

# The Impact of Social Media the Dissemination and Teaching of Mandarin Language: A Systematic Review

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## Abstract

In the current digital landscape, social media has emerged as a vital conduit for the dissemination of information and the sharing of resources, demonstrating significant potential for language acquisition. This investigation delves into the impact and utility of social media in the arena of learning mandarin as a second language. Through a systematic examination of 29 scholarly articles, this study concentrates on the strategic employment of various social media platforms, including WeChat and Facebook, to furnish learners of mandarin with an authentic and immediate educational milieu, thereby facilitating the enhancement of their communicative proficiency. The sentence examines the unique characteristics and limitations of various digital learning environments in Mandarin language education. It suggests strategies to overcome cultural and technological challenges, aiming to improve teaching methods and the spread of the Mandarin language. The insights gleaned from this research will furnish mandarin language instructors and digital media analysts with a framework to foster pedagogical innovation in the digital epoch.

**Keyword:** mandarin, language, Chinese, social media, intercultural communicative

## 1. Introduction

### 1.1 Background

In the digital age, social media has been woven into the fabric of everyday life, emerging as a pivotal platform for the exchange of information and sharing of resources, as evidenced by Naeem (2019). The trajectory from early newsgroups and bulletin boards to modern social networking sites like Facebook and Twitter epitomizes the relentless innovation in information technology that enhances social interaction (AKATAMA, 2021). Notably, the advent of Web 2.0 technologies has democratized user engagement and content dissemination, offering language learners a repository of materials and avenues for practice, thus facilitating the practical enhancement of language skills (Malinee & Senthamarai, 2020; Biletska, 2021).

Mandarin, as a global language, has witnessed a surge in its uptake as a foreign or second language (Wang, 2023). Mandarin is mostly used to refer to a standardized form of the Chinese language, Modern Standard Chinese or Mandarin (Kaltenegger, 2020). The language is based on the pronunciation of the Beijing region of China and has been established as the official language of China (Kurpaska, 2019). As the most widely spoken dialect of the Chinese language family, Mandarin is the mother tongue of hundreds of millions of people and has been widely learned as a second language both within and beyond China's borders over the last twenty years (Du, 2013; Gong, 2020). In 2018, the Chinese Ministry of Education reported over half a million international students participating in various courses and immersion programs across more than 820 educational institutions in China (Ministry of Education, 2019). Moreover, the advent of COVID-19 referred to here as Crown Pneumonia Nova, has necessitated the transition to online language learning for international students due to travel restrictions and safety protocols (Ministry of Education, 2020; Gong, 2020; 2022).

Under these circumstances, social media has stepped in as an informal educational tool, offering learners accessible interactions with native speakers, opportunities for language exchange, and exposure to authentic contextual materials

(Peters, 2020). This informal modality not only underpins the communicative and collaborative endeavors within the global learning community but also serves as a testament to the versatility and resilience of language education in times of crisis (Dai & Elliot, 2023). Social media, often defined as a range of digital technologies and platforms that allow users to generate, share, comment, and modify content, has become an essential channel for informal learning (Greenhow & Lewin, 2019)). On these platforms, such as WeChat (Jin, 2018; Ruan & Medwell, 2020; Zhang & Zhao, 2020), DouYin (TikTok) (Lee, 2023; Huang & Lammers, 2022), and Facebook (Wang et al., 2022; Manca, 2020) and Twitter (Wang et al., 2022; Reinhardt, 2019), where users can not only access and exchange information but also learn and improve skills through social interactions (Wang et al., 2022;). This type of learning applies to language learning as it ensures that learners practice and enhance their language skills informally through interactions and exchanges in real-world contexts (Jin, 2018; Ruan & Medwell, 2020). A traditional classroom setting does not constrain these interactions and provides individuals with flexibility and control, enabling them to learn autonomously and according to their interests and needs (Manca, 2020). Therefore, social media as an effective tool for informal learning deserves to be explored in depth by researchers (Wang et al., 2022; Manca, 2020).

Academically, learning mandarin as a second language pertains to the process whereby non-native speakers acquire language skills in a specific educational setting, tailored for distinct objectives (Gong et al., 2020). The primary research subjects are individuals from non-Chinese cultural backgrounds who undertake the study of mandarin for a variety of reasons including academic advancement, economic pursuits, and cultural interactions (Zhong et al., 2021).

In the digital era, social media has become a vital tool for enhancing language proficiency, offering an informal learning environment (Yadav, 2021). Such platforms enable rich, real-world linguistic application through routine social engagement and information sharing (Godwin-Jones, 2019). They extend educational resources beyond conventional classrooms, providing learners with opportunities to practice language in authentic settings (Jin, 2018; Ruan & Medwell, 2020). Accordingly, examining social media's efficacy as an informal learning modality is critical in language education research, a pursuit that not only seeks to refine pedagogical strategies but also substantiates language acquisition theories and clarifies the impact of informal learning contexts (Feng & Yamada, 2021).

Research into the educational utility of social media has primarily focused on individual digital tools, such as specific educational apps or online platforms (Van Den Beemt, 2020; Lambton-Howard, 2021). Despite this focus, learners use a broader range of digital environments today. Each platform offers unique advantages and challenges for teaching Mandarin as a second language. For instance, some platforms might excel in interactive communication but need more comprehensive grammar training (Yadav, 2021).

There is a crucial need to explore how these various platforms operate together. Current studies typically investigate single platforms in isolation (Zaw, 2018). This approach overlooks how integrating insights from multiple platforms could enhance Mandarin language learning (Zhao and Flewitt, 2020). For example, feedback from a language learning app might show high user engagement but might translate to ineffective learning on social media platforms where distractions are more frequent.

The primary aim of this study is to perform a systematic and in-depth examination of diverse digital learning platforms used in Mandarin language education. This includes analyzing the type of feedback these platforms generate and their impact on language learning. For example, this study compares feedback effectiveness on a video-based platform like YouTube to a text-based platform.

By conducting this analysis, the research seeks to offer a detailed understanding of how digital tools are practically used and their value in teaching Mandarin. This study will help fill the research gap by providing a comprehensive view of how different digital tools can be integrated to improve language education.

This study addresses a significant gap in the literature by contextualizing this research within the broader digital education landscape. It moves beyond the limitations of focusing on single platforms by comparing and synthesizing the effectiveness of various digital tools. This comprehensive approach advances our understanding by highlighting which digital strategies are most effective for Mandarin language acquisition.

In conclusion, this study connects to existing research and pushes the field forward by exploring under-studied areas of digital learning. The findings will inform educators about which digital tools work best together, helping to optimize educational strategies for Mandarin language learners."

This passage uses simple, short sentences to explain the research focus, provides specific examples, and discusses how the study relates to and advances the broader field of digital education studies.

### *1.2 Research Proposal*

The research objective of this study is to explore the mandarin language dissemination process and teaching characteristics of new media platforms in the digital environment. First, this study will elaborate on the communication

characteristics of significant new media platforms, aiming to summarize how these platforms filter, organize, and optimize the many dispersed digital learning resources to meet the specific needs of various learners. The study will explore how second language learners and native speakers of mandarin establish effective communication mechanisms in social media, how to maintain and increase learners' engagement and motivation in such environments, and what social media's drawbacks are as a double-edged sword for language learners. Although preliminary explorations exist on language education on new media platforms in current academic circles, global and systematic studies still need to be completed. Therefore, by systematically analyzing different types of social media platforms, this study will seek to clarify how to make full use of the characteristics of these platforms for efficient mandarin language teaching and to propose practical strategies for evaluating their dissemination effects.

**2. Research Method**

*2.1 Search Strategy*

Figure 2.1 Prisma flow diagram show that the databases used for the literature search were Scopus and Web of Science, with indexing terms set to "social media," " mandarin," and "second language." Indexing was limited to the last six years and conformed to the PRISMA 2020 statement. The following principles guided the search.

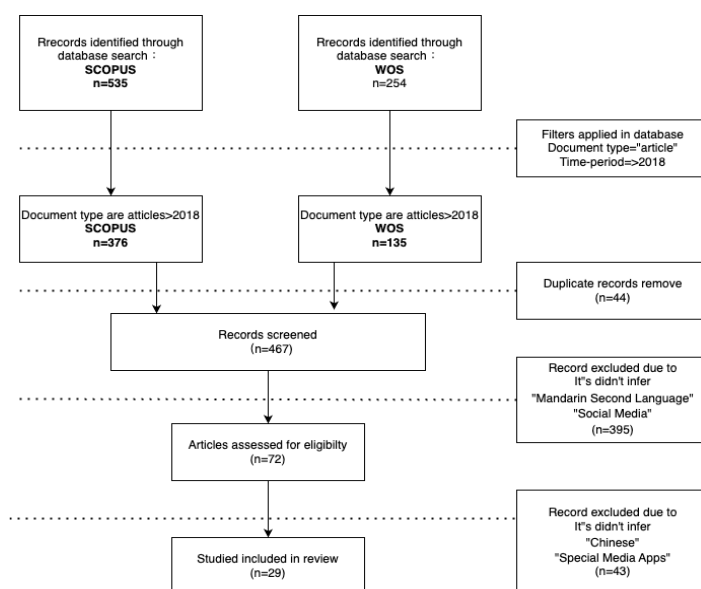


Figure 2.1. Prisma Flow Diagram

First, the article must be original and contain the most original data. In addition, the article must be peer reviewed. This ensures that the article contains information that is helpful to our study and ensures its quality. The most crucial point is that since the time control of this study was from 2018 to 2023, it first excluded studies outside its scope. From 789 articles (from Scopus, Web of Science), 467 were retained for further screening.

Second, to ensure the unity of the theme of this study, the themes of these articles must include social media, language, Chinese, and Mandarin. If an article did not include these three themes, it was excluded to ensure that the screened literature was consistent with the theme of this paper-these two sets of keywords involved two screenings, which excluded 395 articles and retained 72 articles in table 2.1.

Table 2.1. The Search Strings

Scopus	(TITLE-ABS-KEY (Mandarin Language) ) AND (Social Media) AND (Chinese) AND (Intercultural Communicative) AND (WeChat) AND (Facebook) AND (TikTok) AND ( LIMIT-TO (PUBYEAR, 2023) OR LIMIT-TO (PUBYEAR, 2022 ) OR LIMIT-TO (PUBYEAR, 2021) OR LIMIT-TO (PUBYEAR, 2020) OR LIMIT-TO (PUBYEAR, 2019 ) OR LIMIT-TO (PUBYEAR, 2018) AND (LIMIT-TO (PUBSTAGE, "final") ) AND (LIMIT-TO (DOCTYPE , "ar" ) ) AND (LIMIT-TO (Subjarea, "soci") ) AND (LIMIT-TO (LANGUAGE , "English") )
WOS	Results for ((TS= (Mandarin Language) AND (Social Media)) AND TS= (Chinese) and Article or Review Article (Document Types) and English (Languages)

**3. Result**

*3.1 Time*

As shown in Figure 3.1, the range of years of literature covered in this paper is 2018-2023. Because 2023 is ongoing,

the literature in this period must be complete and have research value. This part will analyze the relevant literature before 2018-2024, explore the research themes of different years from the time dimension, and sort out the research lineage of social media and Mandarin language communication.

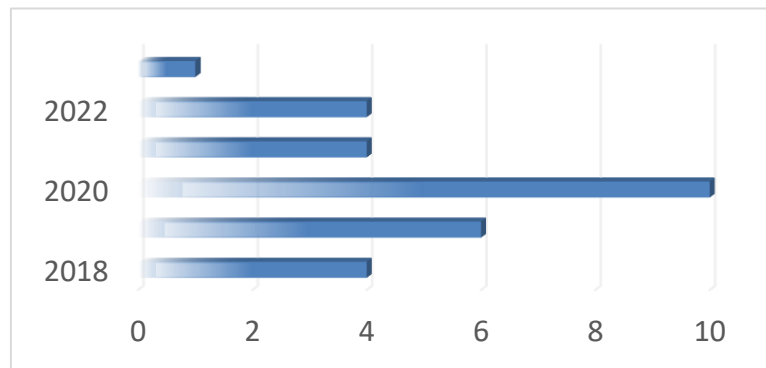


Figure 3.1. Timeline of the Impact of Social Media on Mandarin Language Communication

A total of four articles were published in 2018, covering topics such as Indian university students learning Japanese and Mandarin through social media (Carter et al., 2018), young children in Singapore enriching language environments through social media (Winskel et al., 2018), how mobile technology can be used to support the understanding of collaborative learning among second and foreign language students (Kukulka-Hulme & Viberg, 2018) and overseas students in China improving their mandarin language proficiency through WeChat (Jin, 2018)

Six articles were published in 2019 on topics such as the development of social media and how social computers can aid language learning (Reinhardt, 2019), elementary and middle school students' improvement of mandarin writing through social media (Nee et al., 2019), some factors affecting the tendency of college students to use Facebook for different educational purposes (Toker & Baturay, 2019), the efficiency of WeChat-based learning in teaching mandarin as a foreign language (CFL) (Huang, 2019), an investigation into whether university students learning Mandarin as a foreign language find WhatsApp a valuable medium for enhancing and improving listening skills (Ghee, 2019), how learners can improve their reading level by reading Twitter articles (Jacob & Uitdenbogerd, 2019).

Ten articles were published in 2020 on topics such as analyzing whether and how social media platforms have become an integral part of teaching and learning in higher education (Manca, 2020) How social networking technologies can promote intercultural communicative competence among learners of mandarin as a foreign language (Ruan & Medwell, 2020), the dissemination of mandarin language in the national language (Mandarin) for transnational diaspora communities (Zhang & Zhao, 2020) Young children in Chinese immigrant families interact with distant family and friends on social media (Zhao & Flewitt, 2020) How Chinese teachers implement WeChat-supported language tasks (Tong & Zhou, 2020) Using WhatsApp Groups for online learning (Wargadinata et al., 2020) The effect of the application of learning Chinese idioms through social media students' schools (Ningsih & Aoyan, 2020) The impact of social media technology on improving learners' performance (Chua, 2020). The impact of social media platforms on Indonesian mandarin learners' learning of Mandarin (Ying, 2020). The effect of video as an essential form of second language input for mandarin learners in Singapore University (He, 2020).

Four articles were published in 2021 on the topics of investigating the effectiveness of using WhatsApp Messenger as a pedagogical tool to improve listening skills (Hoe, 2021), investigating learners' attitudes towards the WhatsApp application and their intentions to use it in the future (Khan et al., 2021), the impact of social media on the learning process in elementary school and especially the influence of Mandarin (Ying et al., 2021), and the role and impact of YouTube videos in language education (Vargas-Urpí & Xu, 2021).

A total of four articles were published in 2022, covering topics such as the impact of social media on language learning among Vietnamese university students (Wang et al., 2022), how informal m-learning communities can increase higher education students' local cultural awareness through social media (Tong et al., 2022), the impact of pedagogical methodologies and instructional media utilized in the online learning process (Diana & Sutandi, 2022), and the agency of traditional and nontraditional university mandarin language learners in the informal video learning process (Huang & Lammersb, 2022).

There is one article on the creative use of social media in informal language learning (Lee, 2023). The amount of literature shows a clear growth trend between 2018 and 2021. Only four articles were published in 2018; by 2020, this number had increased to ten. This growing trend reflects the increased awareness of the role of online learning and social media in language transmission and learning due to the new crown epidemic. The epidemic has forced

educational institutions and learners to look for new avenues of distance learning, with social media platforms becoming essential tools due to their wide accessibility and interactivity.

The thematic studies in different years show an expansion from specific social media applications (e.g., WeChat and WhatsApp) in specific language learning to the role of social media in the broader educational context. For example, the 2019 study focuses on improving Chinese writing proficiency through social media and the concept of social computer-assisted language learning, while the 2020 study extends to the role of social media in teaching and learning in higher education and its impact on the development of intercultural communicative competence.

The change in research themes from 2018 to 2023 reflects the gradual deepening of researchers' understanding of integrating social media and language communication. Initially, there are two research themes focused on the direct application of social media as a language learning tool (Carter et al., 2018; Winskel et al., 2018), and over time, four articles gradually focused on how social media contributes to the overall advancement of language education (Jin, 2018; Reinhardt, 2019; Nee et al., 2019; Ghee, 2019) and nine articles show how it can provide learners with opportunities for intercultural communication in both informal and formal educational settings (Jin, 2018; Kukulska-Hulme & Viberg, 2018; Huang, 2019; Jacob & Uitdenbogerd, 2019; Ruan & Medwell, 2020; Zhang & Zhao, 2020; Zhao & Flewitt, 2020; Zhao & Flewitt, 2020; Tong et al., 2022). Eleven articles trend show that research on social media in language education is moving away from tool use towards a more integrated model of education and the development of communicative competence (Tong & Zhou, 2020; Wargadinata et al., 2020; Ningsih & Royan, 2020; Chua, 2020; Ying, 2020; He, 2020; Hoe, 2021; Wang et al., 2022; Diana & Sutandi, 2022; Diana & Sutandi, 2022; Huang & Lammersb, 2022).

### 3.2 Country

Figure 3.2 The countries of social media's impact on mandarin language dissemination respectively demonstrate that among 29 articles, 22 articles have evident geographical characteristics, accounting for 75.8% of the total proportion, which suggests that social media's impact on the mandarin language has prominent geographical characteristics. Four are in China (Huang, 2019; Tong et al., 2022; Zhang & Zhao, 2020; Jin, 2018). One is in Vietnam (Wang et al., 2022); two themes are located in the UK (Zhao & Flewitt, 2020; Ruan & Medwell, 2020). Australia has two themes (Jacob & Uitdenbogerd, 2019; Tong & Zhou, 2020). Four themes are in Indonesia ((Diana & Sutandi, 2022; Ying et al., 2021; Wargadinata et al., 2020; Nee et al., 2019). Malaysia has four themes (Chua, 2020; Ghee, 2019; Hoe, 2021; Nee et al., 2019). Two themes are in Singapore (He et al., 2020; Winskel et al., 2018). One theme in Saudi Arabia (Khan et al., 2021). A theme in Mexico (Toker & Baturay, 2019). A theme in India (Carter et al., 2018). A theme in Spain (Vargas-Urpí & Xu, 2021).

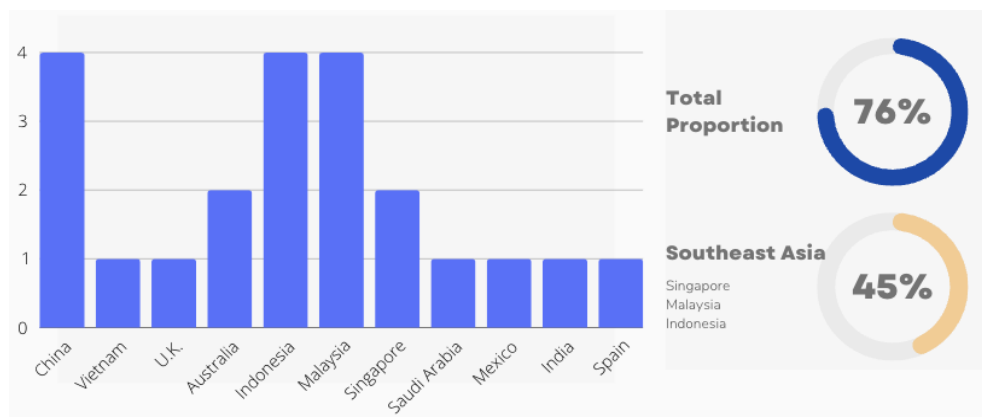


Figure 3.2. Countries Where Social Media Has An Impact on the Spread of Mandarin Language

In the above data, it is easy to find that articles related to the impact of social media on the promotion of Mandarin are concentrated in Southeast Asia, with half of the 22 articles concentrated in Indonesia (Diana & Sutandi, 2022; Ying et al., 2021; Wargadinata et al., 2020; Nee et al., 2019), Singapore (He et al., 2020; Winskel et al., 2018) with the Malaysian region (Chua, 2020; Ghee, 2019; Hoe, 2021; Nee et al., 2019), which accounted for 45% of the total proportion of the visualized region. The Southeast Asian region is essential in studying mandarin language learning and social media applications, which may be related to several factors. First, Southeast Asia has close historical, cultural, and economic ties with China (Diana & Sutandi, 2022). Mandarin people live in Southeast Asia, a relatively large percentage of the population (Ghee, 2019; Hoe, 2021; Nee et al., 2019). In addition, with China's growing position in the global economy, these countries have a sizeable Chinese community and a real need for substantial economic and trade relations with China (He et al., 2020).

There are also countries and regions around the world that focus on learning Mandarin. Wang et al. (2022) in Vietnam,

Zhao and Flewitt (2020), and Ruan and Medwell (2020) in the United Kingdom, along with researchers in Australia (Jacob & Uitdenbogerd, 2019; Tong & Zhou, 2020), Singapore (He et al., 2020; Winskel et al., 2018), Saudi Arabia (Khan et al., 2021), Mexico (Toker & Baturay, 2019), India (Carter et al., 2018), and Spain (Vargas-Urpí & Xu, 2021), highlight the expanding global influence of Mandarin and growing scholarly interest in the role of social media in Mandarin language transmission and learning (Zaw, 2018).

The studies in these countries may reflect the prevalence and effectiveness of social media for language learning in different cultural and linguistic contexts in the context of globalization (Chun, 2016). This distribution may also be related to each region's specific sociolinguistic contexts and educational needs, reflecting the interest in different ways and experiences of combining mandarin language learning and social media across the globe (Kozinets, 2019).

### 3.3 Thematic Analysis

As shown in the thematic analysis in Figure 3.3, the research literature from 2018 to 2023 shows that the application and impact of social media in the field of language teaching and communication, especially in the learning of Putonghua, has undergone rapid development and in-depth exploration.



Figure 3.2. Thematic Analysis

In 2018, research initially focused on how social media can aid in the enrichment and learning support of language environments, encompassing a diverse group of learners from children to university students. Significant contributions were made by Carter et al. (2018), Winskel et al. (2018), Kukulska-Hulme & Viberg (2018), and Jin (2018). Moving into 2019, research is beginning to expand into the potential of social media to improve writing and how it can be used as an educational tool (Reinhardt, 2019; Nee et al., 2019; Toker & Baturay, 2019; Huang, 2019; Ghee, 2019; Jacob & Uitdenbogerd, 2019). By 2020, as the role of social media in education becomes more prominent, research has begun to explore its necessity in higher education and how social media can be used to enhance learners' intercultural communication skills (Manca, 2020; Ruan & Medwell, 2020; Zhang & Zhao, 2020; Zhao & Flewitt, 2020; Tong & Zhou, 2020; Wargadinata et al., 2020; Ningsih & Aoyan, 2020; Chua, 2020; Ying, 2020; He, 2020).

Moreover, by 2021 and 2022, research is more focused on evaluating the effectiveness and impact of specific social media tools such as WhatsApp and YouTube in language learning (Hoe, 2021; Khan et al., 2021; Ying et al., 2021; Vargas-Urpí & Xu, 2021; Wang et al., 2022; Diana & Sutandi, 2022; Huang & Lammersb, 2022). The literature, although limited in data, also demonstrates a continued interest in the creative use of social media in informal language learning (Lee, 2023). Overall, these studies reflect the evolving role of social media in language learning, shifting from a supplemental tool to a platform that can provide a rich pedagogical and cultural exchange experience.

### 3.4 Types and Applications of Social Media

In the context of globalization, social media has gradually become an essential platform for cross-cultural communication and learning (Alsaleh et al., 2019). Social media provides a unique, authentic language environment, especially for learners of mandarin as a foreign or second language (Wong et al., 2016). This allows learners to interact directly with native mandarin speakers and obtain original language input without leaving their local area (Lin, 2018).

#### 3.4.1 Types and Distribution of Social Media

As shown in Figure 3.4, ten articles address social media platforms in China, such as Jieyin (Lee, 2023; Huang & Lammers, 2022) and WeChat (Jin, 2018; Ruan & Medwell, 2020; Zhang & Zhao, 2020; Tong et al., 2020; Nee et al., 2020; Tong, 2020; Carter, 2018; Huang, 2019). These platforms are mainly used by international students in China (Jin, 2018; Tong, 2020) and facilitate real-time communication and interaction between Mandarin language learners and native Chinese speakers (Jin, 2018; Ruan & Medwell, 2020; Zhang & Zhao, 2020; Tong et al., 2020; Nee et al., 2020; Tong, 2020; Carter, 2018; Huang, 2019; Lee, 2023; Huang & Lammers, 2022). These platforms are mainly used by international students in China (Jin, 2018; Tong, 2020) and allow Mandarin language learners to communicate and

interact in real-time with native Chinese speakers (Jin, 2018; Ruan & Medwell, 2020; Zhang & Zhao, 2020; Tong et al., 2020; Nee et al., 2020; Tong, 2020; Carter, 2018; Huang, 2019; Lee, 2023; Huang & Lammers, 2022). These applications are widely popular in China, including mostly international students studying the language in China (Jin, 2018; Tong, 2020), teachers who informalize their teaching through WeChat (Tong et al., 2020), and residents outside of China who wish to improve their mandarin language proficiency as learners (Zhang & Zhao, 2020; Ruan, & Medwell, 2020). International students use WeChat to establish connections, interact with Chinese classmates and friends, practice speaking mandarin, and obtain information about their lives and studies (Jin, 2018; Tong, 2020). Native Chinese speakers can create mandarin learning communities on Weibo and WeChat to interact with foreign friends who are learning mandarin, share learning resources, and provide language support (Zhang & Zhao, 2020; Ruan & Medwell, 2020). This variety of users and interaction patterns helps improve students' mandarin language proficiency and enriches the cultural experience of mandarin language learning.



Figure 3.4. Types of Social Media in China and Outside China

As shown in Figure 3.4 Types of social media in and outside of China, 28 articles dealt with social media outside of China (there was an overlap of multiple social media in the articles), including Facebook (Wang et al., 2022; Manca, 2020; Zhang & Zhao, 2020; Nee et al., 2020; Toker & Baturay, 2019; Reinhardt, 2019), Twitter (Wang, et al., 2022; Reinhardt, 2019; Manca, 2020), Instagram (Wang, et al., 2022; Manca, 2020; Nee et al., 2020; Lee, 2023), Youtube (Wang et al., 2022; Zhang & Zhao, 2020; Nee et al., 2020; Zhang & Zhao, 2020; Diana & Sutandi, 2022; Vargas-Urpí & Xu, 2021; Chua et al., 2020; Yinghua et al., 2020; Ying, 2020 ), Whatapp (Wang, et al., 2022; Wargadinata, 2020; Ghee, 2019; Hoe et al., 2021; Ying et al., 2021; Diana & Sutandi, 2022; Manca, 2020).

Support for international mandarin language learners and those interested in Chinese culture (Wang et al., 2022; Ruan & Medwell, 2020; Zhang & Zhao, 2020; Tong et al., 2020; Nee et al., 2020; Winskel et al., 2018; Toker & Baturay, 2019; Wargadinata, 2020; Tong, 2020; Carter, 2018; Hoe et al., 2021; Huang, 2019). These platforms have attracted users worldwide, some of whom are non-native mandarin learners (Zhang & Zhao, 2020; Tong et al., 2020; Nee et al., 2020; Winskel et al., 2018; Toker & Baturay, 2019; Wargadinata, 2020).

International mandarin language learners can use social media platforms, join mandarin language learning groups, and follow pages and blogs related to mandarin language learning (Tong et al., 2020; Nee et al., 2020). They have access to mandarin language learning resources (Toker & Baturay, 2019; Wargadinata, 2020; Lee, 2023; Tong, 2020), learning experiences and cultural knowledge (Zhang & Zhao, 2020), and communication with other learners (Zhang & Zhao, 2020; Winskel et al., 2018), and improve their mandarin language proficiency. There are a large number of mandarin language learning videos and educational channels on YouTube, which provide learners with a variety of learning options (Diana & Sutandi, 2022; Vargas-Urpí & Xu, 2021; Zhang & Zhao, 2020; Carter, 2018).

Meanwhile, those interested in Chinese culture can display and share their learning progress on image-sharing platforms such as Instagram, documenting their learning achievements by posting images of Chinese characters written, Chinese sentences translated, and images related to the Chinese language. ((Manca, 2020) This form of learning helps students better understand and memorize Chinese characters and vocabulary (Lee, 2023). In conclusion, social media platforms inside and outside China provide diverse learning opportunities and technical support for Chinese language learners to satisfy students with different needs.

### 3.4.2 Application of Social Media

As shown in Figure 3.5, first, social media provides learners with rich cultural communication opportunities. Through platforms such as WeChat WhatsApp, learners can keep in touch with native Chinese speakers in real-time (Carter, 2018; Jin, 2018), participate in discussions in their circle of friends (Huang, 2019; Jin, 2018), read articles posted by their friends (Huang, 2019; Jin, 2018), which helps to gain a deeper understanding of Chinese culture (Huang, 2019; Jin, 2018), festivals and customs (Huang, 2019; Jin, 2018). This cultural exchange enriches the learning experience and enhances learners' sense of identity as Chinese speakers (Huang, 2019; Jin, 2018).

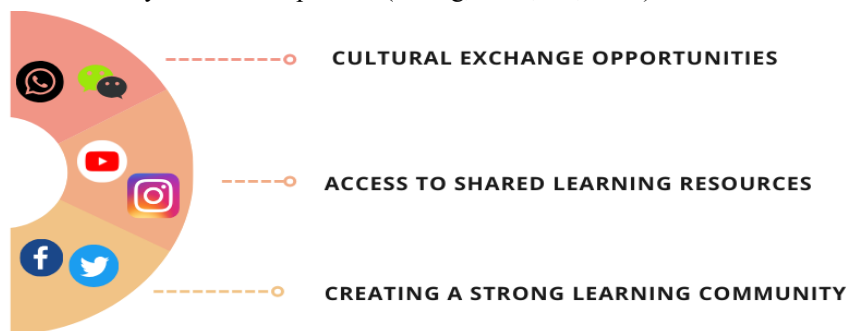


Figure 3.5. Social Media Applications

Secondly, social media is a treasure trove of resource sharing. Learners can share and access various learning resources on these platforms, including textbooks, exercises, and listening materials (Diana & Sutandi, 2022). In particular, YouTube provides many mandarin learning videos and educational channels to help students improve their oral expression, listening, and reading skills. By watching the videos, students expanded their vocabulary and understood the actual usage of mandarin (Vargas-Urpi & Xu, 2021; Zhang & Zhao, 2020; Carter, 2018). Social media, such as Instagram, were also used to share learning-related photos and resources to support students' learning process (Manca, 2020).

Finally, social media creates a strong learning community, e.g., Twitter and Facebook. Learners can join mandarin language learning groups to interact with other learners, exchange experiences, encourage each other, and provide support (Ying, 2020). In WeChat, not only can one communicate with friends in text but also through voice messages and emoticons for interesting mandarin communication (Jin, 2018; Ruan & Medwell, 2020; Zhang & Zhao, 2020; Tong et al., 2020; Tong, 2020; Huang, 2019). This variety of interactions helps learners at different levels to build an identity as fluent Chinese speakers. Through social media, learners can better cooperate and improve their language communication skills (Jin, 2018).

### 3.5 Pedagogical Effects of Digital Technologies

As shown in Figure 3.6, firstly, social media brings more expansive opportunities for interaction. While traditional teaching is usually limited by time and place, social media teaching can occur anytime and anywhere (Nee et al., 2020; Wargadinata, 2020; Tong, 2020). Students can post comments, ask questions, and share insights on social media through online platforms to interact with the instructor and peers in real-time Ying et al., 2021; Ningsih & Royan, 2020; Tong et al., 2020; Hoe, 2021; Ghee, 2019; Khan et al., 2021. Ying et al., 2021; Manca, 2020). This interactivity increases active learner engagement and promotes deeper learning and knowledge sharing (Ying et al., 2021; Huanga & Lammersb, 2022; Tong et al., 2020; Nee et al., 2020).

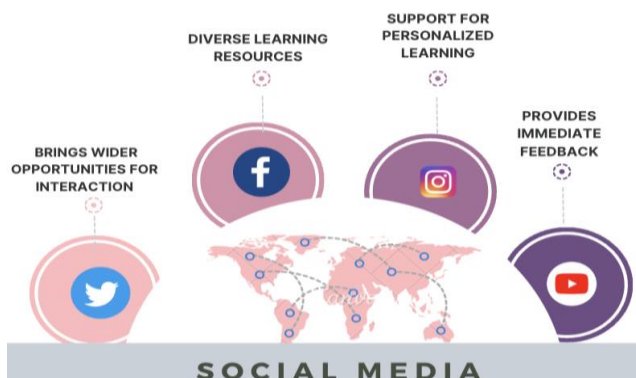


Figure 3.6. Pedagogical effects of digital technology



Second, social media teaching brings more diverse learning resources. Traditional teaching is usually limited by textbooks and teaching facilities in the classroom, and students have limited learning resources. However, social media teaching can provide more diverse learning resources (Vargas-Urpí & Xu, 2021; Zhang & Zhao, 2020; Carter, 2018; Manca, 2020). Students can access various web articles, educational videos, online courses, and learning apps through social media platforms (Diana & Sutandi, 2022). This enriches their learning materials and enables them to access information from different perspectives and multiple media forms to improve the integrated development of language skills.

In addition, social media teaching supports personalized learning. Traditional teaching usually employs a group teaching method that makes it challenging to meet the individual learning needs of each student. In contrast, social media instruction can better meet students' individualized learning needs (Zhang & Zhao, 2020; Toker & Baturay, 2019; Lee, 2023; Tong, 2020). Students can choose learning content and resources according to their interests, learning speed, and learning style (Huang, 2019; Ghee, 2019). They can focus on specific topics or areas and delve into topics that interest them, which improves the relevance and effectiveness of learning (Ghee, 2019).

Finally, social media teaching provides the opportunity for immediate feedback (Jogezai, 2021). In traditional teaching, students usually have to wait until the end of class or the next class to get feedback, which can slow down the learning process. Social media instruction informs students about their progress and performance (Ying et al., 2021; Ningsih & \*\*aoyan, 2020). They can immediately see if their comments have been responded to and if someone has shared their learning (Hoe et al., 2021; Tong, 2020; Wargadinata, 2020; Winskel et al., 2018). This immediate feedback helps students better understand their strengths and weaknesses and adjust their learning strategies on time (Ansari & Khan, 2020). These features provide mandarin language learners with a more flexible, enriched, and personalized learning experience (Greenhow & Lewin, 2019).

### 3.6 The Psychological Impact of Digital Technology on Mandarin Language Learners

According to Figure 3.7 The psychological impact of digital technology on mandarin language learners. Social media platforms have become practical tools for motivating second language learners. Social media has been shown to influence mandarin learners' interest and motivation in learning positively (Chua et al., 2020; Kukulkska-Hulme & Viberg, 2018). Several studies have shown that social media platforms provide practical tools in mandarin language learning environments that help to motivate and actively engage students.

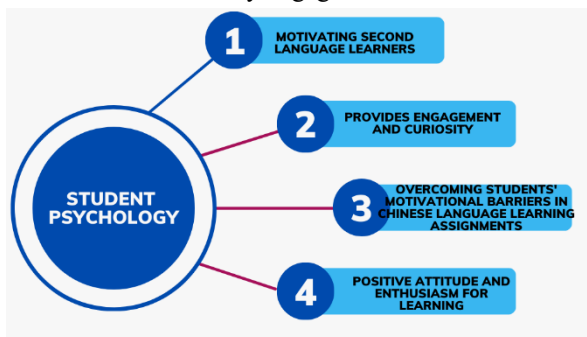


Figure 3.7. The psychological impact of digital technology on mandarin language learners

First, social media provides students with opportunities for engagement and curiosity, both considered critical elements for motivation (Ibàñez et al., 2015). Using multimodal sensory touchscreens and creative activities also increased engagement and motivation among mandarin learners, which is especially significant for those easily distracted (Reinhardt, 2019; Kukulkska-Hulme & Viberg, 2018). In addition, introducing game elements has been recognized as an effective strategy to enhance learner motivation (Huang et al., 2016).

Second, the use of social media reduces the perceived distance required for students to switch between leisure and homework, which helps to overcome students' motivational barriers when starting mandarin learning assignments (Jin, 2018; Kukulkska-Hulme & Viberg, 2018; Zhang & Zhao, 2020). Studies have also found that students' interest and willingness to learn mandarin through social media platforms are significantly enhanced (Winskel et al., 2018; Toker & Baturay, 2019).

In addition, using social media helps shape learners' more positive attitudes and enthusiasm for learning (Chua et al., 2020; Kukulkska-Hulme & Viberg, 2018). Students show more positive attitudes toward English learning on social media (Reinhardt, 2019), and social media's multimedia features attract the attention of young learners (Reinhardt, 2019). Social media also facilitates communication between students from different cultural backgrounds and encourages them to encourage each other in mandarin writing (Reinhardt, 2019). Enthusiasm and mutual

encouragement among students have also been observed when using tools such as WhatsApp for language learning (Reinhardt, 2019).

### 3.7 Advantages of Digital Technology in Language Teaching and Learning

The application of digital technology in mandarin language teaching is divided into two categories: within China and outside China and this division is mainly due to the technological and cultural backgrounds of different regions, as well as the needs of different user groups.

#### 3.7.1 Software within China

Douyin (TikTok) and WeChat, the leading social media platforms in China, each with unique technological features, provide powerful technical support for Chinese students studying in China and other Chinese students learning mandarin (Tong, 2020; Huang, 2019; Jin, 2018). As one of the most popular social media and instant messaging applications in China, WeChat provides multiple learning opportunities for mandarin language learners. Students can establish learning groups through WeChat to engage in real-time language communication with native Chinese speakers and other learners (Jin, 2018; Tong et al., 2020; Nee et al., 2020; Tong, 2020; Carter, 2018; Huang, 2019). WeChat provides voice calling and video calling features that enable students to practice speaking and learning interactively (Ruan & Medwell, 2020; Zhang & Zhao, 2020). In addition, WeChat supports voice messaging and applets to engage students in language learning and cultural experiences (Jin, 2018). WeChat's social interactivity and instant messaging functions help improve students' motivation and learning effectiveness. WeChat plays a unique role in language learning, providing learners with comprehensive support for language learning through real-time communication, voice functions, and diversified learning resources (Jin, 2018; Ruan & Medwell, 2020; Zhang & Zhao, 2020; Tong et al. (Tong, 2020; Carter, 2018; Huang, 2019).

First, DouYin (TikTok) is known for its short video-sharing platform, which provides exciting and vivid video content for learners (Lee, 2023; Huanga & Lammersb, 2022). Students can improve their listening comprehension and oral expression skills by watching Chinese videos on DouYin (TikTok) (Lee, 2023; Huanga & Lammersb, 2022). Such video content is usually short, which is not only easy to digest but also highly visually appealing and can stimulate students' interest in learning (Zhou, 2019). In addition, DouYin(TikTok) also supports user-generated content, encouraging students to create their Mandarin videos to improve creative expression and language skills (Huanga & Lammersb, 2022). Social interactivity is also a highlight of DouYin(TikTok), which allows students to interact, comment, and share videos with other users, expanding their social circles and promoting learning motivation (Lee, 2023; Huanga & Lammersb, 2022). The uniqueness of DouYin (TikTok) lies in its concise and engaging video format, which provides a platform for learners to share their Mandarin learning journey with the world.

#### 3.7.2 Software Outside China

When learning mandarin, non-native mandarin learners actively utilize alternative platforms to facilitate the mandarin language learning although Chinese social media platforms are not commonly used. These alternative platforms include Twitter (Wang et al., 2022; Reinhardt, 2019; Manca, 2020), Facebook (Wang, et al., 2022; Manca, 2020; Zhang & Zhao, 2020; Nee et al., 2020; Toker & Baturay, 2019; Reinhardt, 2019), Instagram (Wang, et al., 2022; Manca, 2020; Nee et al., 2020; Lee, 2023), WhatsApp (Wang, et al., 2022; Wargadinata, 2020; Ghee, 2019; Hoe et al., 2021; Ying et al., 2021; Diana & Sutandi, 2022; Manca, 2020), YouTube (Wang, et al., 2022; Zhang & Zhao, 2020; Nee et al.; Zhang & Zhao, 2020; Diana & Sutandi, 2022; Vargas-Urpí & Xu, 2021; Chua et al., 2020; Ying, 2020), which are international social media that provide learners with the opportunity to learn interactively with others.

The immediacy and interactivity of the Facebook platform provide mandarin learners with a unique technological advantage (Wang et al., 2022; Manca, 2020). Mandarin language learners can access and share text, images, videos, and links, and this diversity of content types can meet the needs of different learners; Zhang & Zhao, 2020; Nee et al., 2020; Toker & Baturay, 2019; Reinhardt, 2019). For example, students can easily access mandarin learning materials such as mandarin textbooks, cultural information, and educational videos to enrich their learning experience (Reinhardt, 2019). This diversity of resources helps improve students' Chinese vocabulary and cultural understanding (Reinhardt, 2019).

Twitter is characterized by immediacy and brevity (Wang et al., 2022; Reinhardt, 2019; Manca, 2020). Twitter tweets are usually short, which forces learners to express their opinions and ideas within a limited number of characters (Wang et al., 2022). This real-time communication motivates students to practice concise expression and effective communication, which are essential skills in mandarin language learning (Reinhardt, 2019). Meanwhile, Twitter's hashtag feature enables students to engage in topic-specific discussions, thus expanding their vocabulary and subject areas. In this way, students can explore topics of interest in Chinese more deeply and improve their language proficiency (Manca, 2020). memorize Chinese characters and vocabulary (Nee et al., 2020; Lee, 2023). In addition, Instagram encourages students to express their opinions and understandings creatively through pictures and short videos. This creative process can help students

understand Chinese culture and language more deeply and develop their creative thinking (Lee, 2023).

YouTube, as one of the world's largest video-sharing platforms, provides a variety of technical support and learning opportunities for mandarin language learners (Wang et al., 2022; Zhang & Zhao, 2020; Nee et al. Vargas-Urpí & Xu, 2021; Chua et al.,2020; Ying, 2020). First of all, there exists a wealth of mandarin learning video tutorials on YouTube, including various aspects of pronunciation, Chinese character writing, grammar, etc., which can meet the needs of different learners (Diana & Sutandi, 2022; Vargas-Urpí & Xu, 2021). Second, YouTube supports subtitling and translation functions, which help improve students' listening comprehension and ability to read mandarin. In addition, the platform provides interactivity where students can exchange learning experiences and questions with other learners and educators in the comment section to expand their learning network (Zhang & Zhao, 2020; Diana & Sutandi, 2022). Self-directed learning is also realized, as students can choose suitable video materials according to their interests and learning pace. Finally, YouTube contains not only mandarin learning videos but also diversified resources such as culture, travel, and music related to the mandarin language, which enriches the learning experience (Chua et al., 2020; Ying, 2020). Therefore, YouTube provides mandarin learners with diverse learning tools and resources, which helps to improve their learning effect and level, and is a critical learning platform (Zhang & Zhao, 2020; Nee et al., 2020).

WhatsApp also affects mandarin learners in many ways. First, through WhatsApp, learners can join various mandarin learning groups, where Chinese teachers and learners from all over the world gather, and they can exchange learning experiences and share learning materials (Wang et al., 2022; Ying et al., 2021; Diana & Sutandi, 2022; Manca, 2020). Secondly, WhatsApp's voice messaging feature allows learners to practice listening and speaking, and they can send voice messages to simulate honest conversations and improve practical language applications (Wang et al.,2022; Wargadinata, 2020; Ghee,2019). In addition, WhatsApp supports sending text, pictures, and videos to facilitate learners' writing practice, sharing video tutorials on writing Chinese characters, or learning grammar and vocabulary (Diana & Sutandi, 2022; Manca, 2020). Further, WhatsApp's user interface is simple and friendly, which makes it easy for learners to learn anytime, anywhere, and is private, which helps create a safe learning environment. Finally, the multimedia sharing function on WhatsApp also provides learners with the opportunity to get in touch with Chinese culture, such as sharing pictures and videos about Chinese cultural festivals, food and traveling through groups, which increases the fun of learning (Wang et al., 2022; Wargadinata, 2020; Ghee,2019). Therefore, as a communication tool, WhatsApp provides mandarin learners with a convenient communication platform and rich learning resources, which positively contributes to enhancing their Mandarin proficiency (Manca, 2020).

With Instagram's emphasis on image and short video sharing, students can improve their vocabulary recall and oral expression by uploading and sharing images and short videos related to Chinese (Wang et al., 2022; Manca, 2020). This image and video learning approach is particularly suitable for visual learners to help them better understand and

#### 4. Challenges and Constraints in the Use of Digital Technologies

Social media offers significant opportunities for Mandarin language learning but also presents several challenges, particularly regarding technology and education. For instance, Kukulska-Hulme and Viberg (2018) highlight that students may become overly dependent on digital platforms, potentially neglecting traditional learning methods. This dependence can lead to decreased engagement with conventional educational practices and may impair students' academic performance and motivation. An example might be students who rely solely on language learning apps and ignore more comprehensive strategies like classroom interaction or textbook study, which can provide a deeper understanding of the language's complexities, according to Figure 4.1.

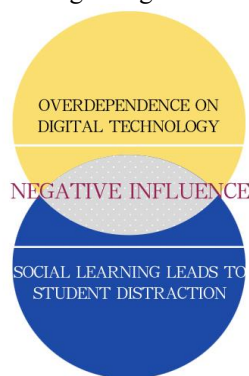


Figure 4.1. Negative effects of social media

Further, using social media for informal social learning can be distracting. Students might spend excessive time on platforms like Facebook or WeChat, which could detract from their focus on academic tasks. For example, a student

might browse social media feeds instead of completing Mandarin language exercises or participating in discussions critical to language acquisition (Kukulska-Hulme & Viberg, 2018).

Privacy and security concerns also arise when using social media in education. Text messaging and other forms of communication on these platforms can expose students to potential breaches of personal information. Protecting student data is crucial, necessitating measures to secure their privacy as they engage in educational activities online.

Lastly, incorporating novel social media activities, while innovative, can sometimes undermine learning effectiveness. Tong et al. (2020) suggest that these activities often lean more toward entertainment than education, which can leave students uncertain about the educational value of these tools. For example, games and interactive challenges on social media might engage students initially but offer little in the way of structured language learning or critical thinking development.

In summary, while social media can be a valuable tool in Mandarin language education, its challenges must be addressed to ensure that it enhances rather than hinders student learning.

## 5. Conclusions

This study thoroughly analyzes the role of social media in communicating mandarin language education in the digital era. As an essential platform for information exchange and resource sharing, social media has shown significant potential in language learning, especially in teaching mandarin as a second language learners. The study focuses on how to effectively utilize various social media platforms, such as microblogging, WeChat, Facebook, etc., to provide mandarin learners with an authentic and immediate language learning environment and to promote the development of their communicative competence.

Learners report that social media platforms offer a highly interactive environment that mirrors real-life language use situations. These platforms expose them to authentic language materials and provide numerous opportunities to communicate directly with native speakers. Such interactions are crucial for enhancing practical language application skills. For example, a learner mentioned, "Using WeChat to converse daily with native speakers helps me apply the Mandarin I have learned in class in a natural setting, which boosts my confidence and comprehension skills."

Furthermore, the instantaneous nature of social media ensures continuous exposure to Mandarin, seamlessly integrating reading, writing, listening, and speaking practice into learners' daily lives. This constant engagement provides access to an expansive array of learning resources. One learner highlighted, "Social media allows me to access Mandarin content anytime, which is perfect for quick learning sessions throughout the day, making language learning a part of my routine rather than a chore."

Social media also facilitates cultural exchange, a critical component of language learning. Interacting with individuals from diverse cultural backgrounds enables learners to delve deeper into the cultural nuances of Mandarin. One student noted, "Through discussions on social media, I have gained insights into cultural references and expressions that textbooks do not cover. It is like having a cultural immersion experience without leaving my home."

The diverse functionalities of social media platforms also allow for personalized learning experiences. Learners can choose learning paths that align with their interests and needs through online discussions, watching video tutorials, or engaging in gamified learning applications. This personalization not only improves learning efficiency but also enhances enjoyment and motivation. A learner expressed, "The gamified elements on some apps make learning Mandarin fun and engaging, which keeps me motivated to continue improving."

In conclusion, social media is crucial in teaching Mandarin as a second language. By providing authentic and instantaneous language input and output environments, social media significantly facilitates the development of learners' communicative competence. At the same time, it offers rich cultural exchange opportunities and personalized learning paths. These features make social media an indispensable tool in Mandarin language education. They underscore the importance of in-depth research on its application in Mandarin learning and its impact on learners' acquisition effects. This research is essential for advancing Mandarin language education in the digital era.

Incorporating learner experiences and perspectives into this analysis not only enriches the understanding of social media's educational impact but also validates the effectiveness of these digital platforms in real-world learning scenarios.

## 6. Limitation

The first limitation in this study comes from the number of social media selected for exploration. Although the article explores the use of specific social media platforms in mandarin language learning and these social media are representative, they may need to be more generalizable. In addition, since the nature of the article is a synthesis, it needs more data to support the study's ideas.

In addition, due to the lack of space, the article fails to compare and discuss the acceptance of mandarin learners from different cultural backgrounds in utilizing social media for learning. Limitations such as technological proficiency and teaching resources for different users were also not fully discussed. These limitations point to the need for future research to explore cross-cultural communication, technological innovation, and diversification of teaching methods more extensively and deeply.

## **7. Development**

The research objective of this paper focuses on exploring the process of mandarin communication and teaching characteristics of new media platforms in the digital environment. The study will analyze in detail the communication characteristics of significant new media platforms to summarize how these platforms meet the specific needs of different learners through different technological focuses. It will provide social and language communication researchers with a new perspective. Researchers can further consider the impact that cultural differences and technology acceptance may have on the communication effects of the mandarin language on digital platforms. By analyzing different types of social media platforms, we propose how to make full use of the characteristics of these platforms for efficient mandarin language teaching and suggest effective strategies for evaluating their communication effects.

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## **Competing interests**

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## **Informed consent**

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## **Data availability statement**

The data that support the findings of this study are available on request from the corresponding author. The data are not publicly available due to privacy or ethical restrictions.

## **Data sharing statement**

No additional data are available.

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