

What can a smartphone offer to learners of Chinese?¹ (智能手机能为中文学习者提供什么?)

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Abstract: This article describes an experiment with integrating smartphones into a university's introductory Chinese-language classroom. A summary of the use of the smartphone as a tool for teaching and learning is provided followed by the instructor's observation and reflections as well as learners' perception after a trial run. Finally, recommendations and suggestions are offered for further use.

摘要: 智能手机能为中文学习者提供什么帮助? 针对这一问题, 作者在大学第二学期的初级中文班作了初步尝试。本文首先描述该尝试的概况, 然后报告教师的观察反思及学生的反馈意见。文章最后为今后的实践提出建议。

Keywords: Smartphone, Chinese Language Teaching

关键词: 智能手机, 中文教学

1. Introduction

As documented by the American Foreign Service Institute regarding the number of hours required in order to achieve proficiency, it is a well-known fact that learning Chinese as a foreign language (CFL) can be challenging to English-speaking learners (Stewart and Wang, 2005). For beginners, speaking Chinese with correct pronunciation is a daunting task due to the distinctive tonal features of the language. Furthermore, identifying logographic characters so as to learn to read and write is even more formidable. John DeFrancis regarded learning to speak Chinese is as difficult as speaking French but he claimed in his book, *The Chinese Language: Fact and Fantasy*, that for native English speakers, "It is in the traditional writing system that the greatest difficulty is encountered." (DeFrancis, 1984, p. 52). In search for effective ways towards ameliorating these two difficulties, one accepted solution is to integrate technology into

¹ The author gratefully acknowledges the strong support from the Teaching, Learning, and Technology Center at Seton Hall University for providing Windows Phones to all students in the course. Special thanks should go to Wendy Sue Williams, Director of Language Resource Center at Seton Hall University for her great assistance throughout this project. Sincere thanks to the JTCLT reviewers for suggestions and comments on the revision of this article. All remaining errors are mine.

the learning process. For example, Chen (2005) shows that inputting Chinese characters using a web-based Chinese-learning program can conveniently but effectively ease the burden of associating the sound of a word with its meaning and “look.” In Xu and Jen’s (2005) empirical research, they found that students using the “penless” computer application performed far better not only in reproducing Chinese characters, but also in speaking, listening and reading.

Since Apple released iPhones in 2007, the smartphone industry has advanced considerably. As a result of multiple functionality and moderate affordability, owning a smartphone is commonplace. Kurtz (2012, p. 9), citing data from the Pew Research Center, pointed out that over a third of all adults in America own a smartphone of some kind. More impressive is Lytle’s (2012) observation that 69% of university students own a smartphone. A similar percentage of foreign language students at the University of Colorado in Boulder was reported by Simon and Fell (2012). At Seton Hall University where the author teaches, the annual 2013 survey indicates that 82.9% of its undergraduate students claim to own either a smartphone or PDA (Seton Hall University, 2013). What is amazing is that, of foreign-language students surveyed by Simon and Fell (2012), 60% already started using smartphones for language-learning purposes, mostly in terms of either looking up dictionaries or doing translation (Simon and Fell, 2012).

While smartphone technology is fairly emerging as compared with other mobile devices such as laptops or PDA, research has been conducted to examine its potentials in foreign language education. For example, Godwin-Jones (2011a) reported the use of smartphones in language learning, including apps for the different types of smartphones (i.e., Apple iPhone, Google Android Phone, and Microsoft Windows Phone). He also noted that smartphones are ideal for individualized informal learning (Godwin-Jones, 2011b). Kurtz (2012) summarized several benefits of integrating mobile phones in language classrooms based on his literature review in MALL (Mobile Assisted Language Learning): which range from “learning enjoyment and motivation to personalized informal learning, social interactivity, context sensitivity, and immediacy” (Kurtz, 2012, p. 21). Zeng (2012) is the only published study that the author is aware of which examines the application of mobile technology in Chinese-learning classroom. In the article, the high-school Chinese-language teacher demonstrated how he integrated Palm Treo smartphone with Chinese input, handwriting and dictionary software in his Chinese classroom.

As more college students start to own smartphones and as more apps are developed for foreign language learning, it will be necessary to ask questions that explore what smartphones can offer to learners of Chinese. These include: How can smartphones be implemented in Chinese language classroom? Are there any pedagogical benefits by using the smartphone in teaching and learning Chinese? What should the instructor do in order to enhance the learning process? What activities can be assigned for students to do in and outside of the classroom? What are the learning experiences with smartphones? To this end, the author describes the experiment completed in Spring 2013 with a group of university students learning introductory Chinese in the second semester. In other

words, the author examined the impact of ubiquitous mobile technology on the learning environment for Chinese language teaching and learning.

2. The Experiment

In Fall 2012, for trial purposes, Seton Hall University provided each of the incoming freshmen with a Nokia Lumia 900 smartphone running Windows Phone and cloud services through Office 365 together with either a Samsung Series 9 Slate PC or a Samsung Series 5 laptop running Microsoft Windows. By launching this program, the University, based on its 17 years of Mobile Computing Program, aimed at further “establishing a state-of-the art technology ecosystem to enhance the living and learning environment for the class of 2016” (Landry, 2012). As part of this exciting program was the opportunity for faculty to examine the potential of the new digital tool in teaching different subjects. Inspired by the ubiquity and convenience of smartphones, the author was particularly interested in exploring whether smartphones can be used to assist beginning learners of Chinese with respect to the aforementioned learning issues, i.e., the difficulty with tone acquisition and character learning. In the following, the procedures of smartphone distribution and app installation are introduced first, followed by a description of how smartphones were used in and out of class.

Each of the students in the Introductory Chinese II course (including freshmen, sophomore, and juniors) was provided with a Nokia Lumia 900 smartphone running Windows 7.² A 45-minute orientation session was scheduled at the end of the Add/Drop period. Other than synchronizing login to the school network on the phone so that students could send and receive emails just as they did on laptops, students were guided to configure the setting so as to have the Chinese keyboard, which would enable them to either key in Chinese characters or input Chinese by handwriting. For English-speaking learners of Chinese, these keyboard features are very helpful when learning how to write characters. Furthermore, students were also assisted with downloading the four free basic apps: (1) **Tip Tap Tones**, an application to practice Chinese TONES; (2) **Chinese Pinyin**, an application that provides the capability to tap to hear the pronunciation of all the possible Chinese syllables; (3) **Engkoo App**, a English-Chinese and Chinese-English dictionary; (4) **武写**, a game to learn to write Chinese characters (see Appendix A for the instructions on configuration and installation). The goal of this orientation was two-fold: it helped students to set up so that they can start immediately to use the programs while inculcating them with the notion that the phone was provided only for language learning purposes and that they were required to bring it to class throughout the semester.

Besides habituating students to the regular use of smartphones in class, a second objective is their use outside the classroom. For reflection purposes, the author kept detailed journals on the use of smartphones throughout the semester. For demonstration,

² At the end of Fall 2012, all the freshmen returned their university phones back to the school when the trial was over. So for this experiment which started in Spring 2013, a distribution of the smartphone had to be re-arranged.

Table 1 lists some instances of the journals, arranged in terms of what was done, and what the teaching and learning objectives were.

Table 1 Selected Uses of Smartphones inside the Classroom

Things Done on the Smartphone	Objectives
<p>Feb. 4, 2013</p> <p>a. Students completed the last question in Unit Test 1 by describing in Chinese a poster for the Year of Snake, which contains new words.</p> <p>b. Students tried Tip Tap Tone twice.</p> <p>c. Students wrote three sentences about themselves in a Word file, then sent to it themselves.</p>	<p>Using the Engkoo dictionary</p> <p>Practicing tones</p> <p>Getting students familiar with the function of Word File</p>
<p>Feb. 11, 2013</p> <p>Students read a passage about how Chinese people celebrate New Year, (see Appendix B). For the new words, they looked up in a more user-friendly Chinese-English/English-Chinese dictionary, KUAISHUO CHINESE DICTIONARY, which they download the passage.</p>	<p>Engaging students to read with the aid of the dictionary, which provides pronunciation.</p>
<p>Feb. 13, 2013</p> <p>Students tried handwriting the words learned: 人, 好人, 老人, 大人, 小人, then they completed Quiz 4 by doing the following:</p> <p>a. Handwriting the three words in Chapter 6-II, 说, 下个, 帮</p> <p>b. Keying in the words, 练习, 准备, 跟, 见面, 回来</p> <p>c. Using KUAISHUO CHINESE DICTIONARY to find the Chinese translation for the two English words, <i>but</i>, <i>must</i></p>	<p>Practicing handwriting characters</p> <p>Practicing inputting characters</p> <p>Practicing looking up English words in the dictionary</p>
<p>Feb. 18, 2013</p> <p>a. Using TIP TAP TONE (2min): students did this individually</p> <p>b. Using CHINESE PINYIN: The instructor gave <i>pinyin</i>, and students located it in the app, and tap it. If the student selected a right syllable, the instructor would know whether that is correct or not.</p>	<p>Practicing tones</p> <p>Warming up with Chinese PINYIN to prepare students for doing future quizzes using the app</p>
<p>Feb. 20, 2013</p> <p>Students did Quiz 5 through CHINESE PINYIN: they listened to the words pronounced by the instructor, located them in the app, and tap it.</p>	<p>Helping students distinguish the pairs: <i>shuo</i> vs. <i>shou</i>; <i>zhen</i> vs. <i>zheng</i>; <i>zhen</i> vs. <i>shen</i></p>
<p>March 18, 2013</p> <p>Students wrote down what they did for a day of their self-selection. Students then downloaded DIARY,</p>	<p>Engaging students to develop writing skills</p>

installed the app, and put in their journal into the diary.	
March 27, 2013 Students learned new words on different types of clothes, and currency for different countries in Speak Chinese & China Finance	Learning and expanding vocabulary
April 1, 2013 Students reviewed the vocabulary of color, clothes and currency in Learn Chinese Free	Reviewing Chinese words on color, clothes & currency.
April 10, 2013 With the dictionary, students did the activity <i>The Price is Right</i>	Practicing speaking price

In addition to the regular use of smartphone inside the class, three small-scale projects were assigned for completion outside the classroom. One was to call the instructor to **Book an Appointment**. To help students with this assignment, the following two activities were accomplished in class:

1. Work in Pairs

A: A student learning Chinese

B: Li Laoshi, the teacher of Chinese

Student A did not attend the Chinese class last Wednesday, because s/he was sick (b òng le). S/he wants to book an appointment with B, *Li Laoshi*, to ask some questions about Chapter 6 (D ìLi ùK è) that was just learned.

2. Work on your own

You have some questions to ask your Chinese-language teacher. You call her/him to book an appointment. Unfortunately, s/he is not in the office. You need to leave her/him a message, telling her/him your name, the time when you want to have a meeting with her/him, and the reason why. If you'd like the teacher to call you back, please be sure to leave your phone number.

The two activities were designed to prepare students with a script about what to say if the teacher picked up the phone and what to say if the teacher was not available. The instructions for this project are as follows: *Call Chen Laoshi at 862-252-4285 between 4:30 p.m. on February 18 and 12:00 p.m. on February 20 for an appointment. If the teacher is not available, please leave a message. Your message must include your name as well as when and why you want to see the teacher.*

The second mini project is **Interview a Friend Learning Chinese**. To prepare students for this project, the instructor asked them, while in class, to locate 5 to 10 verbs, thinking about how to use the verbs to describe how well someone did something using the structure V + de + adj./adv. Two weeks were allocated for students to finish this project. Below are the instructions for this assignment:

1. Write 5 to 10 verbs that are related to learning Chinese.
2. Recall and review all the questions that you have learned so far.
3. Prepare 5 to 10 questions using the above 5 to 10 verbs.
4. Practice your questions until you are fluent.
5. Locate a friend/classmate who is learning Chinese.
6. Video tape the interview.
7. Ask him/her the 5 questions prepared in #3.
8. Upload your video to Blackboard – Discussions – Interview.

Related to the interview is a third project: *Writing about Your Friend's Experience with Learning Chinese*. For this assignment, students were required to write up the interview they had completed. That is, students need to organize the answers from the interviewee into a cohesive and logical paragraph. To make the description both personal and interesting, they were also instructed to add a couple of lines at the beginning to introduce this friend. The composition must be written in Chinese characters, but it could be done either in handwriting using pen and paper, or using the smartphone/computer. The project was due in two weeks.

3. Discussion and Conclusions

This experiment on the use of smartphones suggests a few benefits. First of all, students can easily look up new words from the phone. The Engkoo app that students installed at the orientation was developed by Microsoft Research; it is a useful English-Chinese and Chinese-English dictionary.³ Kuaishuo Chinese Dictionary that was later downloaded provides the pronunciation for each item. In addition, this dictionary app offers compounding expressions that contain the word in question. These compounds are the vocabulary from HSK Levels 1 and 2. Simple and easy to use, this dictionary is readily and immediately accessible thus serving as a virtual teacher to get meaning and pronunciation. This feature was greatly enjoyed by students as reported in the Spring 2013 issue of *Asian Voice Newsletter*, published by Asian Studies Program, Department of Languages, Literatures and Cultures, Seton Hall University:

"Thank goodness for the accessible dictionary." -- Student 1

"This technological learning method allowed everyone to practice writing and speaking Chinese even when Dr. Chen was not available. There have been many times that I have been confused with the Chinese language and had my questions answered within minutes. The apps available for us to download helped us expand our knowledge of the Chinese language.

Looking back now, I realize that I learned words in Chinese that would be helpful in the work field."

-- Student 2

³ At the time of writing this article, the app was already phased out.

There are many apps that can provide students with the means to practice different linguistic skills. For instance, the **Tip Tap Tone** assists students in brushing up on their ability to perceive and distinguish tones, while **Chinese Pinyin** helped them to orally tease apart different syllables. Other apps—such as **Learn Chinese**, **Speak Chinese**, **China Finance**, and **Chinese Business**—enables students to review the words they have learned, and expand beyond the existing vocabulary. This is confirmed in the following comment from the aforementioned student.

“Tip Tap Tones’ is a timed game that challenges you to memorize tone graphs and pronounce tones, and ‘Learn Chinese’ has great vocabulary practice. ‘Kuaishuo’ has translation between English, Chinese characters, and Pinyin which makes it an invaluable dictionary app. The variety of applications offered by the Windows smartphone made it really helpful for me as a student studying my first year of Chinese. Having the smartphone helped me practice my pronunciation and vocabulary in a fun format.” -- Student 1

All the above combine to engage students because the variety of apps enhance their learning with the element of play, of having fun.

However, despite these benefits, this trial experiment revealed a few limitations. First, students who owned smartphones tended not to remember to bring in the school phones to the classroom. Those who did bring in the phone often forgot to bring in the power cable to re-charge the battery. This happened frequently throughout the semester. As a result, when working in pairs, the interruption annoyed the partner student. A second problem was that the smartphone had no capability to play audio files in the MP3 format. As part of the course requirements, students were asked to listen to the audio files, which were uploaded onto Blackboard (the learning management application). At this time, it is not clear whether it was this Windows phone that could not play the files. Relatedly, a third problem was a defect in Windows phones because they cannot be connected to an LCD projector so as to display the image and sound to the screen in the classroom. The fourth limitation was the fact that as compared to iPhone and Android Phones, there were much fewer apps developed for Windows phones. Simon and Fell (2012) recommended quite a few useful apps for learners of Chinese. However, none of them is for Windows phones.

Other than the teacher’s observation, on the last day of class, 19 students took part in an exit survey evaluating the course that included three questions about using smartphones. Responding to the question *What is your learning experience with the smartphone for this semester*, of the total 19 students, 4 selected *Very helpful*, 12 chose *Helpful to some extent*, and 2 selected *Not helpful*. One student provided his/her own option: *Not Clear*. In other words, 84% found smartphones helpful to some degree. For the question *How often did you use your smartphone to learn Chinese*, 5 said *Very often*, 13 selected *Only occasionally*, and 1 student said *Never*. Although only 26% used smartphones “Very often,” the majority answered *Yes* when asked *Do you recommend the use of smartphones in all introductory Chinese classes*. Students who gave a positive

answer used keywords like “excellent,” “helpful,” “useful outside of the class,” “effective for tones” “good for learning writing,” “a good addition to learning,” “interesting because of games,” “dictionary.” Of the remaining 4 who answered *No*, one student said that using the smartphone to learn Chinese is “a burden,” one answered that s/he only “used textbook and reading” to study Chinese. The other two did not give any reasons.

This experiment showed that the majority of our students who were dubbed as “digital natives” (Presenky, 2001, 2008), seemed to be proficient in using smartphones for personal use, e.g., texting friends, listening to music. Yet, they were not ready to use the tools for educational purposes. As required by the 21st Century Skills, students should learn to be able to “use technology as a tool to research, organize, evaluate and communicate information” (Partnership for 21st Century Skills, 2009). We suggest that instructors encourage students to explore their mobile devices for educational purposes. To that end, the instructors, as “digital learners” in the sense of Presenky (2001, 2008), should try to follow the technology trend so as to become updated. For those who wish to try to incorporate the use of smartphone in teaching Chinese, two suggestions are in order. First, refer to the resources about smartphones provided in the references. For apps on other types of smartphones, see the links provided by Godwin-Jones (2011a), and Simon and Fell (2012). Second, design and develop in-class and out-of-class activities based on clearly defined curricular goals. To avoid being overwhelmed by details of various apps, ask yourself: What are the teaching and learning goals of using smartphones? By answering this question, you can then focus only on the pedagogical aspects that are needed to achieve the goals. As emphasized repeatedly by language professionals (e.g., Chen, 2005, 2012; Oxford and Oxford, 2009; Xie and Yao, 2009), technology is not an end, but a powerful means to help achieve what could not reach otherwise, or could not achieve so effectively.

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Appendix A







Instructions for Orientation

A. Configuration and Installation

- a. Settings
- b. Select Chinese

B. Installation of Apps

To prepare, instructions like the following were provided to the students.

- a. Go to <http://www.windowsphone.com/en-us/store/search?q=chinese>
Or click  on the phone, and type in **Windows phone app store**
- b. Select **Windows Phone Apps+Games Store**
- c. Click  on the top right of the screen, and type in **Chinese**
- d. Click See all results for “Chinese”
- e. Select **Tip Tap Tones**, an application to practice TONES , and install it.
- f. Click  on the phone, and type in **Chinese Pinyin APP on Windows Phones**
- g. Select Chinese Pinyin, an application to practice PINYIN, and install it
- h. Click  on the phone, and type in **Engkoo app**
- i. Select , a English-Chinese and Chinese-English dictionary from Microsoft Research, and install it
- j. Select , (a game to learn to write Chinese characters), and install it.
Note: 武写 will be placed inside **XBOX LIVE** after the installation.

Appendix B

Reading Passage for February 11, 2013

中国人过新年

Chinese People Celebrate Chinese New Year

中国人的新年是阴历 (yīnli) 的一月一号。除夕 (chúxī) 每个人都回家和家人一起吃年夜饭 (nián yè fàn), 他们吃鱼 (yú)、吃饺子、吃春卷 (chūnjuǎn)、吃年糕 (niángāo)。吃了饭以后他们一起聊天、看电视, 有时候也唱歌、跳舞、看电影。他们还常常放鞭炮 (fàng biānpào)。阴历的一月一号也叫春节 (chūnjié), 大家见了面, 都说, “新年好!”, “新年快乐!” “恭喜、恭喜、恭喜发财 (fācái)!”。小孩子很喜欢春节, 因为爷爷 (yéye)、奶奶 (nǎinai)、姥爷 (lǎoyé)、姥姥 (lǎolao)、爸爸、妈妈都给 (gěi) 他们红包 (hóngbāo), 红包里 (lǐ) 放了压岁钱 (yāsuiqián)。