analysis, and listening comprehension, but lack features for Chinese cultural studies and character writing, resulting in insufficient cultural depth overall.

Entertainment-focused apps often lack professionalism—for example, Duolingo's level-based learning mode is novel and engaging, but its grammar analysis occasionally contains errors. Professional apps offer rigorous, scientific, and comprehensive knowledge but are typically dry and uninspiring—like Pleco, which boasts powerful and accurate search capabilities but relies on a single-mode approach that makes learning less enjoyable.

Chinese Learning App Usage Needs

High-frequency users increasingly seek Chinese cultural immersion and character writing practice. They may even engage in one-on-one conversations with Chinese speakers, watch Chinese films, or listen to Chinese music during their free time to satisfy these needs. They demand greater linguistic depth, which is difficult to achieve solely through Chinese learning apps.

Low-to-medium frequency users prioritize academic expertise, such as grammar analysis and vocabulary memorization techniques. They implicitly demand scientific rigor, accuracy, and comprehensiveness in content, typically relying on specialized apps like Pleco.

Some low-frequency users prefer highly engaging Chinese learning apps (e.g., Duolingo) to sustain their enthusiasm for learning Chinese. The needs of these low-frequency users are largely met by currently available Chinese learning apps.

Additionally, specialized knowledge required by certain advanced learners is difficult to obtain through apps or requires payment, creating significant learning inconveniences. They must resort to traditional books and reference materials to acquire this knowledge.

III. Existing Issues And Recommendations For Chinese Learning Apps

Existing Issues

User Feedback Aspects

1. Difficulty in Balancing Professionalism and Engagement, Lack of Apps Integrating Both Features

Most Chinese learning apps fall short in learning functionality, struggling to balance professional content design with engaging features, thus failing to meet diverse and personalized needs. For instance, Duolingo's gamified level-based learning is novel and engaging, yet relies heavily on translation and vocabulary drills with occasional grammatical inaccuracies, lacking depth. Similarly, Pleco offers powerful dictionary search

capabilities but features a monochrome interface devoid of images or videos, resulting in a monotonous usage pattern that may become tedious over time and fails to sustain user interest. Currently, few apps on the market effectively blend professionalism with engaging features. There is an urgent need for developers to balance these two characteristics and launch new, comprehensive applications.

2. Insufficient Usage Frequency and Lack of Sustained Motivation

Consistency is key in Chinese learning, and apps' monitoring capabilities play a significant role. However, existing apps' monitoring functions require improvement. For instance, Duolingo uses a green owl named "Duoer" to nag learners into daily check-ins, which can be off-putting. HelloChinese simply sends study notifications that are easily ignored. Pleco lacks such features entirely, relying solely on learners' self-discipline, which often leads to insufficient motivation. To ensure learners persist in their Chinese studies, apps must provide appropriate supervision while also stimulating intrinsic motivation for self-directed learning.

Usage Requirements

1. Cultural and Chinese Character Writing Needs Cannot Be Overlooked

While most Chinese learning apps offer comprehensive features, they often lack corresponding cultural resources. Their role in language-culture exchange falls short of meeting the needs of learners passionate about Chinese culture. Even when apps use images to showcase culture, they often fail to integrate video, audio, or specialized knowledge deeply. Content typically remains superficial—covering landmarks, culinary habits, etc.—while neglecting China's profound traditional heritage like philosophical thought and classical poetry. This falls short of truly conveying cultural significance.

2. Inconvenient or Forced Paid Access to Professional Knowledge

Most Chinese learning apps have relatively limited basic functions, with constraints in course content, feature modules, and interface design. For instance:

- Duolingo requires membership to remove ads and unlock more courses.
- Pleco demands subscription packages for advanced dictionary analysis.
- Rosetta Stone charges high fees for additional language services.

This poses significant inconvenience for university students with limited budgets.

Improvement Recommendations

User Feedback Aspects

For professionalism, Chinese learning apps should incorporate richer specialized vocabularies, integrate more learning functions, and provide more accurate and comprehensive grammar knowledge. Appropriately increasing development costs is necessary to attract more users. Regarding engagement, incentive mechanisms can be added, alongside innovative app icon and interface designs. Incorporating complementary elements like images, videos, animations, and audio can further captivate learners' interest. Ultimately, professional and engaging designs must be integrated to provide personalized service solutions for users.

Regarding usage frequency, apps should leverage supervision and motivation. Daily check-in notifications should avoid overly coercive language to prevent user backlash. Reward and penalty systems can be implemented—for instance, completing daily tasks earns in-app learning coins redeemable for courses or cosmetic rewards, while failure results in losing achievement badges—to stimulate motivation. Simultaneously,

incorporating mini-games like Chinese short stories or poetry word games can fundamentally engage learners' psychological motivations, transforming passive learning into active engagement to foster enthusiasm and persistence.

User Demand Aspect

User demand for Chinese culture signifies the need for cultural functionality integration. This can be developed as an extension beyond academic learning, delving into profound aspects of Chinese excellence like philosophical thought, historical narratives, and classical poetry. Combining these cultural gems with in-app exercises allows learners to grasp the depth of Chinese language heritage during their studies.

Regarding the payment model: First, the entry barrier for paid content should not be excessively high, as overly costly membership fees can easily alienate users. Second, premium content should not be mandatorily bundled with foundational learning materials, as this fails to meet learners' basic educational needs and may be perceived as unreasonable. Instead, supplementary offerings like AI-powered one-on-one tutoring or courses taught by renowned instructors can be provided as optional paid add-ons, allowing learners to choose freely.

IV. Conclusion

Research Summary

Based on the overall usage patterns and feedback from university students, as well as the experiences and psychological perspectives of high-frequency, high-level and low-frequency, low-level international student app users, this study concludes the following key points:

1. Differentiated Content Formats for Diverse Learning Motivations

Liu Zifei (2025) noted in a review of Chinese language learners' motivations that learning motivation is a decisive factor in second language acquisition^[10]. This motivation significantly influences learning drive, manifesting as differences in learning frequency. Interviews revealed that high-frequency learners typically study Chinese out of interest in Chinese culture or personal preference, exhibiting highly intrinsic motivation that enables sustained, efficient learning. Conversely, low-frequency learners primarily use the app for extrinsic reasons such as teacher recommendations, exam preparation, academic course requirements, or research needs. This often leads to low engagement, procrastination, and infrequent study sessions. Therefore, Chinese learning apps should differentiate their content and formats for these two groups with varying levels of motivation, balancing the professional and recreational needs of different learners. For example: For highly motivated learners, the app's primary function should be to deliver specialized knowledge, ensuring efficient learning while minimizing recreational content. For less motivated learners, the app should focus on encouraging and stimulating interest, sustaining enthusiasm for continuous learning, and avoiding tedium.

2. Advertising and Pricing Models Face Some Controversy

Most Chinese learning apps offer premium services—whether expanding course content, unlocking features, or removing ads. While these services provide more convenient personalized learning, they can be relatively expensive for international university students. Some Chinese learning apps display ads that disrupt interface aesthetics, and frequent ad-closing interruptions diminish learning efficiency. Overall, these monetization models and ad placements negatively impact learners' motivation and productivity. Therefore, we urge Chinese learning apps to offer reasonable pricing for university students while minimizing or eliminating

ads to ensure clean interfaces and efficient learning.

3. Lack of Chinese Cultural Features

Most Chinese learning apps focus primarily on four areas: vocabulary memorization, listening comprehension, grammar analysis, and pronunciation practice. Their methods often involve repetitive drills, image-based association memory, and objective/translation exercises—serving exam and academic needs but lacking cultural depth. This hinders the exchange and integration of Chinese and international cultures. To address this, incorporating Chinese cultural exchange communities, daily cultural story posts, and Chinese calligraphy displays can achieve cultural promotion objectives. This approach enhances engagement while subtly deepening language proficiency.

Research Limitations and Future Prospects

This study has several limitations, specifically:

First, the sample of Chinese learning app users was constrained by practical factors, focusing primarily on university students without including teachers or individual learners, which somewhat limits the research findings.

Second, the research team lacked specialists in data analysis and survey statistics, potentially resulting in superficial analysis of the findings, whose practical guidance requires further validation.

Finally, Chinese learning apps are now inextricably linked to international Chinese language education. There is an urgent need for more in-depth scientific research and continuous refinement by developers to provide learners with broader, more comprehensive personalized teaching services, thereby expanding the breadth and depth of Chinese language dissemination worldwide.

Acknowledgements

This research was supported by the following projects:

Quzhou University 2025 National College Student Innovation and Entrepreneurship Training Program Project “International Chinese Education Data Platform: Intelligent Diagnosis and Prediction Model for Multi module Learning Behavior”, Project No. 202511488065.

References

- [1] Xinhua News Agency. Partnering with Sinology to Promote Exchange and Mutual Learning Between Chinese and Foreign Civilizations—President Xi Jinping's Reply Letter Encourages Young Sinologists and International Chinese Language Educators to Contribute Wisdom and Strength to Building a Community with a Shared Future for Mankind [EB/OL]. (2025-12-26)[2024.11.14].http://www.moe.gov.cn/jyb_xwfb/s5147/202511/t20251114_1420289.html
- [2] Wang Rui. A Survey Study on the Application of Chinese Learning Apps in International Chinese Education [D]. Jilin University of Foreign Languages, 2025. DOI:10.27833/d.cnki.gjlhw.2025.000410.
- [3] Guangming Daily. Education: Pioneer, Beneficiary, and Catalyst of Reform and Opening-up [EB/OL]. (2025-12-26) [2018.12.13]. http://www.moe.gov.cn/jyb_xwfb/moe_176/201812/t20181213_363144.html
- [4] China Education Daily. Promoting High-Quality Development of International Chinese Education to Serve the Construction of an Education Powerhouse [EB/OL]. (2025-12-26)[2024.11.13].http://www.moe.gov.cn/jyb_xwfb/moe_2082/2024/2024_zl13/202411/t20241113_1162611.html
- [5] People's Daily Overseas Edition. Learning Chinese, Experiencing China [EB/OL]. (2025-11-10) [2024.11.21]. <https://confer>

ence2024.chinese.cn/newsDetail?id=121

[6] People's Daily Overseas Edition. "Meeting in China, Bringing Hearts Together" [EB/OL]. (2025-11-10) [2024.11.21]. <https://conference2024.chinese.cn/newsDetail?id=120>

[7] Du Xiaoyang. Comparative Analysis and Application Strategies of Mobile Chinese Learning Apps [D]. Henan University, 2024. DOI:10.27114/d.cnki.ghnau.2024.000720.

[8] China.org.cn. Ministry of Education: Over 70 Countries Incorporate Chinese into National Education Systems; Foreign Chinese Learners Exceed 20 Million [EB/OL]. (2025-12-26)[2021.06.12].http://www.moe.gov.cn/fbh/live/2021/53486/mtbd/202106/t20210602_535196.html

[9] Peidi Na. Introduction to Educational Research Methods [M]. Hefei: Anhui Education Press, 1995.

[10] Liu Zifei. A Review of Research on Learning Motivation Among Chinese Language Learners [J]. Jiaying Literature, 2025, (02): 86-88.