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# English VP Idiom Learning and WeChat: Developing Idiomatic Competence among Chinese EFL Learners

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## ABSTRACT

Social networking service platforms and social media have generated a significant amount of discussion and debate regarding their use in second or foreign language learning. However, leveraging digital tools with pedagogical constructs to enhance accessibility and engagement in teaching and learning English idiomatics has not received equal attention. Consequently, discovering new modes of learning in the formulation and implementation of English idiomatics instruction in the modern digital age is a must. This study investigated Chinese EFL learners' development of idiomatic competence. It examined English vivid phrasal (VP) idiom learning in classrooms supporting WeChat use vis-à-vis the classrooms supporting traditional modes of language instruction without WeChat. It also explored the extent to which WeChat-enhanced instruction can affect learners' motivation, attitude, collaboration, and experience. The participants of this study were 55 first-year English major students who took part in an intensive, eight-week idiom-training module. A pre-/post-test and a questionnaire were used to uncover how a WeChat-driven learning environment can mediate the way students acquired Post-Lexical Level (PLL) VP idioms and what their general perceptions towards using WeChat in the idiom-oriented activities were. The results indicated that there was a statistically significant difference in achievement between the WeChat-enhanced group and the traditional face-to-face group. Analysis of data further revealed that peer interactions supported by WeChat are likely to be essential learning constructs in furthering idiomatic competence development.

***Keywords:*** computer/mobile assisted language learning; idiomatic competence; multimedia learning; sociocultural theory; task-based approach

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## Introduction

For more than two decades now, research has investigated the development of idiomatic/figurative and formulaic language among second and foreign language learners (Abel, 2003; Cieślicka, 2006; Giora, 1997; Gomari & Marshall, 2017; Hinkel, 2017; Khonbi & Sadeghi, 2017; Libben & Titone, 2008; Liontas, 2001, 2002a, 2002b, 2002c, 2003, 2007, 2013, 2015b, 2017; McCarthy & O'Dell, 2002; Wray, 2002). Despite notable progress in this area, the attainment of idiomatic competence, characterized by the proficient and effortless use of idioms in diverse sociocultural contexts akin to native speakers (Liontas, 2002b, p. 72), still remains a challenge. This challenge is particularly prominent in collaborative educational settings, with or without digital technologies. Unfortunately, little is presently known about how, and to what extent, social media technologies provide English as a Foreign Language (EFL) learners with opportunities to elevate their idiomatic competence. Even less is known about how such technologies inspire EFL learners to apply idioms naturally in the classroom and beyond (Liontas, 2006, 2018a, 2018b, 2021a; Tabatabaei, 2012).

The aim of the present research is to appraise the impact WeChat can have on Chinese EFL learners' development of idiomatic competence. It seeks to examine achievement in English VP idiom learning in classrooms supporting WeChat use and in classrooms supporting traditional modes of language instruction without WeChat. It also seeks to investigate the extent to which WeChat-enhanced instruction can affect learners' motivation, attitude, collaboration, and experience before, during, and after VP idiom task completion. It is hoped that this research can shed light on how researchers and practitioners alike can utilize WeChat to promote the development of idiomatic competence among Chinese EFL learners. This study begins with a brief discussion of VP idioms to situate the type of English idioms this study pursued in idiom-learning environments sustaining perceived sociocultural interactions and language growth.

## Theoretical Perspectives

### *English VP Idioms*

"Smell a rat," "straight from the horse's mouth," "jump down someone's throat," "paint the town red," and "spill the beans" are but a handful of idioms among the thousands found readily in the English language. Liontas (2002b, p. 77) termed *vivid phrasal* (VP) idioms those idioms that have a fixed phrase structure and a meaning that cannot be deduced from the individual words. They combine both a literal and metaphorical interpretation, evoking visual imagery. Understanding VP idioms involves acknowledging the *Conceptual-Semantic Image (CSI) distance* between the native language (L1) and the second/foreign language (L2), considering the cognitive concepts evoked and the literal/semantic qualities of the words employed.

VP idioms can be categorized on a Lexical-Image Continuum based on their similarity to L1 idioms. Lexical Level (LL) idioms match lexically and pictorially, while Post-Lexical Level (PLL) idioms lack such correspondence. For example, the expression "kill two birds with one stone" easily finds its corresponding equivalent in the Chinese idiom, "一石二鸟" (yī shí èr niǎo), which exactly matches in form and meaning. Conversely, the British idiom "carry coals to Newcastle" (doing something unnecessary) finds an equivalent in the Chinese idiom "画蛇添足" (huà shé tiān zú, drawing feet on a snake), which conveys the same notion of undertaking something pointless.

Semi-Lexical Level (SLL) idioms fall in between, showing significant lexical and pictorial resemblances with minor differences. For instance, the English idiom "speak of the devil and he will appear" has a similar Chinese proverb "说曹操，曹操就到" (shuō Cáo Cāo, Cáo Cāo jiù dào, speak of Cao Cao and he will appear), where "Cao Cao," a historic Chinese warlord, statesman, and poet in the Three Kingdoms of China, can be interchanged with "devil." Context becomes increasingly important for understanding VP idioms (i.e., accessing, processing, comprehending, and interpreting) as learners progress along the continuum. Factors such as word and idiom recognition, lexical access and retrieval, cultural background and world knowledge, and formal schemata and strategy use are important considerations for developing the ability to understand and use idioms accurately in various sociocultural contexts. The hope remains that learners will do so in a manner akin to native speakers with minimal cognitive exertion. Such an effort, we would argue, is best expressed within the tenets of sociocultural theory to which we now turn.

### *Sociocultural Theory*

Sociocultural theory recognizes the importance of how EFL learners comprehend, recall, and acquire English VP idioms in the process of language acquisition. The cognitive and metacognitive processes involved in understanding *idiomatics*—the scientific study of idiomatic language and figurative language (Liontas, 2021a, 2021b, 2021c)—are influenced by social interactions and cultural factors. The human mind is mediated by culture-specific tools and the interactions with more knowledgeable individuals (Lantolf, 2000; Vygotsky, 1978). The *Zone of Proximal Development* (ZPD) is the site where language is shared and internalized through mediation, enabling learners to achieve higher levels of language development through scaffolding and constructive feedback from adults or peers (Vygotsky, 1978, p. 86). Collaborative learning and interaction among learners contribute to their comprehension and acquisition of English VP idioms. (For "collective scaffolding" in second language learning, see Donato, 1994.)

Sociocultural theory precepts can thus help researchers/practitioners and language learners alike to attain a higher level of *idiomatics cognizance*, one in which the human mind, as a dynamic construct, is mediated and supported by the environmental, social, and cultural factors flourishing in learning environments cultivating and refining *idiomatization*—the process of becoming idiomatized to the target culture over time (Liontas, 2015, pp. 626–629). Cognitive functions are mediated by psychological and semiotic tools, such as language and multimedia technologies, which influence language development and knowledge of idiomatics. Mediation in the second language acquisition context is closely associated with textual, graphical, and digital artifacts that learners use to mediate relationships and decipher idioms (Liontas, 2018a, 2018b, 2021d). Multimodal elements in digital media, including pictures, videos, and visuals, facilitate understanding and promote student-centered learning and collaboration, both of which are crucial in idiomatics learning and multimedia learning.

### *Cognitive Theory of Multimedia Learning and Multimodal Social Semiotic Approach*

Mayer's (1997) Cognitive Theory of Multimedia Learning states that students learn more deeply when information is presented using both words and pictures. This is based on the idea that verbal and visual information are processed in separate channels, and active processing leads to better storage and retrieval of information. The presentation of information through both verbal and visual channels helps students create mental representations and build robust verbal and pictorial mental models, enhancing their knowledge (see Mayer, 2014; Mayer & Moreno, 2003).

To optimize cognitive processing, Kress (2009) advocates for a multimodal social semiotic approach that focuses on meaning making across various modes of communication and representation. This approach considers how individuals interpret meanings, perceive the world, and interact through different forms of communication, such as written and oral communication, multimedia, technology, and other semiotic resources (Jewitt, 2006; see also Kress & Selander, 2012). The rapid development of instructional technologies has opened up new possibilities for exploring digital literacies, which require descriptive and analytical investigations, the most important of which we examine in the literature review next.

## Literature Review

### *Multimedia Learning and Idiomatic Competence*

Given that the nature of multimedia materials and digital tools are to facilitate learning while creating meaningful communicative opportunities, it is not surprising to find out that today the utility of such media and tools is thoughtfully integrated with the more "traditional" EFL/ESL learning materials. To date, the pursuit of multimedia affordances is already embodied in a number of CALL/MALL studies. Due to space constraints, only an abridged account of applicable research findings concerning (1) use of subtitles/keyword captions, (2) selection of annotations and multimodal text creation, and (3) attainment of idiomatic competence will be provided here.

Concerning subtitles and keyword captions specifically, access to intralingual subtitles both elevates comprehension of target videos and increases considerably students' communicative output (Borras & Lafayette, 1994), whereas keyword captions enable adult college learners to achieve an analogous level of comprehension when watching authentic videos with full-text captions (Guillory, 1998).

Concerning native texts with annotations for words in the form of text, picture, and video (Chun & Plass, 1996), such annotations enhance short-term recall when information is processed with pictures and text: (1) translation from a source language to a target language and annotated vocabulary in assorted multimedia forms aids beginning-level learners in achieving greater retention of correct word meanings (Grace, 1998); (2) effects of textual-pictorial gloss and picture-annotation type support incidental vocabulary retention (Kost et al., 1999; Yoshii & Flaitz, 2002) while computer-mediated glosses impact L2 reading comprehension and vocabulary learning (Abraham, 2008); (3) employing pictorial annotations in the L2 learning context upholds Mayer's (2014) cognitive theory of multimedia learning (Jones & Plass, 2002); (4) visual annotations permit L2 learners to decipher challenging L2 vocabulary to achieve better memory retention, that is, visual annotations are effective in freeing up L2 learners' working memory capacity while compensating for insufficiently lower-level processes, thereby enabling access to higher-level processes (Sakar & Ercetin, 2005); and (5) multimodal text creation in the L2 writing classroom can serve as a remediation activity that enhances the teaching of literature and language (Christiansen, 2019) while multimodal information generated by a collaborative, resource-rich learning environment can stimulate and strengthen a groups' overall cognitive process and, furthermore, increase confidence in task performance (Kirschner et al., 2014). In all, learning environments endowed with multimedia elements allow learners to select and process particular modes of information when such information is aligned with learners' visual and verbal learning preferences (Kress & Selander, 2012; Plass & Jones, 2005; Sun & Dong, 2004).

Concerning attainment of idiomatic competence, the use of computer-assisted learning of idioms and of web sites explaining English idioms and mobile learning applications/tools for learning idioms and collocations (Amer, 2014; Thornton & Houser, 2005; Wong et al., 2010, 2012) supports idiom learning in general and students' growing understanding of personal and social meaning making environments in particular, wherein artifacts can and do mediate successful small-group co-creation activities. Amidst online idiom learning interactions of EFL college students in Taiwan, the use of a social media app like *LINE*, for example, with its effective text and voice communication features, has been found to provide a stimulating English learning environment whilst significantly boosting learner motivation for targeted peer interaction (Hsieh et al., 2017). Similarly, the use of short message services (SMS) significantly enhances vocabulary learning and retention compared to memorizing words using a dictionary (Alemi et al., 2012). By extension, MALL applications instill much enthusiasm into EFL learners' idiom learning process both inside and outside the classroom: the strategic use of iPads when working collaboratively and sharing constructive feedback promotes idiomatic awareness among heritage learners through textual/visual illustrations and metaphorical meaning co-constructions (Yang & Xie, 2013).

The findings heretofore reviewed are encouraging in that they underscore the continuous exploration of such technologies for the development of idiomatic competence. As seen, the judicious use of such digital media and tools informs L2 researchers and language practitioners alike how best to maximize EFL learners' input and output, as well as how to empower learners to maintain a synergistic collaboration that successfully maps out the processing networks between form and meaning. WeChat, we suggest, is one such social semiotic technology to which we now turn our attention.

### ***WeChat as a Mediated Tool in L2 Collaborative Idiom Learning***

Many researchers already reported that WeChat—the most popular and, by far, most frequently used mobile app in Mainland China—not only fuels the daily social interaction of its users with advanced features and functions (e.g., individual and group chatting, moments sharing, mobile pay, synchronous audio and video communication, food ordering, online shopping), the embedded tens of thousands of mini-programs notwithstanding, it also affords L2 students opportunities to better interact with their peers and instructors through collective scaffolding. To no one's surprise, WeChat is widely considered to be a ubiquitous language learning tool in Mainland China and beyond. According to Wu (2015), WeChat is an effective mediated tool that empowers L2 teachers to promote students' evolving language skills. WeChat also inspires language professionals to exploit new ways of (re)constructing language communities of practice; that is, instead of confining L2 students to a teacher-centered, grammar-driven classroom requiring them to take notes and practice drills passively, WeChat shows great potential in galvanizing students to actively participate in productive tasks and projects that enable them to augment target knowledge and skills in a multimodal learning environment. In such environments, the systematic but proper application of WeChat is much encouraged.

In an exploratory study, Luo and Yang (2016) tested WeChat in their Chinese language classes at a private liberal arts college in the United States. Their conclusion highlighted the importance of L2 teachers incorporating WeChat into their pedagogy, as it offers enhanced exposure to the target language and culture. Moreover, WeChat facilitates the formation of a dynamic language learning community, leading to increased motivation and improved linguistic skills among students. Underscoring WeChat's positive influence on EFL learners' oral production, Xu et al. (2017) reported that WeChat-immersed college students in China became more confident in speaking English and were more actively responsive in assigned tasks and activities, respectively.

Touching on the Chinese-English dyads of two-way L2 learning, Wang et al. (2016) formulated their study within the Community of Inquiry framework to investigate the interplays of three core elements: the cognitive, social, and teaching presence empowered by WeChat. The researchers maintained that, pedagogically at least, language educators may wish to utilize WeChat to support L2 learners' synchronous, semi-synchronous, and asynchronous communication owing to the fact that WeChat's varied media richness created a positive social environment for learners' overall cognitive development. Far more importantly, WeChat's multimodal learning environment transformed positively the overall teaching and learning cycle, thereby making the class more student-centered and even requiring teachers to be much more flexible in task design and organization.

Focusing on improving the pronunciation skills of English learners in China and to maximize the interactivity and instantaneity among learners and instructors, Wang (2017) proposed that WeChat be introduced during three critical instructional moments: previewing before class, practicing during class, and reviewing after class. Conversely, Wu and Ding (2017) argued that WeChat is an effective and convenient mobile tool that allows learners of English in China to interact and collaborate beyond the classroom walls. Adopting the tandem language learning model that aims to improve students' L2 by grouping language learners whose L1 is group members' target language, Sung and Poole (2017) utilized WeChat to allow Mandarin Chinese-speaking international students from China to interact with English-speaking students learning Mandarin Chinese in a U.S. college setting. The authors concluded that WeChat allowed these learners to comfortably communicate with their peers using the target language as well as improve their pronunciation and tones. Similarly, Li's (2018) study shed light upon WeChat's digital affordances in a cultural exchange and meaning-focused communication: WeChat greatly helped Chinese language learners of American college students involved in a summer study-abroad program in China to attain a deeper level of authentic communication practices that are meaningfully endowed with multiliterate elements in a casual virtual space. While interacting with the local native speakers of Chinese on WeChat, these American students were able to construct a new identity that further galvanized them to analyze and explore the Chinese language and culture.

Wu and Miller (2019) capitalized on the concept of "Community of Practice," whereby groups share similar concerns and passion about a particular topic while regularly interacting with one another in various communicative practices. Leading a group of English-major students in China to share their understanding of Chinese culture both synchronously and asynchronously on WeChat, the authors reported that students demonstrated a high willingness and motivation to exchange project ideas in English in the virtual learning environment, which, in turn, elevated their Chinese cultural awareness resulting from an increased appreciation of mutual knowledge and expertise. Thanks to WeChat's timeliness, interactivity, and extensiveness, according to Wang and Crosthwaite (2021), Chinese EFL learners in private tutoring settings found themselves elevating their English skills such as articulation flow, grammar, and enunciation while interacting with their tutor in a highly immersive English environment WeChat clearly supported.

No doubt, the studies heretofore reviewed do expand our understanding of the literature to date. Individually and collectively, these studies explicate the many advantages WeChat offers L2 learning, chiefly among them raised cultural awareness, language skills improvement, and increased motivation. Even so, how best WeChat can be applied to facilitate L2 idiom learning through a hybrid lens of sociocultural theory and cognitive theory of multimedia learning remains sadly underexplored. The study reported next fills this void in that it systematically addresses WeChat's pedagogical applications in course design involving Chinese college students in an EFL learning context. Two research questions were addressed in this study:

RQ1. Can WeChat-enhanced instruction promote L2 idiomatic competence among Chinese EFL learners? If yes, how is such competence achieved?

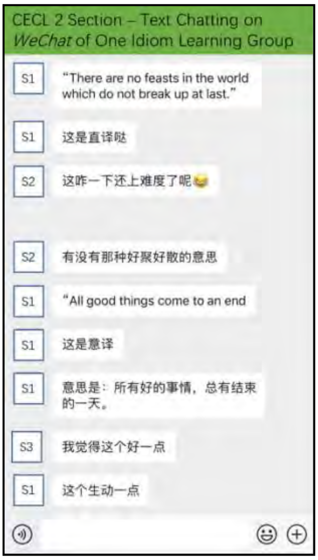
RQ2. Is there a difference in learners' motivation, attitude, collaboration, and experience before, during, and after VP idiom task completion in classrooms supporting WeChat use and in classrooms supporting traditional modes of language instruction without WeChat? If yes, in what ways does the difference manifest itself?

## Methodology

### *Research Backdrop*

This study investigates Chinese EFL learners' development of idiomatic competence in classrooms supporting WeChat use and in classrooms supporting traditional modes of language instruction without WeChat. It also examines the extent to which WeChat-enhanced instruction can affect learners' motivation, attitude, collaboration, and experience before, during, and after VP idiom task completion. The focus of this study is limited to PLL idioms. These were chosen since VP idioms of this type tend to present EFL learners with notable comprehension and interpretation challenges, especially when presented without context supporting figurative meanings. Even in context, PLL idioms affect the success rate with which they are processed by L2 learners (Liontas, 2002a, 2002b, 2002c, 2003, 2007, 2015b). There may thus be value in further investigating whether peer interactions supported by popular social media apps are essential learning constructs in furthering idiomatic competence development.

As already noted, WeChat is the most popular social media app in Mainland China with 1,225 billion monthly active users. According to the China Internet Watch (CIW) Team (2021), WeChat features key communication-oriented aspects such as text chatting (Figure 1), voice messaging, video calling, moments sharing, mini programs (Figure 2), gaming, mobile pay, etc. In this study, WeChat was strategically included in the curriculum to empower students to interact with each other and to work collaboratively to complete a series of PLL idiom activities. WeChat is believed to undergird collective scaffolding (Li, 2018; Luo & Yang, 2016; Wang et al., 2016) that helps create a collaborative, constructive, and multimedia learning environment for all students (S1, S2, S3, etc.) involved. Accordingly, the tenets of both theories, sociocultural theory and cognitive theory of multimedia learning, are purposefully embodied in the study's multimodal social semiotic research design.



CECL 2 Section – Text Chatting on *WeChat* of One Idiom Learning Group

S1 "There are no feasts in the world which do not break up at last."

S1 这是直译哒

S2 这咋一下还上难度了呢😅

S2 有没有那种好聚好散的意思

S1 "All good things come to an end

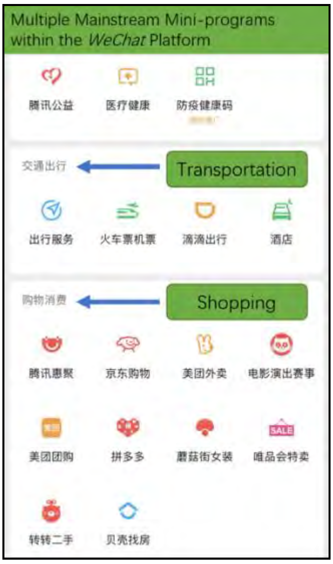
S1 这是意译

S1 意思是：所有好的事情，总有结束的一天。

S3 我觉得这个好一点

S1 这个生动一点

*Figure 1*. Co-Constructing Meaning of Target Idiom Using the Text Chatting Feature



Multiple Mainstream Mini-programs within the *WeChat* Platform

*Figure 2*. Mini-Programs from 3rd Party Companies

### *Setting and Participant Selection*

The study was conducted at a liberal arts college in Northeastern China. Fifty-five first-year English major students (3 males, 52 females) were intentionally recruited because they had recently transitioned into an intensive academic program from high school. Importantly, these students did not have much idiom-learning experience or the opportunity to travel overseas to cultivate their idiomatic competence. Their English proficiency level was intermediate—all students admitted to the English program are required to achieve a score of 90 plus (out of 150) in the English Subject Test in China's National College Entrance Exam. Additionally, these students were involved in a core course for English majors called CECL-Communicative English for Chinese Learners (Li, 2012). The overarching goal of the CECL course is to develop students' communicative competence, which, according to Savignon (1972), is characterized by one's ability to use language effectively in unrehearsed, unstructured interactions with native speakers, a strong position Liontas (2001, 2002a, 2002b, 2002c, 2003, 2006, 2007, 2013, 2015a, 2015b, 2017; 2018a, 2018b, 2021a, 2021b, 2021c) has been advocating for since the mid 1990s concerning the development of idiomatic competence in authentic communicative situations. Aged between 18 and 20 years old, the 55 participants of the study were divided into two sections, CECL 1 (25 students: 2 males, 23 females) and CECL 2 (30 students: 1 male, 29 females).

### *Research Design and Data Collection*

Both CECL 1 and CECL 2 sections followed a task-based approach allowing the instructor to elicit students' output to consolidate learning through discussions, dialogues, role-play activities, and structured exercises. In both sections, participants were expected to take part in an intensive, eight-week idiom-training module designed to go beyond the content included in the CECL textbook. To help participants with the learning of VP idioms, the *101 American English Idioms* (Collins & Risso, 2007) book was included in the training module. In the CECL 1 Section, all planned activities supported traditional media technology. Conversely, in the CECL 2 Section, the WeChat intervention was added to participants' two-month long idiom training.

The instructor involved in this study was an associate professor at a liberal arts college in Northeastern China who has taught the CECL course for over 10 years. Since the study was principally focused on English learners' idiomatic development, a vital element in the CECL curriculum, the instructor was motivated in the effects the application of WeChat may have on her students' overall idiomatic competence and language acquisition. Following several in-depth communications, it was decided to adopt a task-based approach to PLL idiom learning (Appel & Lantolf, 1994; Willis, 2005). Of particular note here is the notion that task performance relies on scaffolding from peers and instructor to co-construct, perform, and internalize a task in order to improve L2 proficiency (Donato, 1994). To this end, Ellis's (2003) framework of "pre-task," "during task," and "post-task" were methodically applied in the study's task-based lessons to help guide participants' task performance in the execution of PLL-related idiom learning tasks.

In both sections, CECL 1 and CECL 2, the lessons were organized around three critical phases. The "Pre-Task Phase" involved the introduction of PLL idioms. The "During Task Phase" followed with five steps taken in small groups either in person for CECL 1 students or via WeChat video recording and sharing features for CECL 2 students: (1) the sampling of PLL idioms, (2) the construction of PLL idiom meaning, (3) the search for relevant information concerning PLL idioms, (4) the practice of reading PLL idioms as a group in dialogue formats, and (5) the collaborative writing and performing of dialogues featuring proper PLL idiom use. The "Post Task Phase" concluded with the instructor offering either in person or via WeChat's voice recording feature analytic and holistic comments on students' idiom task performance. Participants were required to attend class three times a week. In each class session, during the 30-minute idiom teaching and learning period, one PLL idiom was featured. To maximize idiom learning, all participants were asked to engage in cooperative learning groups, complete worksheets as needed, partake in dialogue practices and role-play activities, and seek multimedia support to construct and co-construct meaning making of the PLL idioms targeted. In the CECL 2 Section, specifically, the multimedia aspects and functions featured on WeChat were the primary driver of the idiom training participants received. In both sections, the course instructor provided directives and facilitated the dialogue practices and role plays as necessary.

### *Research Instruments*

To uncover how a WeChat-driven learning environment can mediate the way students acquired PLL idioms and what their general perceptions towards using WeChat in the idiom-oriented activities were, two instruments, a pre-/post-test and a questionnaire, were used in this study.

#### *Pre- and Post-tests*

A VP Idiom Learning Achievement Test, a pre- and post-test consisting of PLL idioms, was used to compare participants' learning achievement in both sections. The tests are comprised of 30 multiple-choice questions totaling 30 points. Students' achievement in these tests represents mastery of PLL idioms in both sections, CECL 1 and CECL 2. Participants from CECL 1 and CECL 2 took a pre-test (VP Idiom Learning Achievement Test) before the 8-week experiment. The test was scanned and sent to the first author. Both sections later took an identical post-test. Two instructors assessed pre- and post-tests for inter-rater reliability. CECL instructor took the test twice for test reliability. Instructor and first author evaluated data for scorer reliability, with ongoing communication for alignment.

### *Questionnaire*

The Idiom Learning Questionnaire applied in the present study focused on learners' *motivation*, *attitude*, *collaboration*, and *experience*. In total, 20 statements (five per area) were graded on a five-point Likert scale ranging from 1 (completely disagree) to 5 (completely agree). Respecting motivation, statements inquired about the importance of learning idioms, the desire to see idioms be part of the CECL course structure, the regularity of studying idioms, the usefulness of idioms in everyday communication, and the desire to complete the idiom learning training. Respecting attitude, statements probed the challenges the eight-week long idiom learning training presented, whether idiom instruction was easy to follow, learn, and perform, and whether peer explanations of idiom meaning making were of value. Respecting collaboration, statements queried about the nature and variety of pair and group activities in idiom learning, the co-construction process of idiom meaning making, and the value of specific performance tasks involving skits, dialogues, games, and the like. Finally, respecting experience, statements addressed the perceived affordances of authentic illustrations, graphics, and verbal (textual, audio) and visual (graphic, photographic, video-graphic) information accompanying the authentic study of idioms and the activation of idiom knowledge supporting specific learning styles. Two instructors were again invited to evaluate the questionnaire's content validity, including the clarity, relevance, length, and format, prior to its administration.

### ***Procedures***

Prior to initiating the study, all relevant documents and materials were first submitted to the university's Institutional Review Boards (IRB) for review and approval. Following approval of procedures and materials planned for in this study, experimental data were then collected at a liberal arts college in China over a period of three months. The pre- and post-tests were distributed synchronically to CECL 1 and CECL 2 sections. At the end of the two-month long idiom training, the instructor led participants in both sections to take the Qualtrics Idiom Learning Questionnaire posted online—a web-based software that stores and facilitates the analysis and reporting of survey response data.

## Results and Discussion

To answer the first research question descriptive statistics of mean, standard deviation, skewness, and kurtosis were conducted and are reported in Table 1.

Table 1
*Descriptive Statistics and Independent T-tests for CECL 1 and CECL 2*

| Test | Section | Mean | *SD* | Skewness | Kurtosis | *t* Value | *df* | *p*-value |
|---|---|---|---|---|---|---|---|---|
| Pre-test | CECL 2 | 8.00 | 2.48 | -1.10 | 2.79 | -0.45 | 53 | 0.655 |
| | CECL 1 | 7.72 | 2.15 | -0.02 | -0.47 | | | |
| Post-test | CECL 2 | 18.92 | 4.39 | -0.03 | -1.07 | 4.28 | 53 | <.0001 |
| | CECL 1 | 14.67 | 2.93 | 0.19 | 0.73 | | | |

Independent *t*-tests (with an alpha level of .05) were also conducted via SAS 9.4 prior to the start of the study as well as at the end of the eight-week idiom training to further capture potential subtle differences among participants' learning achievement. The table shows that in both sections, the means and standard deviations of the pre-test did not differ significantly, 7.72 and 2.15 for the CECL 1 Section and 8 and 2.48 for the CECL 2 Section, respectively, meaning that both sections were rather homogeneous. The sections' pre- and post-test scores were relatively normally distributed with skewness ranging from -1.10 to 0.19 and kurtosis ranging from -1.07 to 2.79, which falls into the acceptable range of ±3 (Brown, 2006). Importantly, the *t*-value was -0.45 with 53 degrees of freedom (*df*), and the associated *p*-value was 0.655. The results revealed that there was no statistically significant difference between the CECL 1 Section and the CECL 2 Section. Simply put, participants in both sections had equivalent idiomatic competence prior to the study. Regarding the post-test results, however, the CECL 2 Section presented a mean, of 18.92 and a standard deviation of 4.39, surpassing the mean and standard deviation in the CECL 1 Section, which were 14.67 and 2.93. More notably, the *p*-value in the post-test was <.0001, indicating that there is a statistically significant difference between the CECL 1 Section and the CECL 2 Section. The results suggested that the participants in the CECL 2 Section had higher and more noticeable learning outcomes than those achieved in the CECL 1 Section.

In addition, dependent *t*-tests were employed to evaluate the effectiveness of the idiom training for both sections (Table 2).

Table 2
*Dependent T-tests of Pre- and Post-Tests for CECL 1 and CECL 2*

| Section | Mean Dif | *SD* | *t* Value | *df* | *p*-value | Effect size |
|---|---|---|---|---|---|---|
| CECL 2 | 11.2 | 5.26 | 10.44 | 24 | <.0001 | 2.13 |
| CECL 1 | 6.67 | 3.36 | 10.88 | 29 | <.0001 | 1.98 |

Since the *p*-value in both sections was <.0001, the eight-week idiom training had a critical impact on participants' idiomatic competence development. Still, the effect size for the CECL 2 Section (Cohen's $d = 2.13$) was larger than the CECL 1 Section (Cohen's $d = 1.98$). The results thus revealed that in the two-month long idiom-training period, WeChat empowered participants in the CECL 2 Section to acquire the target PLL idioms more effectively than those who participated in the CECL 1 Section.

To answer the second research question following the completion of the eight-week idiom training for both sections, the Idiom Learning Questionnaire was simultaneously distributed to all participants. First, to understand how well the items under each subscale measure the same construct or idea, the internal consistency was assessed by calculating Cronbach's alpha via SPSS Statistics 24 and evaluated in compliance with the criteria $\alpha \geq .9$ is Excellent, $.9 > \alpha \geq .8$ is Good, $.8 > \alpha \geq .7$ is Acceptable, $.7 > \alpha \geq .6$ is Questionable, $.6 > \alpha \geq .5$ is Poor, and $\alpha \leq .5$ is Unacceptable (George & Mallery, 2003). The scores are reported in Table 3. Based on the outputs shown in Table 3, Cronbach's alphas for the four subscales were consistently higher than 0.7, revealing that the internal consistency reliability of the four subscales (with 95% confidence interval of Cronbach's alpha) is acceptable.

Table 3

*Reliability of Four Subscales*

| Subscale | *N* of items | α | 95% CI of α |
|---|---|---|---|
| Motivation | 5 | .857 | .785-.910 |
| Attitude | 5 | .725 | .587-.828 |
| Collaboration | 5 | .820 | .730-.887 |
| Experience | 5 | .781 | .671-.863 |

To compare how participants' English VP idiom learning in classrooms supporting WeChat use and in classrooms supporting traditional modes of language instruction sans WeChat differed during the eight-week idiom training, independent *t*-tests were used by aggregating the total scores of each subscale (motivation, attitude, collaboration, experience). Employing SPSS Statistics 24, the total scores for each subscale were calculated for the two sections. The mean value is the total score of each subscale. The descriptive statistics are reported in Table 4.

Table 4

*Independent T-test of Four Subscales for CECL 1 and CECL 2*

| Subscale | Section | Mean | *SD* | Skewness | Kurtosis | *t* Value | *df* | *p*-value |
|---|---|---|---|---|---|---|---|---|
| Motivation | CECL 2 | 19.13 | 3.96 | -0.33 | -0.42 | 0.31 | 50 | .76 |
| | CECL 1 | 18.82 | 3.19 | 0.27 | 0.05 | | | |
| Attitude | CECL 2 | 19.04 | 2.94 | -0.58 | 1.26 | 0.97 | 50 | .34 |
| | CECL 1 | 18.28 | 2.69 | 0.38 | -0.10 | | | |
| Collaboration | CECL 2 | 19.39 | 3.01 | -0.05 | -1.27 | 1.14 | 49 | .26 |
| | CECL 1 | 18.42 | 2.99 | 0.09 | -0.28 | | | |
| Experience | CECL 2 | 17.74 | 2.75 | -0.06 | -0.94 | 0.03 | 49 | .97 |
| | CECL 1 | 17.71 | 2.78 | 0.94 | 0.88 | | | |

Despite the fact that there is no statistically significant difference shown in each subscale, the CECL 2 Section participants outperformed the CECL 1 Section participants for the mean value. These results indicate that following the completion of the eight-week idiom training, participants in the CECL 2 Section, that is, the section wherein the multimedia aspects and functions featured on WeChat were the primary driver of the idiom training participants received, had overall a comparatively better learner motivation, attitude, collaboration, and experience than the participants in the CECL 1 Section.

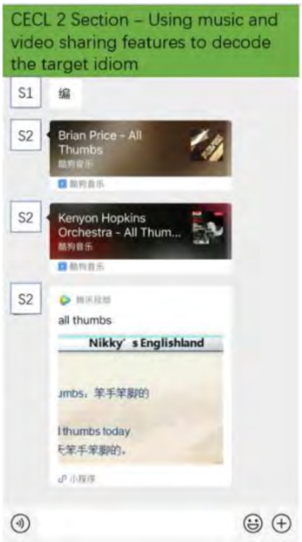
Based upon the results reported here, it is clear that the eight-week idiom training significantly elevated participants' idiomatic competence in both the CECL 1 Section and the CECL 2 Section. The relative difference of the effect size of both sections suggests further that WeChat as a technological intervention enabled participants in the CECL 2 Section to acquire the target PLL idioms more effectively than those in the CECL 1 Section who followed a more traditional idiom-learning approach; that is, students who used WeChat for their VP idiom learning showed better memory retention than their peers in the face-to-face EFL learning context. The results are consistent with Hsieh et al.'s (2017) study who maintained that mobile-assisted language learning tools such as *LINE*, *WhatsApp*, and *WeChat* can be adopted to support English idiom learning among college students in an EFL context. The better performance of the CECL 2 Section in the post-test also echoes Christiansen's (2019) assertion that L2 writers supported by *WeChat* and *Facebook* manifested higher motivation and engagement with digital mediated projects that helped them cultivate higher levels of multimodal communicative competence and better linguistic skills, respectively. In turn, these WeChat affordances underscore the positive impact multimodal resources can have on L2 vocabulary acquisition (Abraham, 2008; Borras & Lafayette, 1994; Chun & Plass, 1996; Grace, 1998; Guillory, 1998; Jones & Plass, 2002; Kost et al., 1999; Plass & Jones, 2005; Sakar & Ercetin, 2005; Sun & Dong, 2004) and, importantly, are closely related to Mayer's (2014) cognitive theory of multimedia learning: deeper learning occurs when information is presented in both text and pictures. Using multimodal input and output, English learners are apt to free up their working memory to comprehend more effectively target PLL VP idioms and transfer them to their long-term memory.

In the study reported here, WeChat's multimedia features such as hold-to-talk voice messaging, image sharing, voice/video recording, web links inserting, and voice/video conferencing, to mention but the most salient features investigated, empowered learners to obtain a higher level of comprehensible input as well as achieve a better memory retention. Additionally, the interactivity nature of WeChat was productively embedded within Vygotsky's (1978) ZPD concept, which, in turn, boosted the active contribution of each learner in the task-oriented learning process here engendered. It thus follows logically that L2 educators and practitioners alike should consider implementing this type of multimedia learning approach in their curricula in general and in their English idiom-learning activities in particular. Without exception, all learners should have, and need to have, equal access to multimodal resources shown to facilitate language acquisition irrespective of linguistic or pragmatic arenas targeted (Jewitt, 2006; Kress, 2009). WeChat is but one such laudable multimodal resource students should and could employ productively when learning about and acquiring English VP idioms irrespective of subtype. Doing so *with a purpose* and *for a purpose* (Liontas, 2006, 2017, 2018a, 2018b, 2021a, 2021b, 2021c) requires that students engage in appropriate (meta)cognitive processing to enhance learning. Offering students opportunities to construct their own knowledge structures and mental models is key to success and personal growth in learning how best to use a variety of modes to achieve idiom learning outcomes not soon dismissed as inconsequential or marginal at best. Multimodal idiom learning expressed in dialogic modes of communication, including linguistic, visual, gestural, spatial, and audio, is likely to lead to more thoughtful knowledge constructions and coherent mental representations from the semiotic systems presented individually or in combination therein. Taking account of these systems underscores the critical postulation upon which a new multimodal social semiotic approach to VP idiom learning can now rest. It also epitomizes PLL idiom meaning making that is derived exclusively from diverse communication and representation modes. When such modes are productively applied in a range of technological tools and forms of semiotic resources, the development of idiomatic competence is optimized.

Whilst this study did not show statistically significant differences in learners' motivation, attitude, collaboration, or experience during the two-month long idiom-training period, it bears repeating that CECL 2 Section participants had overall comparatively higher subscale means than CECL 1 Section participants (Motivation: 19.13 in CECL 2, 18.82 in CECL 1; Attitude: 19.04 in CECL 2, 18.28 in CECL 1; Collaboration: 19.39 in CECL 2, 18.42 in CECL 1; Experience: 17.74 in CECL 2, 17.71 in CECL 1). The answer to the second research question—*Is there a difference in learner motivation, attitude, collaboration, and experience before, during, and after VP idiom task completion in classrooms supporting WeChat use and in classrooms supporting traditional modes of language instruction sans WeChat? If yes, in what ways does the difference manifest itself?*—is therefore a resounding yes.

Respecting *motivation* and *attitude*, participants were highly engaged in the WeChat-based idiom learning activities and, evidently, considered the regular learning of idioms an important construct in both course structure and authentic communication and representation modes that further fueled their desire to complete the idiom learning training. The findings are congruent with the conclusions of Luo and Yang's (2016) and Xu et al. (2017): WeChat stimulates students' interest in collaborative learning and, furthermore, enhances their motivation to carry out the particular demands of task-oriented activities. In addition, the findings corroborate Li's (2018) claim that the multimodal linguistic and semiotic resources available in WeChat afforded beginning-level Chinese language learners opportunities to improve Chinese writing as well as acquire new vocabulary and colloquial speech.

Respecting *Collaboration*, participants preferred to decipher PLL idiom meaning despite discernible CSI challenges in environments where English VP idiom learning is principally co-constructed and task-based. The nature and variety of pair and group activities in idiom learning, the co-construction process of idiom meaning making, and the value of specific performance tasks involving skits, dialogues, games, and the like, appear to positively influence both the level of and the intensity invested in collaborative constructs promoting VP idiom learning. The variation in mean scores can be ascribed to WeChat's multimedia functionalities, which enable EFL learners to share images and videos, participate in audio or video conferences, and utilize diverse technological tools and semiotic resources. This dynamic communication and multimodal approach in collaborative online group activities aids in the comprehension and interpretation of target VP idioms. This finding is analogous to the findings Wang et al. (2016), Li (2018), and Wu and Miller (2019) reported: WeChat can engender a unique learning environment enabling L2 learners to achieve effective bi-directional communication, develop expanded (meta)cognitive capacity, and, importantly, decode challenging concepts via targeted multimodal resources. As shown in our study, the multimedia features embedded in WeChat empowered learners to both construct and co-construct their understanding of English PLL VP idioms in important ways, whilst also asserting a strong sense of ownership over the idiom-oriented tasks in which they were asked to engage collaboratively. Put simply, WeChat's multimodal ways of communication and representation prompts students to share ideas freely in a learning environment where collaboration is more than a convenient buzzword (Figures 3 and 4).



CECL 2 Section – Using music and video sharing features to decode the target idiom

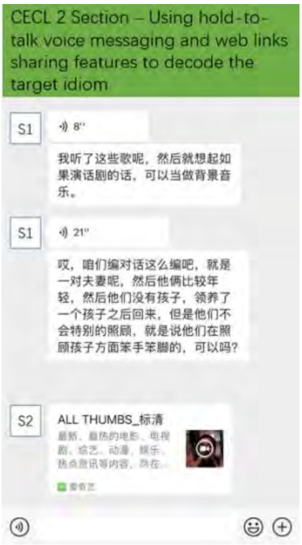
S1 编

S2 Brian Price - All Thumbs
酷狗音乐

S2 Kenyon Hopkins Orchestra - All Thum...
酷狗音乐

S2 腾讯视频
all thumbs
Nikky' s Englishland
umbs：笨手笨脚的
l thumbs today
天笨手笨脚的。
小程序

*Figure 3*. Using Music and Video Sharing Features



CECL 2 Section – Using hold-to-talk voice messaging and web links sharing features to decode the target idiom

S1 8''
我听了这些歌呢，然后就想起如果演话剧的话，可以当做背景音乐。

S1 21''
哎，咱们编对话这么编吧，就是一对夫妻呢，然后他俩比较年轻，然后他们没有孩子，领养了一个孩子之后回来，但是他们不会特别的照顾，就是说他们在照顾孩子方面笨手笨脚的，可以吗？

S2 ALL THUMBS_标清
爱奇艺

*Figure 4*. Using Hold-to-Talk Voice Messaging and Web Links Sharing Features

Respecting *experience*, our results highlight the perceived and actual affordances authentic illustrations, graphics, and verbal-visual information drive into particular action. The actions taken by learners in dynamic environments in which the activation and promulgation of idiom knowledge supporting specific learning styles becomes both real and amenable to change do corroborate the findings by Kirschner et al. (2014), who maintained that the multimodal information generated by a collaborative, resource-rich learning environment can indeed stimulate and strengthen a groups' overall cognitive process, thereby encouraging learners to answer with increased confidence still more complex and challenging tasks.

Additionally, we found that multimedia learning environments can indeed boost the dominant character of learning activities long considered to represent important information processing systems wherein group members are allowed to utilize each other's processing capacity. Said another way, while struggling with cognitively demanding tasks in predetermined multimedia learning environments, the transactional activity costs associated with such tasks would be traded off by the volume and intensity of collaboration students are able to generate in an effective and efficient manner. Notwithstanding the costs derived from (meta)cognitive energy spent in collaborative activities such as brainstorming, communicating, assessing, and executing, the multimodal information that is carefully choreographed in such multimedia-based learning environments can optimize participants' collective working memory, and, in the process of so doing, also markedly expand the group's cognitive capacity reservoir. This clearly implies that the multimedia/multimodal learning environment we strategically devised on WeChat to accompany the authentic study of PLL idioms helped CECL 2 Section participants to initiate a collective working space, a group reservoir of sorts that notably reduced their individual (meta)cognitive load and one that sustained the continuous internalization processes of all relevant incoming-outgoing VP-idiom information, the combination of which underscores and affirms the theoretical-pragmatic precepts Liontas presented in his own research on L2 idiomatics since the late 1990s (see, for example, Liontas, 2001, 2002a, 2002c, 2003, 2006, 2007, 2015a, 2018b, 2021a).

In sum, there is indeed a difference in learner motivation, attitude, collaboration, and experience before, during, and after VP idiom task completion in classrooms supporting WeChat use and in classrooms supporting traditional modes of language instruction sans WeChat. But that difference is not statistically significant despite slightly higher subscale means, most likely because learner motivation, attitude, collaboration, and experience are already prominently high in learning environments that expressly promote the study of idiomatic-figurative language. The singular methodology pursued may or may not exert strong influence upon the results achieved. So argued, WeChat alone, as a viable technology tool for idiom learning deserving much attention here, was not able to impact the results in statistically significant ways, at least not in environments in which English idiom learning is already positively predisposed from the outset irrespective of the medium's pedagogical presence or absence. Unsurprisingly, EFL learners eager to acquire English idioms, VP idioms included, will do so regardless of the technological means by which idiom learning is so deeply engendered. WeChat may well optimize the conditions for deep learning, but it alone may not be the sole variable that significantly influences the development of idiomatic competence. Declarations and/or affirmations to the contrary are ill-advised here and not supported by the empirical evidence we were heretofore able to analyze and examine critically.

## Conclusion and Future Directions

The study reported here aimed to shed light on how researchers and practitioners alike can utilize WeChat to promote the development of L2 idiomatic competence among Chinese EFL learners. Moreover, the study sought to examine more closely the affordances of several multimedia features embedded in WeChat, a communication app that is widely lauded today as the most prominent social media app in Mainland China and beyond. The particulars of the study's design were carefully couched in the parameters of known theoretical frameworks encompassing sociocultural theory, cognitive theory of multimedia/multimodal learning, and idiomatics learning of VP idioms. In so doing, this study also filled an important gap in the SLA research landscape to date. The contributions are both novel and of great import to future investigations on the subject. Herewith a brief listing of these contributions.

To begin with, this study confirmed the thesis that when compared to traditional face-to-face learning environments, WeChat is likely to create a virtual ecosystem that helps EFL learners comprehend and process English VP idioms more effectively and, thereby, achieve a higher level of memory retention. This finding is in line with van Lier's (2000) ecological perspective, which reports that "the learner is immersed in an environment full of potential of meanings" and "[t]hese meanings become available gradually as the learner acts and interacts within and with this environment" (p. 246). Not only did the WeChat-ecosystem support EFL learners maintain constant negotiations and multimodal information exchange, it clearly empowered them to understand and internalize English VP idioms in context-appropriate textual and pictorial formats, the combination of which produced "mental representations" that maximized the acquisition of the PLL idiom information targeted.

The importance of the quantified learning outcomes notwithstanding, Chinese EFL learners clearly favored the diversity of multimedia features the WeChat app enabled both in the execution and in the exchange of multimodal information deemed significant in online collaborative tasks promoting English VP idiom learning. Of note here is that this finding is in line with Mayer's (2014) cognitive theory of multimedia learning, which explains why students tend to procure a better understanding of challenging concepts like PLL-type idioms, especially when they are able to activate their dual channels for visual/pictorial and auditory/verbal processing, as opposed to only utilizing textual information to decode English VP idiom meaning.

The multimodal social semiotic nature characteristic of WeChat architecture resonates with Kress and Selander's (2012) and Liontas's (2018a, 2018b, 2021a, 2021b, 2021c) stance in that educators need to achieve a broader understanding of multimodal design in the learning of another language and the recognition of its culture. Such designs are particularly effective when embedded in user interface architectures supporting AR (augmented reality), VR (virtual reality), MR or MxR (mixed or merged reality), and XR (cross reality) environments, including AI (artificial intelligence), ML (machine learning), and gamification approaches to language learning (Liontas, 2006, 2020, 2021d, 2022). The multifaceted nature of technology-mediated learning, so Guichon and Cohen (2016) explained, is believed to provide enhanced and enriched international opportunities for L2 learning. Unsurprisingly, the cross-media information shared on WeChat elevated Chinese EFL learners' understanding of English VP idioms in important ways. Chiefly among those ways was the social networking nature WeChat permitted during collaborative group sharing which, in turn, offered further credence to the primary tenets Vygotsky's (1978) sociocultural theory concerning the development of higher psychological processes so clearly supports. The critical point worth reiterating here is that in an L2 idiom learning context, sociocultural theory is a critical and viable construct that can indeed shed new light on the efficacy of the claims here made.

Language educators and/or researchers wishing to explore further the efficacy of the results reported here are advised to first take note of limitations. First, the participants in this study took part in an intensive, eight-week idiom-training module designed to go beyond the content included in their CECL textbook. An idiom-training period longer than eight weeks may result in findings that are materially different from the results we reported herein. Second, since this study aimed to substantiate the claim that the multimedia features and social networking functions of WeChat empower Chinese EFL learners to acquire English VP idioms and help transfer them more easily into their long-term memory, it is suggested that researchers also consider applying a delayed post-test to see what effect, if any, such a procedural change would have both on the acquisition of English VP idioms and the retention of them in memory. Third, a more in-depth investigation of learner motivation, attitude, collaboration, and experience may yield results this study did not yet fully capture. Future studies may wish to employ a more detailed questionnaire as well as make profitable use of interviews or focus groups with some or all of the participants. Finally, future researchers may find it valuable to investigate gender differences, given the limited participation of males in the present study. This area warrants further scrutiny and exploration. This way, both individual and collective voices could be captured, especially if critical thematic/hermeneutic analyses follow the full transcription of said interviews. Resulting findings could subsequently be anchored in pedagogical propositions that should better solidify the use of WeChat in second/foreign language learning in general and English VP idiom learning in particular. We remain confident in our assertion that helping EFL learners connect multiple modes of communication to their senses, especially visual, auditory, kinesthetic, and tactile, whilst employing culturally shaped tools and semiotic resources, is more than likely to solidify and expand the social context for making meaning of all types of VP idioms.

In closing, learning about and practicing the linguicultural expressions that uniquely characterize the cultural norms and practices native speakers employ ever so effortlessly yet productively in a multitude of communication and representation modes the world over is an investment worth making today, tomorrow, and the day after tomorrow. Most assuredly, such investments no doubt will guide future teaching and learning practice. In the meantime, the findings here reported are worthy of further consideration and should be revisited whenever new venues for exploratory idiomatics research involving social media apps are proposed in the days and months ahead. And who knows if WeChat is more than a passing fad in an ocean replete with social apps claiming to do this, that, and the other? Only time will tell. The jury is still out on how best to develop *idiomatic competence* among Chinese EFL learners.

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