Chinese Language Learners' Participation in a WeChat Online Community of Practice
(中文学习者在微信实践社区中的参与度)

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Abstract: Utilizing WeChat in Chinese language education has generated interest among Chinese language educators and researchers. Both its affordances and constraints have been documented in previous studies. However, discussion about how language learners participate in WeChat-supported activities remains scarce. This qualitative literature review analyzed relevant studies through the theoretical lens of Community of Practice (Wenger, 1998), focusing on the core construct—participation. The results show that current common practices have not fully tapped into the educational potential of WeChat to allow learners to fully participate. Different ways of using WeChat for educational purposes should be pedagogically sound and could be further explored. Additionally, participants' transition towards full participation is not necessarily associated with language proficiency. Instead, three factors—affective, social and curricular—exert influence collectively.

摘要：近年来，中文教师以及学者针对微信在中文教学中的运用进行了尝试以及研究。然而，中文学习者在微信交际活动中参与度如何？相关讨论并不多。本篇质性论文综述采用实践社区理论，梳理、分析了近年来有关学术文章，指出：目前中文教学中运用到的微信功能有限，学习者在各类活动中参与度不等。微信相关教学活动应该在教学理念的指导下合理设计。此外，语言水平并不一定会影响中文学习者在微信交际活动中的参与度。情感因素、社交因素以及课程设计都会对参与度有所影响。

Keywords: WeChat, social networking applications, Chinese teaching, participation, community of practice

关键词： 微信、社交软件、中文教学、参与度、实践社区

1. Introduction

Social networking applications (SNAs) have been discussed, applied, and researched in foreign language (FL) education since their inception. WeChat, one of the most popular SNAs in Chinese communities around the world, has gradually gained increasing attention from researchers and practitioners in FL teaching, especially in teaching English as a second language, where its potential educational functions are explored (K. Wang, 2017). Both its affordances as well as constraints have been documented in prior studies. L. Jin (2018) identified four affordances and provided pedagogical suggestions for language educators about how to utilize WeChat for language learning and teaching. Other researchers investigated specific ways to use WeChat for FL learning, such as linking Chinese language learners (CLLs) with Chinese native speakers, and investigated the learners' perceptions of such utilization (Jiang & Li, 2018).

It is noteworthy that the vast majority of the extant studies merely focused on the utilization of WeChat for educational purposes in general, and FL teaching in particular, without much discussion about how language learners participate in WeChat activities, what roles they play in activities, factors that affect their participation, and the like. Participation is not only an important indicator of students' learning and the level of their engagement, but it is also a catalyst and path for learning. In an attempt to provide a better understanding of these aspects and shed light on better curricular designs incorporating SNAs such as WeChat into language curricula, this literature review analyzed relevant studies through the theoretical lens of Communities of Practice (Wenger, 1998). Specifically, this literature review intends to investigate the following two questions:

1) What are the characteristics of CLLs' participation in WeChat online community of practice?
2) What factors affect CLLs' participation in the community of practice that has been formed and sustained, specifically "moving from peripheral participation to full participation" (Lave & Wenger, 1991)?

2. WeChat and Community of Practice (CoP)

WeChat, which could be translated as "micro messenger," is one of the most popular SNAs in Chinese speaking communities with over a billion monthly users (Iqbal, 2020). A a free and integrated application, it provides users with various functions, such as text and voice messaging, voice and video calling, blogging, paying for purchases, gaming, booking a flight, and renting a bike among other features. The utilization of WeChat rapidly entered almost every aspect of Chinese people's daily life since it was launched in 2011. Primarily an instant communication app, WeChat supports "asynchronous, semi-synchronous and synchronous collaboration and interaction, as it allows for one-to-one, one-to-many, and many-to-many" communication through texts, voice messages, and video conferencing (Y. Wang, Fang, Han, & Chen, 2016, p. 22). Its "Moments" feature functions as a blogging and social networking site (e.g., Facebook and Twitter) on which users can post original short texts, pictures, long articles, as well as share,

like, and comment on others' content after they befriend each other. The different versions of WeChat make it available on almost every platform (Windows, Android, and iOS). It has gained attention from Chinese language educators and researchers due to its educational and social potential to serve as a channel for CLLs to enter and participate in Chinese speaking communities as well as to facilitate forming their own Chinese learning community. For example, focal participants studying abroad in China in Diao (2020) used WeChat as an effective tool to make friends from the host community. Additionally, due to its ubiquity in people's daily life in China, being able to use WeChat is necessary for CLLs to survive when they live and study in the target community. For instance, many local vendors now only accept WeChat payment for business transactions. As L. Jin (2018) argued, study abroad students should take WeChat communication as not only an effective linguistic development context but also a social necessity (p. 46).

CoP as a social theory of learning defines learning as social participation. Learners or participants actively participate "in the practices of social communities and constructing identities in relation to these communities" (Wenger, 1998, p. 4). Learning as social participation is "a kind of action and a form of belonging" and "shapes not only what we do, but also who we are and how we interpret what we do" (p. 4). Learning Chinese under the theoretical framework of CoP entails social participation in a Chinese learning community as well as a Chinese speaking community. In this sense, to understand the experience of Chinese learners is to understand their practices and participation in these communities.

A community of practice has three characteristics: domain (a shared domain of interest), community (joint learning and interaction), and practice (a shared practice with a shared repertoire of resources) (Wenger, 1998). It tends to encourage every member to take responsibility for information-sharing and problem-solving, to develop their identities in the community, and to foster unification of the community, serving as an effective platform for people to exchange knowledge and localize new information (Yang, 2009). Wenger (1998) views the "community of practice" as a unit, and posits to understand practice as the "source of coherence of a community" (p. 72). In this review, we consider the "joint enterprises" through WeChat with a "shared repertoire" of Chinese language and culture learning, and "mutual engagement" among members as an online community of Chinese learning practices (Wenger, 1998, p. 73). Chinese learners, teachers, and other native speakers (language partners and research assistants) are all members of these online communities. With their shared interest in Chinese learning, teaching, and language exchange, they obtain a shared Chinese language and culture learning and interaction repertoire. When mutual engagement and interaction among members exist, all three dimensions of practice as the property of a community are built, and a community of practice through WeChat for Chinese language learning is formed. The WeChat online community of practice, ideally, should provide learners, CLLs in particular, a space to learn from "old-timers," earn their "legitimate membership," and gradually transition from "peripheral participation" to "full participation" in the community (Lave & Wenger, 1991). Chinese learners as the "new-comers" of the communities learn the shared repertoire, the target language and culture in this case, through participation in practices and engagement with other members, "old-timers" such as teachers, native speakers,

research assistants, and even other learners, as well as other "new-comers." Chinese learners' participation and reification not only shape their own experience and learning trajectories but the communities' as well. Developing an understanding of learners' participation in these communities provides educators an analytic perspective on possibilities and pedagogical designs involving online digital technologies as WeChat.

To fully explore the educational potential of WeChat in Chinese language education, we concentrate on the core construct of CoP, participation, by investigating the ways learners participate in the WeChat online community of practice that has been formed and what affects their participation. This qualitative synthesis of the literature review argues that: (a) the current practices have not fully tapped into the educational potential of SNAs for Chinese language education to transform learners into adept participators. CLLs' participation is dominated by asynchronous, one-to-one communication in the interpersonal mode through text messages while the other features are much less frequently used to a satisfying degree; (b) the difference in ways of utilizing SNAs for language learning does not imply superiority, but rather should be adopted and designed with the guidance of sound pedagogies to serve different instruction goals, and; (c) participants' transition towards full participation is not necessarily associated with their language proficiency. Instead, three types of factors—affective, social and curricular—exert influence collectively.

3. Research Methods

The authors conducted a systematic search using ProQuest and Google Scholar. Bibliography tracing was applied as well to aid the search. The keywords used for the search were "WeChat" OR "social network applications" AND "language* learning" OR "Chinese language learning." The criteria for inclusion of the papers applied to this literature review are: (a) relevance; (b) credentials of the authors, academic journals and publishers; (c) date of publication, and; (d) publication language. Doctoral dissertations, master's theses, and book chapters have been excluded. This literature review only covers academic articles that were published in the past eight years (from 2011 to 2019). A total of 11 peer-reviewed journal articles investigating the utilization of WeChat in teaching Chinese as a second or foreign language were selected for analysis. Apart from the rigorous criteria that were applied in searching and inclusion, the relatively low number of available studies for review is also partially due to the fact that the WeChat application was first released in 2011, and the incorporation of it into Chinese language courses did not start until very recently.

The critical literature review was conducted qualitatively. Specifically, the collected data was coded and categorized both deductively by adopting the six categories of participation proposed by H. Jin (2009), and inductively, identifying a seventh indicator of participation that is named as "modality of communication" in this literature review (see Table 1). Two types of codes are used under this theme—linguistic mode (speech and/or writing) and other semiotic resources (emoticons, stickers, photos, memes, etc.). Altogether, sixteen codes in the right columns of Table 1 are used for coding in this study,

which are grouped under the seven themes in the left columns. Additionally, building upon what H. Jin (2009) proposed in the second category "range of participation," this study also identified one more form of participation and coded it as "one-to-one."

Factors that affect CLLs' participation were identified in the collected studies as well. Building upon the coding process delineated above, the content relevant to the seven categories of participation was coded inductively for another round to reveal these factors. These codes were categorized and grouped under three themes—affective, social, and curricular factors. For instance, under the first category of participation, "type of participation," students' overall attitudes to social media were identified as a factor at play, and therefore, were coded and categorized under the theme "affective factors."

In summary, the following seven indicators of participation and CoP serve as an overarching framework and theoretical analytical lens for this literature review.

Table 1 Categories to analyze participation in the WeChat community of practice

1. Type of participation	a. Active participation b. Passive participation
2. Range of participation	a. One-to-one, one-to-many, or many-to-many b. Non-native to non-native speakers or non-native to native speaker communication
3. Mode of communication	a. Receptive, productive or both b. Interpersonal, interpretive or presentational only c. Interpersonal, interpretive or presentational (all three communicative modes present at the same time)
4. Direction of communication	a. Act as a sender or receiver b. Act as both a sender and receiver (one-way or two-way communication)
5. Communication device	a. Real time communication. b. Face-to-face communication. c. Stored-and-forward communication.
6. Path to information access	a. Information accessed on an on-demand basis (when the content, timing and sequence of communication are under the control of the end user) b. Information accessed on a broadcast basis
7. Modality of communication	a. Linguistic mode (speech and/or writing) b. Other semiotic resources (emoticons, stickers, photos, memes, etc.)

Adapted from H. Jin (2009, p. 31)

4. Findings

To make an informed analysis of students' participation in the WeChat community of practice, the literature review first lays out the practices of WeChat utilization in extant studies.

A rather common practice is using WeChat as an educational platform or tool to connect CLLs with native speakers. Five studies (Jiang & Li, 2018; Sung & Poole, 2017; Y. Wang et al., 2016; Z. Wang, 2015; Zhang, 2016) paired up the two cohorts as language partners and adopted WeChat as a venue to conduct one-on-one conversations in voice and/or text messages. The conversation formats and topics are usually pre-designed by the curriculum and account for certain percentages of students' grades. For instance, Jiang and Li (2018) weighted 15% of assessment on WeChat tasks in the curriculum. Two other studies (Huang, 2019; L. Jin, 2018) involved native speakers as well but in a different way. Students communicate with their Chinese friends over WeChat in private without teachers' intervention and corresponding curricular design. WeChat was adopted as a platform for students to submit oral assignments and receive feedback from two research assistants (RAs) in Xu and Peng (2017). The two RAs are native speakers, but their participation seemed to be somewhat restrictive according to the study design. Among all the studies, Luo and Yang (2016) carefully designed the most WeChat-supported activities and implemented five various tasks that are beneficial for students' linguistic gains and community building. Nevertheless, the group chat in their study was merely created among CLLs without the involvement of native speakers. Although Chu, Ng, Lai, and Lam (2015) provided rather fruitful and informative research results, unfortunately, little data can be retrieved regarding the ways that WeChat was used in students' language learning in their study.

Aside from messaging, some of the reviewed studies employed other useful functions in WeChat. For instance, Luo and Yang (2016) used "Official Accounts" in WeChat to update weekly news about China in English, share language learning resources, and promote the Chinese language program. An official account in WeChat is similar to a blog. WeChat users may subscribe to various official accounts relating to their reading interests. The administrator of an official account, whose role is akin to bloggers, regularly posts articles for subscribers. Huang (2019) used the same function for a different purpose, summarizing weekly learning content for students to review. Additionally, the researcher also incorporated "Moments" into the curriculum, requiring students to post at least once a week, which accounted for 10% of their grade.

In all the studies laid out above, the utilization of WeChat remains merely in the out-of-class context. Zhan and Chen (2018) incorporated WeChat into in-class instruction in a creative way, expanding the scope of using WeChat for Chinese language learning. Due to students' diverse proficiency levels in a content course, they adopted WeChat for differentiated instruction. In class, students used WeChat to record their speaking responses to individualized speech tasks. However, there is a lack of peer interaction in this way of using WeChat, which is primarily for submitting voice messages and soliciting feedback from teachers, akin to the usage in Xu and Peng (2017).

Contrasting the aforementioned studies, L. Jin (2018) primarily used WeChat as a Chinese study-abroad management platform and created a group chat including the researcher, American students, and Chinese tutors to serve this end.

4.1 Research Question 1: Nature and Characteristics of Participation

4.1.1 Type of participation: Active or passive

The first indicator to analyze the degree of participation adapted from H. Jin (2009) is the degree of involvement—active or passive. In this study, active participation is defined as constantly participating in the practices in the community and/or autonomously participating; passive participation is defined as participating inconsistently and/or participating without a positive attitude.

There is not much quantitative data showing the frequency and consistency of participation of CLLs' in the WeChat community of practice. Only one study (L. Jin, 2018) explicitly records the number of contributions of participants. This could be the result of research design since most of the collected studies investigated learners' perceptions of utilizing WeChat for Chinese language learning and its challenges and drawbacks rather than elucidating participants' level of activity in the community.

Despite the scarcity of relevant quantitative data, we are still able to derive the overall degree of participant activity and their tendency to participate through systematic analysis of the qualitative data retrieved from studies under review.

As Chu et al. (2015) argued, enjoyment is significantly related to attitude, and attitude in turn strongly influences students' decisions as to whether they will keep using SNAs for language learning. In all the reviewed studies, the participants overwhelmingly held rather favorable attitudes towards the incorporated WeChat-supported activities. Therefore, it might be a reasonable conjecture that the participation under the program or project requirements is actively initiated by the participants. Furthermore, as explained in the previous sections, students are usually instructed to practice the target language individually with their language partners via WeChat. Such type of conversion requires active participation by both parties to ensure the conversation keeps flowing, and CLLs are put at the center of the community of practice at the onset.

Despite encouraging and positive feedback from students, taking a more in-depth look at the available data reveals a wide range of variation among the participants with regards to the level of activity. Jiang and Li (2018) reported that students' investment of time and effort on the task varies greatly at an individual level, ranging from 20 minutes to four hours weekly (p. 10). This result is congruent with the findings of Sung and Poole (2017) that the frequency of using WeChat for language learning ranges from multiple times a day to one to two times a week. L. Jin (2018) discusses the different frequency of participation in the WeChat conversations from two focal participants. One participant actively participated in the conversations an average of three to four times per week and over ten times in the first and last week. The other participant had zero participation over

two weeks, and there was only one week with over ten times because she was "sharing photos she took for the group during a group outing" (p. 37).

This variation in frequency and consistency of participation is evidenced in other studies as well (Huang, 2019; Xu & Peng, 2017; Y. Wang et al., 2016). Data in Xu and Peng (2017) showed reluctance from some of the participants to do the assignments on WeChat even when they were required. Multiple studies showed that some participants preferred face-to-face communication over WeChat and were not comfortable using SNAs (Huang, 2019; Xu & Peng, 2017; Y. Wang et al., 2016). Teachers in Y. Wang et al. (2016) had to email students, reminding them to check their WeChat messages at least once a day and reply as soon as possible (p. 25). Moreover, to reinforce students' participation, students were required to share their WeChat exchanges in class.

In sum, while students are generally active in the WeChat community, the characteristics of task design and different attitudes towards WeChat-supported activities necessitate constant teacher monitoring or intervention to reduce inactivity.

4.1.2 Range of participation

The second indicator used to analyze the degree of participation adapted from H. Jin (2009) is the range of participation: (a) one-to-one; one-to-many or many-to-many; (b) non-native to non-native speakers or non-native to native speaker communication.

It is apparent that the features of WeChat significantly expand the range of participation from one-to-one to many-to-many, which allows a much broader spectrum of communication. Notwithstanding such great potential, many studies, surprisingly, confined WeChat-supported tasks to one-to-one communication. As mentioned previously, CLLs are required to use the target language to complete weekly tasks with their respective language partners. To carry out this type of task, WeChat is not necessarily adopted as many other SNAs can provide the same functions. In other words, the unique features of WeChat are not fully tapped into for language education.

Huang (2019) used the resources in WeChat to a greater degree, implementing tasks at three different levels involving one-to-one, one-to-many, and many-to-many participation. However, the available data in the study primarily focuses on one-to-many participation without too much information about the other two types of communication. The one-to-many participation in the study refers to students' weekly posts in their "Moments," namely sharing their life with peers in the program and Chinese friends. Xu and Peng (2017) also focused on one-to-many participation. However, WeChat, in their design, was merely used as a tool for students to submit oral assignments and receive feedback from RAs. Their study did not cover whether feedback was sent individually or in the group chat, nor whether students listened to and commented on each other's oral submission in the group chat. Additionally, Xu and Peng admitted that "There was a lack of teacher-student interaction after feedback provision on the WeChat platform" (p. 181). According to Huang (2019), submitting homework through WeChat was rated as the least helpful function among others including applying knowledge to practice, sharing thoughts,

reviewing class content, etc. Similar usage was found in Zhan and Chen (2018). However, they designed the tasks in individualized ways. Considering the wide gaps among students' proficiency levels, the instructor assigned differentiated speech tasks to students. Not surprisingly, such kind of individualized learning was rather well-received among students, although the interaction is merely one-to-one between students and the instructor.

Many-to-many interaction is seen in L. Jin (2018) and Luo and Yang (2016). The difference between the two studies is that WeChat-supported participation in Luo and Yang (2016) only took place among CLLs without the presence of native speakers. Therefore, the value of WeChat in connecting learners to the authentic resources in the target community is missing.

A relevant issue that is worth some discussion here is the role of teachers in participation. Although the results indicate that one-to-one communication is a prevailing format in current practices, such type of communication is, from the perspective of CLLs, actually one-to-two as teachers often joined their private conversation with language partners as a silent listener and observer (Jiang & Li, 2018; Y. Wang et al., 2016). The enrollment of teachers is a safeguard to prevent low-quality conversations and allows in-time intervention and feedback. Despite the benefits, students might feel uncomfortable with the teacher presence in their private conversation, as one student commented in Y.Wang et al. (2016). This student felt somewhat embarrassed with the teacher being in the group (p. 26). This might be a signal for researchers and educators to identify alternative ways to facilitate smooth and high-quality conversation while designing e-tandem language learning between CLLs and native speakers. For instance, students could be required to write a summary of their language exchange in WeChat or report their experience in class.

Although the overall range of participation is widely broadened due to the development of cutting-edge technologies, participants do not necessarily enjoy conversations taking place in all ranges. The data in L. Jin (2018) pointed out a varied preference for one-to-one, one-to-many, or many-to-many participation in the WeChat community. One of the two focal participants preferred one-to-one participation despite being enrolled in the many-to-many chat group. She was rather reticent in the group and mostly used WeChat to communicate with her language partner privately. Furthermore, she preferred face-to-face communication and participated in WeChat communication only when needed (e.g. scheduling a meeting time or talking with her language partner after she left China). She also read the "Moments" posts from her Chinese friends and asked her language partner to explain them to her. Another participant, on the other hand, was tremendously active in both the group and private chat, showing a tendency for all ranges of participation.

Students in Huang (2019) stated that their top-rated motive for learning Chinese is to make Chinese friends. This indicates a tendency of non-native to native speaker communication, which is also evidenced in other studies. CLLs expressed that the convenience of authentic language and cultural exchange with native speakers is one of the greatest strengths of WeChat-supported activities. In L. Jin (2018), one participant "found

WeChat an extremely convenient and fun tool to stay in touch with the new Chinese friends he made in Shanghai" (p. 35).

In summary, the range of participation in the current practices of using WeChat for Chinese language learning is primarily one-to-one despite the enormous potential of being broadened to many-to-many through the other functions of WeChat. The studies demonstrate that the range of participation is greatly influenced by the instruction and research design in different programs and studies. Participation is mostly one-to-one when the design is pair-based while the range broadens to many levels when a variety of participants are grouped. Additionally, community members' personal preferences greatly determine the range of their participation as well. Despite these differences, the incorporation of WeChat affords CLLs access to the linguistic and cultural resources in the target community even for passive participants.

4.1.3 Mode of communication

The third indicator of the six categories is the mode of communication: (a) receptive, productive or both; (b) interpersonal, interpretive or presentational only, and; (c) interpersonal, interpretive and presentational at the same time (H. Jin, 2009). Although the indicators are listed as three parallel options, overlaps exist across these modes. For example, the communication practices in one studied community can be categorized as receptive as well as interpretive. As the analysis of the current practice of utilizing WeChat for Chinese language learning demonstrates, most studies focused on elevating CLLs' Chinese proficiency in all listed modes. During one-on-one language practice, students are expected to not only express and present their ideas in the target language accurately, fluently, and appropriately, but they must also demonstrate their understanding of the input from their interlocutors. Such bi-directional communication shows their command of Chinese in an interpersonal mode.

While acknowledging the value and convenience of using WeChat-supported tasks to train students in all listed modes of communication simultaneously, it is worthwhile to mention that the five-component tasks integrated into Luo and Yang (2016) were designed more comprehensively. Students had opportunities to focus on one mode at a time in this study. The "ask/answer question," "mini-oral project," and "socializing and information sharing" components stressed the interpersonal modes. The "mini-writing tasks" expected students to post their writing in the WeChat group; however, reading and commenting on each other's submissions was not compulsory but was encouraged instead. Therefore, the presentational or productive mode was the targeted training mode in this task. Similarly, the speaking task in Zhan and Chen (2018) and the sub-task in Huang (2019), requiring students to post weekly in "Moments," are also ways to focus merely on presentational or productive modes.

In contrast to Luo and Yang (2016) use of various modes guiding the design, Xu and Peng (2017) concentrated only on the characteristics of mobile-assisted oral feedback. Participants were required to use WeChat to submit their recorded assignments and receive

feedback from the RAs to review. While the presentational mode was involved in the study's design, the interpretive mode is the core of their study.

It goes without saying that a language curriculum should give students adequate opportunities to make and negotiate meaning in all three communication modes to maximize their linguistic and intercultural gains. As demonstrated in the relevant studies, the WeChat-supported activities provide opportunities to fulfill such a goal, and at the same time it allows language educators to focus on one mode at a time.

4.1.4 Direction of communication: One way or two way

The fourth indicator is to analyze the direction of communication, one way or two way, which is closely associated with the third indicator. All studies maintain two-way communication with occasional one-way communication. Typical one-way communication is when students primarily communicate in the presentational mode, for instance, posting on their "Moments," without receiving any comments or feedback from other WeChat members.

It is not surprising that communication among WeChat participants is predominantly two-way, a predictable outcome considering the embedded features of WeChat as a SNA and how WeChat is used as a mobile community of practice for language learning. Primarily an instant messaging application, WeChat consists of a variety of functions to support two-way communication: text and voice messaging, voice and video calling, and blogging with comments. One of the crucial reasons that educators and researchers choose WeChat as the platform for a mobile community is the multiple opportunities for mutual communication and engagement realized by the different features. The design of each study also implies their intention of utilizing the two-way communication component in WeChat. For example, students were required to submit recorded assignments to the WeChat group to receive and review feedback from RAs (Xu & Peng, 2017); other students needed to ask and answer questions with native speakers in assigned topics (Jiang & Li, 2018), and; another group of students negotiated and scheduled their face-to-face meetings through WeChat (L. Jin, 2018). Two-way communication could be seen as an embedded feature of WeChat, WeChat-based mobile communities of practice, and WeChat-based design of Chinese learning studies.

4.1.5 Communication device

According to H. Jin (2009), a communication device primarily consists of three subcategories: real-time communication (as in video teleconferencing), face-to-face communication, and stored-and-forward communication (as with electronic mail). In extant studies, the third subcategory, stored-and-forward communication, was utilized in most WeChat-supported activities (e.g., Huang, 2019; Sung & Poole, 2017; Z. Wang, 2015; Y. Wang et al., 2016; Xu & Peng, 2017). For instance, to review in-class learning content and expand vocabulary with the help from language partners, Sung and Pool (2017) assigned students three tasks: texting tasks (i.e., communicate by texting), voice tasks (i.e., communicate through voice messages), and camera tasks (i.e., take pictures of objects

relevant to lesson topics and ask language partners for the corresponding Chinese words). Instead of meeting face-to-face, both parties sent and replied to messages at their convenience through WeChat, which overcomes both temporal and spatial restrictions.

Although the function of synchronous communication such as video-chatting is very popular among WeChat users, it seems that asynchronous communication through voice and text message is used more frequently by FL educators and is well-received among FL learners. Participants in the existing studies expressed that asynchronous communication on WeChat reduced their anxiety of speaking an FL since they have more time to prepare and practice what they would like to say and check the voice and text messages they received as many times as they wish, which is especially beneficial for comprehension in the target language (Sung & Poole, 2017; Z. Wang, 2015; Y. Wang et al., 2016). For instance, A participant in the study by Xu and Peng (2017, p. 180) explicitly indicated that: "Maybe I am a little shy in class, but I am confident when speaking on WeChat. I don't have to rush, and it's easier to say something in this way."

Aside from anxiety reduction, this type of language practice helps some participants at the social level to a certain extent. Sung and Poole (2017) primarily designed asynchronous communication tasks and reported that "it seems that the diverse functions of WeChat aided the smoothness, and decreased the awkwardness level, of the interactions for the participants, maximizing the effectiveness of the social interactions needed for language learning" (p. 107).

The popularity of asynchronous communication on WeChat is also partially attributed to a practical matter—different time zones among participants. Many studies investigated the effectiveness of WeChat in linking language learners with native speakers. However, due to the time difference, it is rather challenging for the two sides to manage and maintain real-time communication. In response to such student feedback, the 30-minute semi-synchronous language exchange in the study by Y. Wang et al. (2016) was replaced by asynchronous text message exchanges. The change of communication device produced "more feedback and more accurate output" (Y. Wang et al., 2016, p. 25), facilitating students' participation in the online learning community.

Among the existing studies, Zhang (2016) explicitly stated that the synchronous communication device was adopted in the study, and students were required to conduct a weekly conversation in Chinese for at least 40 minutes. Interestingly, when comparing synchronous and asynchronous communication devices through WeChat, Zhang (2016) reported that asynchronous chat was rated as less preferable than synchronous chat by CLLs who were paired-up with native speakers in a different time zone, as "the general consensus of the participants was that asynchronous chat was less efficient" (p. 71). While this might seem somewhat contrary to the feedback from students in Y. Wang et al. (2016) and other studies at first glance, taking a closer look might lead to a reasonable conclusion that the two different results are not mutually exclusive. The efficiency of synchronous communication and the usefulness of asynchronous communication was confirmed respectively in these studies. Notwithstanding, such an interesting phenomenon indicates an imperative need for further research on a more systematic and comprehensive

comparison between the two types of communication devices in the mobile-assisted language learning environment. For instance, a mixed-methods study may analyze which communication device effectively facilitates students' participation, with quantitative data informing students' participation in terms of quantity and quality and qualitative data providing an in-depth understanding of the factors at play. The resulting findings may inform when and how to use what communication device of SNAs, such as WeChat, to meet students' learning needs and styles better.

Another interesting phenomenon is that no matter if it is synchronous or asynchronous communication, the vast majority of students, especially those that paired-up with a native speaker, unanimously opt for texting over voice messages even when they are given choices (Zhang, 2016). According to Zhang (2016), the main reason was that audio/video chatting was too challenging and stressful. On the contrary, texting may reduce anxiety and permit time for students to look up words they encounter in their language partners' messages. Sung and Poole (2017) reached the same conclusion that the main function for communication between language partners was the text function while the other functions were used as supplementary methods for communication (p. 104), although they designed three various assignments (i.e., text task, voice, task, camera task) for students to complete. This result is not to deny the usefulness of the voice function of WeChat as participants in Sung and Poole (2017) shared their fondness for this function and admitted that the voice function helped with pronunciation. While communication is merely among language learners in Luo and Yang (2016), oral tasks through voice messages in WeChat was rated as most useful since it helped with oral skill development in Chinese.

4.1.6 Path to information access

The sixth indicator of the degree of participation categorized by H. Jin (2009) is the path to information access. Users may access on an on-demand basis where the content, timing, and sequence of communication are under the control of the end-user or on a broadcast basis (H. Jin, 2009, p. 31). Although WeChat does possess features that allow users to access information in both ways, the first path—accessing on an on-demand basis—is more often adopted for participants to carry out various learning tasks or to solve real-life problems. The activities include asking and answering each others' questions in Chinese (Luo & Yang, 2016), practicing the target language with native-speakers (Jiang & Li, 2017; Z. Wang, 2015; Y. Wang et al., 2016, Zhang, 2016), submitting oral assignments and receiving feedback from RAs (Xu & Peng, 2017; Zhan & Chen, 2018), and seeking help from community members (L. Jin, 2018). It is also very common for participants to use the "Moments" function of WeChat (Huang, 2019; Sung & Poole, 2017) to share the events of their actual lives with other community members.

The second path of accessing information is rarely seen in the extant utilization of WeChat for Chinese language teaching and learning, except in the study by Luo and Yang (2016) and Huang (2019). Huang (2019) created their own official account and used it as a platform to summarize students' language learning performance and important grammar covered in class when student participation was somewhat limited. Further, such a way of

utilizing WeChat was substantially different from the real-life usage of official accounts, and the subscription was enforced by the instructor rather than out of participants' own interest, accounting for limited student participation. Such a lack of student participation in the official account is also reported in Luo and Yang (2016): "A number of students confessed that they did not spend much time on it" (p. 90).

L. Jin (2018) designed a WeChat group chat as a platform for faculty to disseminate information such as the change of a meeting time and event updates. For the language learners, this way of using WeChat is accessing information on a broadcast basis, and it is, in fact, a practical usage as well because this preserves the way that WeChat is used in real life instead of adapting it specifically for educational purposes. Nevertheless, there is little data regarding this function of the WeChat group in L. Jin's (2018) study due to its research focus being elsewhere. Therefore, it is difficult to know if such a path of accessing information hinders or facilitates learners' participation in the WeChat online community.

Overall, the first path affords participants in the WeChat online community of practice opportunities to take a much more proactive role to obtain and/or contribute information. Such a sense of agency of doing things in the community facilitates learners' participation. In sharp contrast, the ways to use WeChat as a venue to broadcast information to foster community members' participation are much less satisfying in the available studies. Further, rather scant data could be retrieved in this regard, and relevant functions of WeChat for language learning need to be further explored.

4.1.7 Modality of communication

In addition to the six categories to evaluate the degree of participation and interactivity in web tools for FL education proposed by H. Jin (2009), another salient theme that emerged out of the critical review of the existing studies is the multimodality of participants' communication in the WeChat online community of practice. As Kress (2015) contends, the linguistic mode per se is not adequate for all communicational needs; instead, people utilize multimodal semiotic resources to make meaning, which goes beyond speech and writing. WeChat provides users with multimodal communication means, including voice and text message, emoticons, pictures, hyperlinks, video clips, Chinese memes, and the like.

Although using multimodal means to participate in WeChat communication is not designed by Chinese instructors intentionally, many CLLs demonstrate the capability of effective communication through multiple means on WeChat. These multimodal communication means are complementary to each other, working together to help language learners successfully negotiate meaning and deliver messages. For instance, modes such as emoticons, photos, stickers, and memes compensate for language learners' relatively insufficient proficiency in the target language. As illustrated in L. Jin's (2018) study, memes and stickers accelerated a beginning Chinese learner's participation in the community despite his limited Chinese. In this case, a beginner in terms of language proficiency, aided by semiotic resources beyond language, could be a mature and experienced participant in the community who participates fully. Even for learners with

higher proficiency levels, access to emoticons, hyperlinks, or music may also be a gateway to conversing with native speakers in a more socially and culturally appropriate and authentic way, in addition to being linguistically appropriate. It can also serve as an entry point of a conversation among community members. For example, a participant in Sung and Poole (2017) shared that the song feature in WeChat was especially useful, and often led to discussions about music in their respective cultures. Zhang (2016) found that students found helpful images on the web to facilitate the conversation "when they did not know how to say something," and "all participants made use of emoticons to express their feelings" (p. 71).

Successful communication through multimodal semiotic resources not only enhances the confidence of CLLs in the target language but also fosters rather lively, enjoyable, and relaxing interaction among community members (Y. Wang et al., 2016, p. 33). This is echoed by L. Jin (2018). Another participant in the study by L. Jin (2018) didn't actively participate despite her higher language proficiency. Nevertheless, she reported rather favorable attitudes toward multimodal messages she received on WeChat: "And yeah, it is fun to text friends there, with all the stickers and memes. I don't text much but I enjoy reading those messages in our group chat" (L. Jin, 2018, p. 37).

It is worthwhile to note that what modalities of communication participants will use in the community is intricately associated with curriculum design. For instance, in L. Jin (2018), it is rather loosely designed in terms of how students should use WeChat group chat in the study abroad program. Therefore, students freely expressed ideas through language, video clips, photos, emoticons, etc. Conversely, some researchers explicitly instructed students to only use a certain modality of communication. For instance, Jiang and Li (2017) required students to ask each other questions and that the interaction be in the form of voice messages. Zhan and Chen (2018) also only used voice messages to help students practice speaking. Different components in Luo and Yang (2016) expected students to complete tasks in various types of modality ranging from texting in a short paragraph to recording a short oral production.

The policy, target language only, is often treated and used as a golden rule in FL teaching, especially in intensive immersion language programs. However, the effective usage of other semiotic resources in the dynamics among community members, as demonstrated in studies like L. Jin (2018), Sung and Poole (2017) and Y. Wang et al. (2016), signify the importance of further research on such types of meaning-making and negotiation in digitally-mediated communication. A better understanding of such types of nonverbal communication can shed light on better design of tasks for language practice and development as well as help FL educators nurture learners to become not only adept in the target language but also other semiotic resources, using them in a socially and culturally acceptable ways.

4.2 Research Question 2: Influencing Factors

Built upon the systematic review above, the content relevant to the seven categories of participation was coded inductively to reveal factors that affected CLLs participation in

the community. The factors were identified at three levels: the affective level, the social level, and the curricular level.

It is rather evident that affective factors impact the participation of CLLs in the WeChat online community of practice in various ways. For instance, students' high-level anxiety in synchronous communication with native speakers leads to the adjustments of WeChat-supported tasks. Additionally, as such anxiety gradually subsides, students' participation in the community improves as well. Zhang (2016) reports that the interaction of CLLs with native speakers improved as they became happier and more relaxed. Aside from anxiety, participants' personal preferences influence the level of participation as well. Some students' inactivity in the community results from their resistance to SNAs in general, not to mention using it for educational purposes. Huang (2019) reminds us that "if the learners are not social people themselves or tend to decline social media in the first place, they may not be active in using the language to communicate online, in this case, using WeChat" (p.16). One participant in the study explicitly expressed reservations about using social media, and he personally does not have any account. Consequently, he was frequently late in completing WeChat-assisted tasks and remained somewhat in a peripheral status at the beginning of the course.

Despite individual differences, the vast majority of participants consider WeChat-supported activity as useful, enjoyable, and informative. The overall positive experience of students in WeChat-assisted language learning plays an essential role in keeping them active in the community. The survey results from Zhang (2016) show that most of the participants enjoyed the project so much that 60% of them planned to maintain their relationship with language partners after the project has concluded. This is in tandem with the findings reported in the other studies (Chu et al., 2015; Huang, 2019; Luo & Yang, 2016; L. Jin, 2018).

Social factors can also hinder community members from moving towards fuller participation. Participants are not familiar with each other and do not have much in common; therefore, they might not know how to engage in conversation with each other, especially in a different language. While some students feel uncomfortable conversing on WeChat with their language partner, who speaks a different language and comes from a completely different culture (Y. Wang et al., 2016), other students find WeChat very helpful to avoid the awkwardness in meeting language partners in person (Sung & Pool, 2017). Whichever scenario applies, the same issue is that there is a lack of a topic to converse about when socializing with each other. Therefore, some students suggest that, if feasible, community members should meet in person regularly to build bonds and create common topics for WeChat discussion, or that language partners should be paired up based on similar interests (Sung & Poole, 2017).

While both affective and social factors exert an influence on students' participation, curricular design directly determines the range, mode, or device of their participation. As analyzed and elucidated above, how participants access, share, and deliver information are in line with the requirements of the WeChat-supported tasks. This can be observed in Luo and Yang (2016), with the five different types of tasks entailing diverse ways of

participation. For instance, the "mini-oral project" required students to participate in an interpersonal mode, actively, bi-directionally, and asynchronously.

Built upon curricular requirements, teachers' in-time intervention and constructive feedback may also effectively change participants' attitudes, energize participants, as well as increase and broaden their participation in various ways. The fourth participant in Huang (2019) was rather low-motivated at the beginning of the study; however, he started to post high-quality messages after receiving teacher feedback. Appropriate teacher scaffolding before implementing WeChat-supported activities may also be helpful to better prepare students for participation in the community. Sung and Poole (2017) conducted a training session after pairing up language partners, which familiarized the participants with different matters, including language use, speech speed, and linguistic areas for improvement. The necessity of such types of training was echoed in the study by Y. Wang et al. (2016), who also recommended more careful teacher monitoring in the future use of WeChat for language learning, consistent with the suggestions from Luo and Yang (2016).

5. Discussion

The aforementioned findings make it rather reasonable to conclude that to date ways to incorporate WeChat into Chinese language curricula remain rather underdeveloped. As revealed in the literature review, the current practices primarily revolve around asynchronous and one-to-one communication at the interpersonal mode through text messages. The other functions are confirmed to be useful, however, they are less frequently utilized to a satisfactory degree within the current Chinese language and learning practices.

The device of communication, for instance, primarily concentrates on the stored-and-forward device with much less discussion about synchronous communication. The main hindrance to adopting real-time communication devices is low language proficiency, which results in high anxiety amongst novice language learners. For the same reason, participants overwhelmingly opt for text messages in place of audio or video chat. Therefore, it is reasonable to conjecture that synchronous communication through voice messages and video conferencing in mobile-assisted language learning could be less challenging to advanced Chinese language learners. Consequently, for such a group of learners, synchronous language exchange should be more heavily weighted to further improve their fluency in Chinese in addition to accuracy. Therefore, ways to effectively adopt mobile-assisted language learning should be further explored in the advanced-level Chinese language courses. This is consistent with what L. Jin (2018) proposed: "Higher-level learners can be encouraged to venture out of text-based conversations to conduct audio or video-based chat on WeChat" (p. 46).

Additionally, how participants in the online community access information is restricted to a demand-basis. Ways to make broadcast-based information sharing more interactive and genuine should be further developed. For instance, there should be more genuine and authentic ways to utilize the Official Account function of WeChat for Chinese language education, allowing students to find accounts that truly match their interests. In

the meanwhile, this could also serve as a beneficial platform for CLLs to be immersed in a legitimate target language context and receive authentic target language input. Similarly, other functions such as group chat and multimodal communication should receive equal attention in order to broaden participation range and aid community members in moving towards fuller participation. In addition, when it comes to mobile-assisted language learning, teachers should help students tap into the multimodal semiotic resources to prepare themselves socially and carry out authentic, meaningful, and culturally-appropriate conversations with native speakers.

An interesting phenomenon that emerged in this literature review is that legitimate membership of CLLs in the WeChat online community and their corresponding degree of participation from peripheral to full is not necessarily associated with participants' proficiency in the target language. High proficiency in the target language does not ensure active or full participation. With the aid of the multimodal semiotic resources afforded in WeChat, participants with limited proficiency in the target language, even the beginning learners, can successfully carry out meaningful communication with other community members. On the contrary, much more proficient language learners could remain as peripheral participators.

The contributing factors at three levels—affective, social, and curricular—working together, determine the nature and characteristics of students' participation in WeChat-supported Chinese language learning. In the study by L. Jin (2018), WeChat group chat was used as a platform for disseminating information in the study abroad program without delineating specific ways for participants to use this platform or to act in this group. To a certain degree, WeChat was not adapted for educational purposes in this case, which in turn afforded students more room and flexibility as to how to participate in this online community. While it allowed the participant with lower proficiency to utilize multimodal communication to meet his learning, social and life needs, it did not give adequate attention to the other group of participants with more advanced proficiency, causing them to feel less motivated to actively contribute to the communication in the WeChat group chat as their proficiency was far beyond the conversation taking place in the community. As demonstrated in Zhan and Chen (2018), individualized speech tasks through WeChat reduced boredom among more advanced learners. This calls for a careful and differentiated design of WeChat-supported activities that meet the educational needs of various groups of learners with different proficient levels of the target language. For instance, if WeChat is designed as a platform for students to discuss controversial social issues in China or America, it might lead to rather heated debate, and participants similar to a student in L. Jin's (2018) study might take a more proactive role in participating in such type of conversation instead of passively receiving messages containing simple sentences in Chinese or funny memes. This student was rather active in the WeChat community when there was a need for real communication, and she even maintained her membership in the group after the study abroad program ended.

In summary, in order to turn WeChat into an effective educational tool to form a FL learning community where community members are encouraged to commit to "core participation" (Wenger, 1998) and to "exchange knowledge and localize new information"

(Yang, 2009), instructors and researchers should further explore the functions of these SNAs for educational purposes, and make differentiated pedagogical designs as to how to effectively utilize these tools for FL teaching and learning. This is congruent with what H. Jin (2009) emphasized when discussing how to use internet web tools for FL education. She asserted that participatory learning assisted by participatory tools increases a learner's target language use if the pedagogical design is sound and technology use is appropriate (p. 28); but poor pedagogical design can reduce the motivation and degree of student participation and interactivity when using technology to learn a foreign language (p. 43). Future research should shed light on these issues, such as the effectiveness of varying communication devices of SNAs in facilitating students' participation, to provide empirically-buttressed guidelines for pedagogical practices.

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