Learning Through a CMC-Based Tandem Project with Native Speakers: A Descriptive Study of Beginning CFL Learners
(网络环境下中文教学配对学习活动的设计：
一个描述性研究)

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Abstract: Tandem learning through conferencing tools, one form of computer-mediated communication (CMC), has been proven beneficial to language learning. This study investigates the implementation of a tandem learning activity that was designed, based on the multiliteracies' view of pedagogy, to allow CFL learners in America to interact with native speakers of Chinese in China. It explores how learners interact with native speakers via Skype, QQ or WeChat, with the purpose of completing a culture project, how they perceive this learning experience, and how the design of the tandem activity might be improved. Data collected include: chat records, learner reflections on the tandem learning experience, a survey, project presentations, researcher/teacher field observation notes, and an informal focus group interview. Grounded theory was used in data analysis. The findings show that the learners were able to communicate with the native speakers online successfully by adopting various strategies. A majority of the learners enjoyed the tandem activity, primarily because they felt that it had enhanced their learning. Various topics were covered in their conversations. The learners enjoyed connecting with native speaking college students in China despite some challenges. Specific ways were suggested to improve integration of tandem learning into beginning level CFL courses.

摘要： 利用网络视频或音频社交工具进行配对学习已被证明有益于语言学习。本研究旨在探讨基于多元认读理论（Multiliteracies theory）设计的利用网络社交工具（Skype, QQ, 或者微信）进行配对学习的活动的设计与实施，包括中文学习者在完成一项文化课业中如何与中国大学生通过网络社交工具用中文交流，他们对此项活动的感受与认知，以及此设计如何进一步改进。作者利用人类学的扎根理论（Grounded theory）分析数据，研究数据包括会话记录，学生反思，调查问卷，学生活动报告，老师观察记录，以及非正式小组访谈。研究结果表明，学习者通过利用不同策略成功地完成了与操母语者交流并取得文化信息的目的；多数学生认为此活动虽然

有一些挑战，但是增强了他们对目的语言及目的文化的学习，因此喜欢并享受整个活动过程。

Keywords: CMC, Tandem Learning, Learning with Skype, Learning with QQ/WeChat, Culture learning, Multiliteracies

关键词： 电脑辅助沟通，配对语言学习，利用网络会议工具，多元认读理论，中国文化学习

1. Introduction

Computer-mediated communication (CMC) refers to communication taking place between human beings via networked computers (Herring, 2001; Warschauer, 1999). The use of CMC in education (Luppicini, 2006; Romiszowski & Mason, 2004; Wallace, 2003) and in language learning (Abraham, 2008; Lin, Huang, & Liou, 2013; Mahdi, 2014; Nguyen, 2008) has been thoroughly examined. Research in the field has revealed that CMC benefits the learning process by increasing learner motivation (Lee, 2004; Sotillo, 2000), supporting active learning (Bikowski & Kessler, 2002; Lee, 2005; Warschauer, 1999), enhancing learner autonomy (Arnold, 2002; Payne & Whitney, 2002; Chiu, 2008), and fostering collaborative learning (Leahy, 2008; Savignon & Roithmeier, 2004). Research on the effects of CMC on language education has revealed that, as a student-centered tool in language learning, CMC can help improve the learners' various language skills (Chun, 2008; Davis & Thiede, 2000; Dussias, 2006; Godwin-Jones, 2008; Levy & Stockwell, 2006; Lund, 2006; Payne and Whitney; 2002; Thorne & Payne, 2005).

CMC has the characteristic of space and time independence (e.g., synchronous or asynchronous). CMC users may choose their means of communication from a variety of formats, such as text, audio only, video only, or a mixture of these formats. With these features, many types of CMC activities, including synchronous and asynchronous, have been designed to facilitate authentic communication between language learners and native speakers (Levy & Stockwell, 2006; Kern & Warschauer, 2000). This study focuses on the use of Skype/QQ/WeChat tandem language learning—one type of CMC activity, by Chinese-as-a-Foreign-Language (CFL) learners, to complete a culture project. The design of this tandem culture project was based on the multiliteracies theory (The New London Group, 1996). The goal of this study was to find out whether or not the design of the tandem activity helps CFL learners to better learn the target language and culture, to explore the ways learners interact with native speakers of Chinese, and to understand how the learners perceive this learning experience.

2. Literature review and rationale

Tandem language learning refers to learning from exchanges between two learners with different native languages. It originally took the format of Face-to-Face (FTF) interaction with the major channel of communication being oral (Brammerts, 1996;

Chung, Wesche, & Barfurth, 2005; Appel & Mullen, 2000). However, it is often difficult to use tandem language learning in an FTF environment due to limited number of available learning partners. It is much more convenient to use CMC to arrange tandem language learning.

Researchers originally examined the use of email in tandem language learning and found that it was an effective tool for language learners of both groups to learn the target language (Little, Ushioda, Appel, Moran, O'Rourke, & Schwienhorst, 1999). Kötter (2003) attempted to determine whether tandem language learning could be implemented in a format "in which the learners could interact with each other in real time over a computer network" (p. 145) and found that it works in situations where the learners need to respond to each other more quickly than when they communicated via email. Chung, Graves, Wesche, & Barfurth (2005) examined the online tandem task performance between a native speaker of Korean and an American student who was learning Korean. This research showed that the native speaker of Korean used guiding questions to provide scaffolding which helped the learner to self-regulate his learning experience and internalize the language and culture. Appel & Gilabert (2003) examined the efficiency of learning via email tandem, comparing two groups of tandem learners. One group was assigned a specific task and the other was not. Results show that the first group produced more language output, had more frequent exchange with their partners, and became more interested in sustaining exchange with their learning partners.

Skype is a free downloadable software application first introduced in 2003 (Wikipedia, 2016). QQ and WeChat, functionally equivalent to Skype, are widely used in China. These communication programs allow users to communicate either through video/audio in synchronous chat, or by text message or video/audio message in asynchronous chat. The her empirical study of the use of Skype in learning, Yanguas (2010) compared the interaction patterns used in communications with Skype (audio/video and written) with the patterns used in FTF communication among intermediate Spanish learners. Skype can be used in tandem learning to facilitate communication between two people of different mother tongues (Elia, 2006). In their study, Tsukamoto, Nuspliger, & Senzaki (2009) used Skype to connect Japanese high-school students of English with American Japanese language students in the United States, and found that the English learners played a more active role in learning via Skype than they did when they were doing similar activities in the classroom. Wang, Fang, Han, & Chen (2016) evaluated the affordances of WeChat for the development of a community of inquiry (CoI) in semi-synchronous language exchange. The findings of their study indicate that WeChat helped establish the cognitive, social and teaching presences in CoI.

These studies examined whether or not synchronous and semi-synchronous CMC, using Skype (or QQ/WeChat), was an effective tandem learning tool. Few studies have attempted to determine whether or not Skype can be used in tandem learning in cases where the learners have the choice of using synchronous and asynchronous formats. Scholars have been calling for principles of using CMC in language learning that can be applied, studied and developed in order to successfully implement CMC in language

teaching and learning (Chapelle, 2003; Mahdi, 2014). No research, however, has been done to determine how the teacher should integrate Skype/QQ/WeChat-based tandem learning into an existing curriculum, and how they should organize the tandem learning tasks. Research is needed to investigate ways by which a teacher may implement tandem learning using Skype/QQ/WeChat without specifying synchronous or asynchronous format of interaction. Such research will help contribute to the understanding of the principles of the effective use of CMC in learning.

3. The theoretical framework and the design of the tandem project

This study was informed by the multiliteracies learning theory developed by the New London Group (1996). Based on the assumption that the human mind is embodied, situated, and social, the multiliteracies learning theory encourages a pedagogical approach that prepares learners for a successful life in a more and more globalized world. This approach supports inclusion of cultural, linguistic, communicative and technological diversity in teaching and learning. The necessity to communicate meaning amidst the constant change in today's communications milieu requires that learners be able to figure out differences in patterns of meaning in different contexts, and be able to use a variety of multimodal representations, especially those of the new digital media. The pedagogical framework, based on the multiliteracies theory, breaks down the teaching and learning process into four segments: situated practice, overt instruction, critical framing, and transformed practice. When these four segments are employed together, regardless of order, learners are encouraged to develop their own critical thinking skills, and are able to improve their learning styles to better fit the rapidly changing and globalized world.

In this study the researcher/teacher designed the tandem project, using the pedagogical approach that the multiliteracies theory encourages. Thus, the project incorporated four components to introduce different methods of learning and communicating to the CFL learners in order to improve their ability to communicate and navigate bilingual and bi-cultural differences: *Situated practice, Overt Instruction, Critical framing,* and *Transformed practice.*

Situated practice comprises "immersion in meaningful practices within a community of learners who are capable of playing multiple and different roles based on their backgrounds and experiences" (The New London Group, 1996, p. 85). This immersion brings together experts (the teacher and the native speakers) and learners, and at the same time motivates learning by giving learners an opportunity to "use and function with what they are learning" (p. 85). During this process, evaluation is not used to judge, but to guide learners to experiences and to assist learners in becoming members of a new culture.

Two of the primary purposes of learning a new language are to know a new culture and to be able to communicate with native speakers of that culture. In contrast to most classroom activities such as reading aloud, drills, translation, pair or group work among the learners, the intent of designing situated practice into the tandem project was

to immerse the learners in a "community of practice" (Lave & Wenger, 1990) with native speakers of Chinese, and as the first step of achieving which, by pairing each learner with a native speaker and asking them to communicate in Chinese about culture differences between China and America.

Overt Instruction includes "all those active interventions on the part of the teacher and other experts, that scaffold learning activities; that focus the learner on the important features of their experiences and activities within the community of learners; and that allow the learner to gain explicit information at times when it can most usefully organize and guide practice…" (The New London Group, 1996, p. 86). Overt Instruction here refers not to direct transmission, drills, or rote memorization of information, but rather to the collaborative relationship between the teacher (or other experts) and learners. Within this kind of collaboration, learners are able to "accomplish a task more complex than they can accomplish on their own" (p. 86), and be able to become aware of and have control over what is being learned. Most importantly, learners develop a metalanguage that describes the form, content, and function of the discourses of practice.

Overt instruction involves identifying learners' needs and explicitly explaining and addressing those needs. Through active interaction with the teacher (and other experts) in the situated learning, overt instruction not only aids learners in understanding what they are learning (Henderson & Exley, 2012), but helps them know how they are learning at a metacognitive level (Gee, 2002). To become engaged in the tandem project, the learners receive overt instruction not only from the teacher, but also from the native speakers of Chinese during their one-on-one communication.

Critical framing allows learners to stand back from what they are doing and view it critically. The goal of critical framing is to "help learners frame their growing mastery in practice (from Situated Practice), and [their] conscious control and understanding (from Overt Instruction)" (The New London Group, 1996, p. 35). The teacher needs to help the learners to "denaturalize and make strange again what they have learned" (p. 86). Learners need to reframe what they have learned into a broader context by comparing it with a different context, in other words by "foregrounding" what has been taken for granted. Through critical framing, learners are able to distance themselves from what they have learned, critique it, account for its importance and uniqueness, and apply it in their life. Critical framing is the basis for an improved (i.e., transformed) practice.

Through critical framing learners have an opportunity to develop the skills necessary to question, evaluate, and re-evaluate knowledge, and to frame and reframe information in different contexts. The tandem project was designed to give the learners two opportunities to critically reflect, one related to the cultural knowledge they will acquire from their partner in China; the other related to their learning. After situated learning, the learners had an opportunity to compare their partner's culture with their own, thereby compelling them to re-frame information as they received it from their partners. At the end of the project, the learners wrote a reflection paper to critically evaluate the entire process of learning through this project.

Transformed practice should demonstrate that "the learners can design and carry out, in a reflective manner, new practices", and that they can "implement understandings acquired through Overt Instruction and Critical Framing in practices" (The New London Group, 1996, p. p.35). The teacher should re-create a discourse in which learners can implement what they have learned and re-practice it in a reflective manner.

Transformed practice occurs when learners apply what they have learned to new situations, such as learner-teacher role reversal activities. The tandem project was designed to include a culture presentation. In this presentation, the learners were required to reflect on what they had learned while interacting with their native speaker partners, to compare their partner's culture with their own, and to plan a pathway to further learning. The learner's culture presentation, and comparison of the learner's communication at the beginning of their interaction with their native speaking tandem partner, and towards the end of that interaction, served as an indicator of whether or not their practice had been transformed.

4. Research questions

This study is an effort to examine whether or not the tandem project, as designed, could be successfully implemented within the CFL course, how the learners had perceived their tandem learning experience, and how the project design might be improved in the future. Three major research questions were raised in this study:

1)   Does the tandem project work for beginning CFL learners? What are the learners' perceptions about the tandem learning activity?
2)   How do beginning level CFL learners interact with native speakers online via Skype/QQ/WeChat, with the purpose of completing a culture project? What are the strategies adopted to make the communication successful?
3)   Is there anything in the design that should be changed? If so, what is it?

5. Methodology

5.1 Context and participants

The participants consisted of 12 college students and one high school student (six male and seven female) enrolled in a second-semester 5-credit Chinese course (after finishing the first-semester 5-credit Chinese course) in a large Mid-western university. Out of the 12 college students, four were freshman, two were sophomores, four were juniors, and two were seniors.

5.2 Procedures

The tandem project began in the 8th week of the semester (Note: There are 15 weeks in total in one semester.) The learners were asked to establish communication with

a native speaker of Chinese in China, using either QQ, WeChat or Skype, for the purpose of completing a project on Chinese culture over a 4-week period. Upon completion of the project, the participants were required to present what they had learned about Chinese culture with the help from their tandem partners to the class, and then to write a reflection paper on their experience of interacting with the native speaker and on their class presentation.

Each participant was randomly paired-up with a tandem partner—a native speaker of Chinese who was a junior English major in China. The native speakers were asked to help the American students to complete a project on Chinese culture. The native speakers were also encouraged to ask their learner tandem partners questions about American culture or about the English language.

The researcher/teacher gave instructions to help the CFL participants get started. First, the teacher clarified the purpose of the project, explained the project requirements, and gave suggestions on online chat/instant messaging. Three main goals of the project were established—that upon completion of the project, the learners would: (1) Feel more comfortable when talking with a person from China online, (2) improve their understanding of Chinese culture, and (3) become more aware of the differences between the English and Chinese languages, and between American and Chinese culture.

The requirements of the exchange included adhering to a timeline, and spending a specified amount of time each week talking in Chinese synchronously. The project was introduced in the week before the spring break. The learners were required to install Skype, QQ, or WeChat and start to use it by sending the teacher a message during the spring break. In the week after they came back from the spring break, they were instructed to contact their tandem partner and introduce themselves, and subsequently to begin to converse with their tandem partner using Skype, QQ or WeChat, with the choices of using voice, text-chat, and/or recordings. Participants were required to spend a minimum of one hour per week conversing. During this time, at least 40 minutes were to be spent talking in Chinese, and at least 30 minutes were to be spent in synchronous talk. Each Monday, a chat record was to be submitted to the teacher. The participants were required to use Chinese characters (not to use pinyin) if they choose to use text-chat.

After finishing the tandem project, the participants delivered oral presentations in Chinese on the culture topic in class. In their presentations, the participants introduced their tandem partners, the culture topic that they had researched, what they had learned during the tandem exchange, and their thoughts about their tandem partner's culture as compared with their own. After making their presentations, the participants wrote a paper in English reflecting upon their experience communicating with their tandem partners, and on the process of completing the tandem project.

5.3 Data collection

In order to examine whether or not the project design worked, how the learners interacted with the native speakers, and whether or not the learners encountered

difficulties while completing their culture project, the study adopted a descriptive research design through collecting qualitative data. One important feature of descriptive methodology was that differing data collection methods are employed to illustrate a case from different angles (Yin, 2003). Triangulation ensures the validity of the study (Berg, 2004).

In order to capture the process of tandem partner interaction and the learner's perception of the tandem culture-learning project, a variety of data were collected. These data included the learner's Skype/QQ/WeChat chat records, their culture presentations, their reflection papers, a survey given after the project was completed, the researcher/teacher's observation notes, and an informal focus group interview.

5.4 Data analysis

The open-and-axial coding approach from the grounded theory (Corbin & Strauss, 1990) was used to analyze the tandem chat record and the reflections data. Initially the researcher/teacher perused the Skype/QQ/WeChat logs and the reflection papers in order to identify emerging thematic patterns. Communication key characteristics were extracted from the conversations and marked with a series of codes completely generated from the data. The codes were grouped into categories. The initial coding was revisited and re-evaluated to determine whether the identified patterns and categories needed to be revised. The codes were grouped into similar categories in order to make the data more workable. From these categories, which were the basis for the creation of a theory, patterns were identified. In addition to the chat records and the reflection data, the researcher/teacher's observation notes (Note: these notes are composed of 1) the students comments made about their tandem project, 2) their communication with their partners, 3) and the observation notes the researcher/teacher made when the students did their oral presentations in class.) were documented to supplement and confirm the categories and patterns identified during the analysis of the records and reflections data. The culture project class presentations served as an artifact of the tandem activity product. The survey results supplemented the findings.

6. Findings and discussion

The tandem project design proved to be effective, and all but one participants reported that they had learned a great deal about Chinese language and culture. Eight participants used QQ, four used Skype and one used WeChat in communicating with their partners. (At the time when this study was being conducted, WeChat was not as popular as it is today.) During the exchange with their partners, the participants adopted various strategies to approach the culture topic and to make the communication successful. Notwithstanding the effectiveness of the project design, a number of modifications were identified that might serve to improve it.

6.1 The design of the tandem project was effective

The chat records, the class presentations, and the reflection papers all indicated that the tandem project design was effective in improving the learner's language skills and in improving the learner's understanding of the target culture. A variety of topics appeared in the chat records. These topics included: day-to-day activities, movies, class schedules, academic majors, eating habits, hobbies, raising kids, college life, games, girlfriends and boyfriends, growing-up experiences, and the time difference between China and the United States. All of these topics were closely related to the tandem partner's daily lives, but only about half of which had been covered in their Chinese study. Topics that were only remotely related to daily life, such as domestic or international news, rarely appeared in the conversations.

Each participant successfully completed a class presentation in Chinese. Eleven participants used PPT in their class presentations (see Figure 1 for sample PPT slides). One participant made a video, which was played for the class. Due to a scheduling conflict, one participant made an online presentation. The 13 presentations covered ten topics. See table 1.
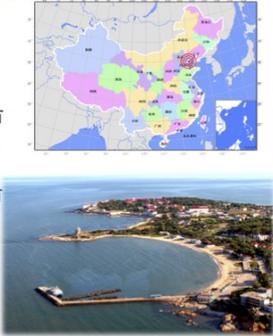
Table 1: Topics covered in the culture project. (Zhang, 2015)

Weddings. This report was in the format of a conversation in Chinese between the participant and his fiancée (his fiancée was also learning Chinese). This humorous conversation included a description of Chinese bridal apparel and of the special foods served at a Chinese wedding.	Funerals. This report described the differences between funerals in American and Chinese culture including: customary funeral attire, funeral setting(s), funeral directors, and funeral activities. In this report, the learner included the Chinese family custom of refraining from wedding until at least, three years after a family funeral.
Education (two learners reported on this topic). These presentations revealed two different perspectives on education in China. One focused on the Chinese educational system including the college entrance exam and course settings within the colleges. The other focused on relationships between teachers and students, parent involvement in their child's education, and the pressure on students to achieve academic success.	Food (three learners reported on this topic). The three presentations described college student eating habits, each from a different perspective. One learner described the typical day-to-day eating habits of Chinese college students, for example, where they eat and why they do not cook. Another learner described the differences between the foods customarily served in Northern China and those served in the United States, and described American restaurants found in China. Another student reported foods served on special occasions.
Dorm life. This presentation described Chinese college dorms, how many students share a room, and typical dorm activities.	Relationships. This report described various kinds of relationships, and the differences between them in China and American. These relationships included: parent-kid relationships, man-woman relationships, girlfriend-boyfriend relationships, and teacher-student relationships.

Extracurricular activities of Chinese college students. The learner used a poster (see below) to describe what Chinese college students like to do when they have free time.	Internet café. This report described the Internet café, why people use them, why responsible parents discourage their children from going to them (their negative influence on children's studies), and why their tandem partner did not like Internet cafés.
Travel in China. In this report, the learner described things she had seen and heard while on a trip to China during the tandem project, ways she had become confused by things she had observed, and how she resolved her confusion with the help of her tandem partner.	The cultural differences, in my eyes. In his report, the learner described the primary cultural differences he had observed while on a trip to China and how, with the help of his tandem partner, he came to understand the reasons for the differences he had observed.

Figure 1: Sample slides from participant presentations

6.2 Two categories of perceptions about the tandem project were identified

The first category comprised enjoyable experiences during the project. The second category comprised adjustments required to succeed in the tandem project including: being a little nervous, not knowing how to approach the native speakers, and learning to enjoy what the project taught them.

Eleven out of the 13 participants enjoyed the tandem project experience. The reasons participants gave for liking the project varied. Some liked it because it combined all of the components of language learning into a single experience. One participant said, "I like it—culture, connection, grammar, vocabulary, presentation, speaking and listening, on the spot". Another stated that the project had forced her to think faster in Chinese, and to learn more by "forcing students out of their comfort zones and making them utilize what they have been learning in class." Other participants commented that the project helped them to "learn new grammar and new vocabulary that is important for conversation", and to become aware of what they knew of the language. One participant said, "I believe that chatting with my Chinese partner helped me with my Chinese learning. I was forced into a position where I had to use grammar that I had learned, look up words, translate what she was saying, and generally ask for help when I didn't understand what she was saying. Chatting with my partner made me utilize what I knew of the Chinese language".

All participants enjoyed connecting with their tandem partners in China, discovering what they do and what they think, and learning about the similarities and differences between their cultures. Most participants reported that they had learned a lot from the tandem communication. The participants enjoyed learning about, as one described it, "a culture that behaved differently on a daily basis" from their own, and yet "had many similarities in terms of what might be accomplished, in terms of work, school, family and etc." Other learners expressed appreciation for having been given the opportunity to participate in the tandem project because their Chinese partners had helped

them in their "understanding of Chinese, if not grammatically, at least culturally, and that that was an experience second only to actually visiting a different country." Another learner expressed similar feelings in his reflection,

> Using the technology to talk with our partners helps us all keep connected and helps to break down barriers and differences that we perceive about each other. For example, in my project, my partner and I were surprised to find that American and Chinese students do very similar things in their free time (shopping, doing laundry, eating with friends, etc.), and there was not very much difference at all between things we liked to do. … As I was making my poster (the presentation), I was again surprised by how much more we had in common than I originally had thought. This project is definitely one that should be kept for future classes, because it has really helped me in both learning more Chinese as well as learning more about Chinese culture and life." Another participant wrote,

In most cases, the participants liked the project, not because of one aspect, but because of several. For example, one participant wrote in his reflection paper,

> In completing this project, I found it to be a very rewarding and worthwhile experience. I not only developed a further knowledge of Chinese vocabulary, but also developed in my ability to effectively communicate a topic or idea in Chinese. I thoroughly enjoyed this project because I grew in my knowledge of Chinese, developed friendships with students studying English in China, and learned how to effectively communicate an idea orally in Chinese.

One participant commented that the class presentations served as an excellent culmination of the project,

> Additionally, I enjoyed this project because it allowed students to practice their speaking and listening comprehension skills. Viewing and listening to other students' presentations gave our class the opportunity to learn some new words, as well as practice overall listening comprehension. I felt that while presenting my project, it was a very relaxed environment where there was not a lot of pressure, allowed me to critically think about formulating sentences. In addition, a decent portion of my presentation was made up on the spot, so I was able to practice thinking and communicating in Chinese on the spot without prior preparation.

Not all participants enjoyed the project at the onset, but most experienced an improvement in the in the process of interacting with the native partner as they became less worried, happier, and more relaxed. Worries at the beginning of the project were mainly due to the lack of experience in interacting with native speakers. For most of the participants, their experience in speaking Chinese with native speakers had been limited to that of speaking with their instructor. After the partners began communicating, they

discovered that the flow of their conversations was improving. Their worries ceased and they began to enjoy the project. One learner described this transition from worrying to enjoyment, "When I first started working on this activity, I was a little bit worried that I wouldn't be able to understand/communicate with my partner, or that the conversation would be awkward or forced. However, as I began the project and began communicating with my partner, I was amazed by how well the conversation seemed to flow".

Another participant recounted the psychological process she experienced,

> I remember how nervous I was and how unprepared I felt at the beginning. This was not going to be like practicing with other Chinese learners or with our Chinese TAs. I was a little worried about messing up, and my biggest fear was that my Chinese partner would not like me or that she would think my Chinese was terrible. Still I was very excited to have the opportunity to develop my Chinese with natural-born speakers. Not only was it a fun experience, it also allowed me to make friendly connections with people in China. I hope to continue my Chinese education by chatting with the friends I have made.

Most of the participants enjoyed the project so much that when asked whether they and their native speaker partner would keep in touch with each other after the project, 60% of them said, yes, and those who did not say, yes, said maybe.

6.3 Different strategies were adopted to communicate effectively

While some strategies commonly used in face-to-face communication such as, requests, clarification checks and self- correction, greetings, leave taking, and inter-subjectivity, were applied to online communication, other strategies were also adopted to make message exchanges more efficient. Four categories of strategies were identified: (1) Using text chat instead of audio chat, (2) rapid code-switching when necessary, (3) getting to know their partners through natural conversation before learning about culture, and (4) utilizing available online resources to help with smooth communication.

Although participants were given the choice to use either audio/video chat or the text chat, or both, most of them chose to use the text format synchronously. Of the 13 participants, only two used audio chat, even minimally, during the 4-week tandem interaction period. All other participants used synchronous text chat exclusively. The main reason given for preferring synchronous text chat over audio/video chat was that audio/video chatting was too challenging for beginning Chinese learners, and that audio/video chatting often raised learners' anxiety. One participant wrote in her survey in Chinese, "Speaking makes me nervous, but I can write/type.". Another one commented, "My partner used a larger vocabulary and I was continually translating characters that I didn't know. If I had used video or audio chatting, I think that I would have gotten really lost in the conversation".

About 50% participants used synchronous chat at least twice a week and 60% participants chatted with their partners for at least 30 minutes each time. Four participants chatted for over an hour each week. Asynchronous chat was tried occasionally and found to be less preferable than synchronous chat. The general consensus of the participants was that asynchronous chat was less efficient. One participant wrote, "I would generally try to chat with my partner twice a week, but sometimes it would be a struggle to chat with her once a week because our schedules wouldn't align. In that case, we would try to send messages back and forth so that we would get a response once the other logged online. When that would happen, things would be very slow going". Another participant stated in his survey, "My partner and I would try to chat for an hour when we would actually be online at the same time; if we were chatting back and forth over the course of several days while the other was offline, it was a smaller amount".

While most participants used Chinese in their text chatting, they code-switched between Chinese and English when necessary. Their synchronous conversation usually began and ended in English. Conversations often began in English to more easily set up the next meeting time, and often ended in English to quickly clarify any uncertainties and conclude the conversation. Occasionally they mixed both English and Chinese using English only for clarification. In general, over 85% of the communication was in Chinese. One participant said, "I used 99% of the time to chat in Chinese. I feel that trying to use as much Chinese as possible was most effective."

The majority of participants found their cultural topic within the natural flow of conversation with their tandem partner during the 4th, and last week of the tandem project. During the first three weeks, the participants and their tandem partners talked about their daily lives. When asked how they arrived at the topic of their culture project, most said that the topic just came naturally. One participant wrote, "We randomly talked about various foods one day and [I] decided to follow up on that subject." When the participants were asked what suggestions they would give future tandem project participants, as to how to approach the culture project with their partner, most participants said that they would suggest that culture project ideas be discovered within their natural conversations. One wrote, "I would tell students in the future to maybe get to know their partner first, their likes and dislikes, and then see what works naturally for both of you." Another one encouraged the future students to follow what they are curious about and she said, "If you have something you are curious about, you can go for it and ask. It might just lead to the culture topic you want to discuss."

Another strategy unique to online communication utilized by the participants was the use of online resources, such as web tools, dictionary, and images to make the communication smooth, especially at the beginning of the tandem project. One participant commented, "I found that at first it was a little challenging, and I had to use some translation software, but after a while it became a bit more natural." Another said, "I found that if I looked up the words and phrases that my Chinese partner sent to me, I could usually figure out what she was saying." When they did not know how to say something, they occasionally found a helpful image on the web and sent it to their partner. All participants made use of emoticons to express their feelings.

6.4 Individual Differences

When using these above-mentioned strategies to communicate, individual differences emerged. There were four different communication styles shaped by the individual differences. The first style was *open and direct*. A majority of the participants interacted with their partner in this style. These participants simply started interacting with their partner as a new friend and asking questions which were closely related to their daily life. Sometimes miscommunication occurred, but with effort, communication became increasingly smoother. The second style was *cautious and very prepared*. Participants using this style prepared their questions in advance. The other two styles were only used by two participants, respectively. The third style was *explaining all situations he or she was in meticulously for fear of being misunderstood*. The other was *minimalism*, the participants of this style used the minimum number of words required to communicate the question, in a telegraphic style.

6.5 Challenges

Despite the fact that most participants enjoyed the project, they did encounter challenges along the way. Some participants found it challenging to formulate questions necessary to elicit the information needed about Chinese culture to compare it with their own. Asking good questions requires prior knowledge. However, neither the participants in the United States nor the Chinese students in China were familiar with each other's culture. As one participant commented, "I considered it hard to just think of differences [to ask] and how to compare them, without actually knowing of the differences already." The challenge of question formulation resulted in questions that were too broad, such as, are there any differences between Chinese weddings and American weddings?" One participant suggested that questioners should "have some ideas prepared so that you and your partner can discuss them.

Another challenge was scheduling synchronous talking times with their tandem partner. This challenge was caused primarily by the time difference between the US and China. There is a 9 to 13-hour time difference between the two countries depending on time location in the US. This had made scheduling synchronous talks very challenging, especially for college students who go to bed very late. Most participants had to get up very early in order to talk with their partner.

Replying to tandem partner messages in a timely fashion and acceptable fashion was occasionally found challenging. If there were many new words in the partner's messages that the participants had to look up in the dictionary, it often took the participants more time to prepare a reply, often leaving the participant unsure as to whether they had conveyed their message clearly and concerned that their delayed reply would bore their Chinese partner. One participant said, "the hardest part of all was making sure I was typing the correct Chinese to my partner before I sent it. I was self-conscious of my Chinese and checked it about three or four times before I replied to her

messages. I need to feel more comfortable in my learning and trust myself; otherwise, my delayed responses will bore my Chinese classmates."

6.6 Project design strengths and weaknesses

Overall all, the tandem design, based on the multiliteracies theory, successfully provided enough scaffolding and media for the CFL learners to learn Chinese language and culture. The broad range of format choices available through Skype/QQ/WeChat offered users great flexibility to choose the method of communication that worked the best for them. Following is an examination of the strengths and weaknesses of the four components of the project design.

Situated practice was the essential component of the tandem project design. The findings specified in the above section proved that situated practice greatly enhanced the learners' learning of culture, and maximized exposure to the language. This component brought experts to the learners, and immersed the learners in an environment second only to visiting China. Based upon the perceptions of the participants, a few adjustments could be made to allow the situated practice to work even better.

While it is feasible to engage beginning Chinese learners with native speakers through situated practice via tandem communication, it is critical to the learning experience that the native speaker understand, and accommodate, the beginning learners' limited command of Chinese language. The process of "legitimate peripheral participation" is a necessary component of situated learning, according to Lave & Wenger (1990). Situated learning—a method of engaging learners in a "community of practice"—necessitates the movement of the beginner or newcomer to move, by participation in simple and low-risk tasks, from the periphery to the center of the community, that is, to become experts themselves capable of helping incoming newcomers or beginners. In the tandem-learning environment, the learners were put at the center of community of practice from the outset, that is, they started to communicate with the experts—native speakers/target culture experts, from outset of the project. Therefore, employment of the tandem learning method requires that the experts understand and accommodate the beginning learners' competency level, and the learning process, in order to be effective (e.g., the expert accommodating the beginning learner by using less complicated expressions, or by being more tolerant to the learners response speed).

The experts in this study knew that they were communicating with learners who had completed just 6 months Chinese learning, and strived to accommodate that learning level by, for example, providing the English translation their Chinese message if they did not hear back from the participants in a timely fashion. However, despite the expert's efforts, their lack of detailed knowledge of exactly what the learners knew, and of exactly how learning occurs, impeded the learning process. One participant said, "Since my partner did use a lot of vocabulary that I didn't understand, I had to translate some sentences. It helped me learn some new words, but at the same time it was nerve wracking because if I didn't respond quickly enough, my pen pal would ask me if I had understood or not".

Another consideration when designing tandem communication to better utilize the situated practice component is time zone difference. The time zone difference between the US and China challenged some participants when finding mutually acceptable times to do synchronous chat. Although this challenge was overcome, and the participants succeeded in their situated practice, an alternative method of scheduling asynchronous chat sessions might be to schedule whole class sessions once a week, all participants would assemble in a classroom and chat with their native speaker partners in China, which would require one group to either get up very early or stay up very late. While this alternative might be achievable, it eliminates individual flexibility by requiring all learners to chat at the same time and place. Since both the participants and the native speakers were students, their conversations usually began with what they were doing at the moment. Since most students' lives are focused on completing classwork, starting conversations with that subject may have a tendency to limit the scope and depth of conversation, indicating a need to make some adjustment to the project design.

Expert overt instruction is essential when learners are required to complete complex tasks in tandem learning. Project participants were appreciative of the overt instruction provided by the instructor and the tandem partners and perceived them as useful. The overt instruction provided by the instructor provided the learners with an understanding of the purpose of the tandem project, etiquette of online communication, and general requirements for completing this project. The instructor's overt instructions successfully prepared the learners to plan and direct the course of their learning experience. At the same time, the overt instruction from tandem partners, acting as experts in their capacity, helped the learners to gain an understanding of Chinese culture, a better command of the Chinese language, metalanguage skills, and skill and confidence in directing their learning experience. Figure 2 (c.f. next page) shows an example of the overt instruction from the tandem partner:

An analysis of this chat record suggests that a few elements need to be incorporated into the overt instruction. For example, learners need overt instruction to help them plan and complete their culture project. The instructor should encourage the learners to explore Chinese culture and become familiar with it before they begin a conversation with native speakers about it, so that once the conversation has begun the learners can focus on their conversation, equipped with an understanding of the culture adequate to allow the conversation to flow naturally toward a culture project topic. Furthermore, learners need to know how to verify that their tandem partner understands their level of competency with the Chinese language. The instructor can facilitate this understanding by instructing the learners, from the outset of the learner-tandem partner relationship, to express their appreciation of their tandem partners' patience. One participant suggested, "I think it was important to communicate to my partner that I might take a while to respond because it takes time to process and think of a response." Research has shown that text-based chat can reduce foreign language anxiety (Kelm, 1992; Kern, 1995; Warschauer, 1996) However, only after the native speakers understand the Chinese proficiency level of the CFL learners, could the anxiety be reduced. This

22:32:23 Tandem Partner
是啊，因为我们要高考 (College entrance examination)，这个考试对我们很重要，所以老师对我们要求很多，作业非常多。

22:32:23 Tandem Partner
Yes, because we have CEE (College entrance examination). This exam is very important to us, so teachers have high expectations of us and give us a lot of assignments.

22:35:48 Tandem Partner
你知道中国的高中要"文理分科"的吗？

22:35:48 Tandem Partner
Do you know that the high school students in China are divided into two tracks (literal arts and science)?

22:36:45 CFL Student
在美国我们也有高考。它叫 SAT 或者 ACT(我们有两个)。在中国的高考很竞争的吗？

22:36:45 CFL Student
In America, we also have examinations like CEE and they are SAT and ACT(there are two of them). In China, is it very competition to enter a college?

22:37:20 CFL Student
不知道

22:37:20 CFL Student
I don't know.

22:39:11 Tandem Partner
"竞争"是动词也是名词，不是形容词，所以不能说"很竞争"，可以说"竞争很激烈"。

22:39:11 Tandem Partner
"Competition" is a noun and "very" cannot be put in front of a noun. You can say, "is it highly competitive" or "is the competition very fierce?"

22:40:32 CFL Student
/OK 啊，谢谢

22:40:32 CFL Student
/OK, oh, thank you!

22:42:35 CFL Student
中国的高考很竞争很激烈吗？

22:42:35 CFL Student
In China, is the competition very fierce in order to get in a college?"

22:42:58 Tandem Parnter
是的，在中国高考竞争很激烈。因为我们都觉得，考上好的大学以后才能找到好的工作。在中国每年的考生都有几百万人。

22:42:58 Tandem Partner
Yes, very fierce. Because we all feel that only after we get a bachelor's degree, can we find a better job. Each year there are about several million who take the CEE.

Figure 2: Excerpt from Chat record (with researcher added translation) showing overt instruction from native speakers (underlined part is overt instruction on language, the rest is on culture.)

measure will encourage the tandem partner to bear in mind the learner's language proficiency level during the ensuing conversations, and will relieve the participant of pressure and anxiety related to such things as slow in response time. Finally, overt instruction should be provided to the participants which will encourage them to use the simple expressions that they have learned in class to express complicated issues that arise in the course of their conversations, rather than to engage in the tedious, time consuming, and uncertain task of looking up new words and composing new expressions for every occasion. For example, instead of looking up words in the dictionary and trying to figure out how to say "Is it very competitive to enter in college?" The learner can use what they have learned to express the same meaning with, e.g. "Is it very difficult to get in college?"

In addition to providing overt instructions to the learners, the instructor should provide overt instruction to the learner's Chinese tandem partner, if necessary. This instruction might cover such things as the purpose of the project, the ways in which the tandem partner would be expected to help the learner, and the definition of important terms that will be used in conversation, such as *culture*. Chat records and participant reflection papers indicated that occasionally the tandem partner had misconception of what *culture* meant in the context of the project. One participant wrote in her reflection

paper, "[My partner] was trying to tell me all sorts of things about the Qing Dynasty (1645-1911) until I got the point across that I had to focus on something much smaller." By offering overt instruction on the term *culture*, for instance, the instructor, by defining big C culture as architecture, literature, and arts, little c culture as the daily life and body language, misunderstandings could be minimized.

In this study, the format of participants' reflection papers was Critical Framing. "We do not learn from experience. We learn from reflecting on experience" (Dewey, 1933, p. 78). The participants extended and deepened their learning through critical reflection upon their tandem and presentation experience. Through critically reflecting on their learning, they began to discover how to plan and direct their tandem learning experience. One participant wrote, "… the hardest part of all was making sure I was typing the correct Chinese to my partner before I sent it. I was self-conscious of my Chinese and checked it about three or four times before I replied to her messages. I need to feel more comfortable in my learning and trust myself."

Learning occurs not merely from what learners are told by their tandem partners, but from reflecting upon them, synthesizing the information, and relating the information to their own lives. One participant gathered information about college students' extra-curriculum activities and prepared presentation for their tandem partner. In her reflection paper, she related her tandem partner's life to her own life and concluded by saying,

> From the way [my tandem partner] talked about students in China, Chinese students   seem to be a little more studious than American students (in general). This may be because of the fact that schooling in China is more rigorous that schooling in the United States. It also seemed like Chinese students think of free time less as a way to have fun, and more of a way to catch up on work, or even get ahead of other students, whereas American students generally think of free time as a time to relax completely. Again, I think that this is probably due to how much more competitive and selective the education system is in China compared to the way it is in the United States.

In this project, the class presentation format was Transformed Practice. The class presentations demonstrated that the learner knowledge of Chinese culture had been expanded and deepened. Learner use of Chinese in the class presentations was fluent and included an expanded vocabulary. Learner practice had been transformed through doing the tandem project. Of course, the ideal way to implement transformed practice is to "walk the culture," by going to China and practicing what is learned in the real life. However, since in most cases that is not practical for most of the learners in America, tandem learning offers a very practical alternative.

7. Conclusion

This study has examined whether or not tandem learning, designed for beginning level CFL learners, based on the multiliteracies theory, works. Additionally, it investigated, also, how beginning level CFL learners interact with a Chinese partner via Skype, QQ or WeChat to complete a culture project. The results of the study showed that the learners enjoyed the communication, conducted mostly in Chinese via text chat, and successfully used strategies to make their communication successful. Overt instruction given by the instructor, and by the learner's tandem partner through interaction, combined with the completion of the culture project and reflection on their learning experience by way of preparing the class presentation, clearly improved the CFL learners' knowledge of the target culture ability to use the target language.

Furthermore, the tandem project opened another world to the learners. The participants were given the opportunity to talk to the native speakers assigned to them—some finding opportunities to talk to other native speakers they got to know on Skype/QQ/WeChat as well—and afforded them a newfound confidence to talk to native speakers of their own age.

The field of foreign language education is in need of principles of using CMC (Chapelle, 2003; Mahdi, 2014). This study has shed valuable light on our understanding of how to design CMC activities to maximize learning. The findings of the study confirm the feasibility of using the multiliteracies pedagogy in designing CMC activities, especially tandem learning. The successful implementation of the tandem design confirmed that the four integrated components of the design complimented each other, and all of them are indispensable to the learners' learning. As the situated practice takes the form of tandem learning, it does not necessarily mean that immersion in the language environment, with a native speaker partner, will automatically ensure that learners learn. As cautioned in New London Group (1996), "while such situated learning can lead to mastery of practice, learners immersed in rich and complex practices can vary quite significantly from each other (and from curricular goals), and some can spend a good deal of time pursuing the 'wrong' leads" (p. 31). Because "situated practice does not necessarily lead to conscious control and awareness of what one knows and does," situated practice itself cannot "create learners or communities who can critique what they are learning" (p. 32). Therefore, overt instruction and critical framing are required. In the tandem learning, both the instructor and the native speakers provide such instruction to help learners take control of their learning experience. The inclusion of overt instruction and critical framing in the design of the tandem learning is as essential as is situated practice in helping the CFL leaners to master the practice in learning Chinese language and culture. Transformed practice provides the learners an opportunity to articulate what they have learned, and to demonstrate mastery of learning the target language and culture.

The findings of the study also confirmed the importance of assigning a specific task to the tandem learning process, as suggested by the study of Appel & Gilabert (2003). In this study, the culture project was used, not only as the anchor of the participant's tandem communication, but also as a device to connect the four integrated components of

the pedagogy of multiliteracies. Without this device, the four components could not have been meaningfully integrated.

By examining the interacting process between the CFL learners and their tandem partner, this study revealed that beginning CFL learners adopted strategies in order to communicate efficiently with their tandem partners when they were given the choice of using either audio/video chat or using text chat. The findings of this study will, no doubt, help researchers to better design CMC (including tandem) activities, to improve language learners' efficiency in communicating with native speakers, and to strengthen learners' learning from these activities.

This study represents the first attempt to use the multiliteracies theory to design a tandem language learning activity, thus further research is needed to fully develop this important learning pedagogy. For example, although the participants' self-reported perception of the project design, and their culture project presentation (as artifacts) served sufficiently to affirm the validity of the design, quantitative data collected by comparing the learners' culture knowledge and language ability, before and after the tandem project, would probably better furnish this affirmation. Administering a pre-test on culture knowledge might help to improve the way that the participants' approach the culture project in the future. In this study it was the culture project that cohesively bonded the four pedagogy components together, and it worked very well for that purpose. Further research can be done to determine whether or not the design will need to be modified to accommodate expansion of tandem learning to include such activities as a collaborative writing project, a reading club project, a drama performance task, or other different types of activities that the learner and the tandem partner could complete together. Finally, it would be worthwhile to gain a greater understanding of the tandem partner in China— what strategies the native speakers use to help their American partners, and what effect tandem learning has on the native speakers' understanding of their own culture and of the English language. On the same line, it'd be interesting to find out, if the native Chinese speakers (the tandem partners) have lower English proficiency, whether or not the research result will be the same.

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