

A Study of Mobile-Assisted Oral Communication in Mandarin Chinese as a Second Language

Yu-Ju Lan^a, Yen-Ting Lin^a, Chia-Ling Kao^a, Kuo-En Chang^b, Yao-Ting Sung^c, Tzu-Chien Liu^c

^aDepartment of Applied Chinese Language and Culture, National Taiwan Normal University, Taipei, Taiwan

^bGraduate Institute of Information and Computer Education, National Taiwan Normal University, Taipei, Taiwan

^cDepartment of Educational Psychology and Counseling, National Taiwan Normal University, Taipei, Taiwan

yujulan@gmail.com

Abstract: The aim of this study was to explore the effectiveness of using a mobile device to construct a ubiquitous language learning environment on the oral output of overseas Chinese students learning Mandarin Chinese. Many overseas Chinese students have come to Taiwan to learn Chinese. However, they learn Chinese simply in the classroom, just as they do in their hometowns. That is, these learners failed to apply the Chinese knowledge gained in the classes to the real world. In this study, the learners had oral interaction in the real-world contexts with the assistance of mobile devices. The participants were 34 overseas Chinese students, aged 17 to 23. 18 of them carried the mobile devices, searched and visited shops on streets. During the activity, they could receive learning materials, including the texts, images, and audio files online anytime. The other 16 learners studied in a situated classroom with learning materials on the paper. The classroom was set as a street. Some students acted as the shopkeepers, while others as the customers. The results showed that there is a statistically significant difference in oral communication performances between the two groups. The students using the mobile devices in the real-world contexts use more language learning strategies, and they had more opportunities to receive the input and produce the output in the target language.

Keywords: MALL, CSL, oral communication

Introduction

Language learning should take place in the real-life context, as claimed by Krashen (1981). To enhance language ability, learners should interact with native speakers as more as they can (Swain, 1993; Ellis, 2005). In the class, students only interact with their teachers and classmates. Some of the second language learners go to the countries to use the target language, but most of the students still learn the language in the classroom, not in their daily life. Outside the classrooms, most foreign students tend to speak their common first language rather than the target language with other students from the same country (Lan, 2014). Language learners need support to use what they learning. In terms of the development of mobile technology, mobile devices have been very common nowadays (Kelly, & Minges, 2012). And it is worth to be used as a personal learning tool (Chen, Hsieh, & Kinshuk, 2008; Johnson, Becker, Cummins, Estrada, Freeman, & Ludgate, 2013). In the field of technology-enhanced language learning (TELL), the research on mobile-assisted language learning (MALL) has started to be conducted over 20 years ago (Burston, 2013). However, the MALL research on Mandarin is rare. Most of these researches focus on reading and character writing (Chang, Lan, Chang, & Sung, February 2010; Wong, Boticki, Sun, & Looi, 2011a; Tam, & Huang, 2012). A study of Mandarin oral ability can rarely be seen. This study applied the web-based

learning system during the engagement of outdoor language learning activities, and compared the students' oral performance with the students who learned Mandarin by role playing in classroom.

Research Design

Participants

34 high school students (19.76 years old in average) who joined the short-term (i.e., 6-week) Chinese learning courses from May to June in 2014 at National Taiwan Normal University participated in the experiment. They came from Thai (n=28), Canada (n=3), the U.S.A. (n=2), and Brazil (n=1). 18 students were randomly assigned to the experimental group and learned with the web-based collaborative learning system. The experimental group was divided into 6 sub-groups, 3 members in each sub-group. The other 16 students were assigned to the control group and learned Mandarin by role playing in classroom.

Web-based learning system

In the study, a web-based collaborative learning system, *Mobile Language Learning*, developed by the 1st author, was adopted to conduct the outdoor learning activities for the experimental group. *Mobile Language Learning* could display the texts, allowing the students to make their own multimedia notes, and share information in the sub-group. As can be seen in Figure 1, users could see the texts input by the teacher and make notes under the texts.

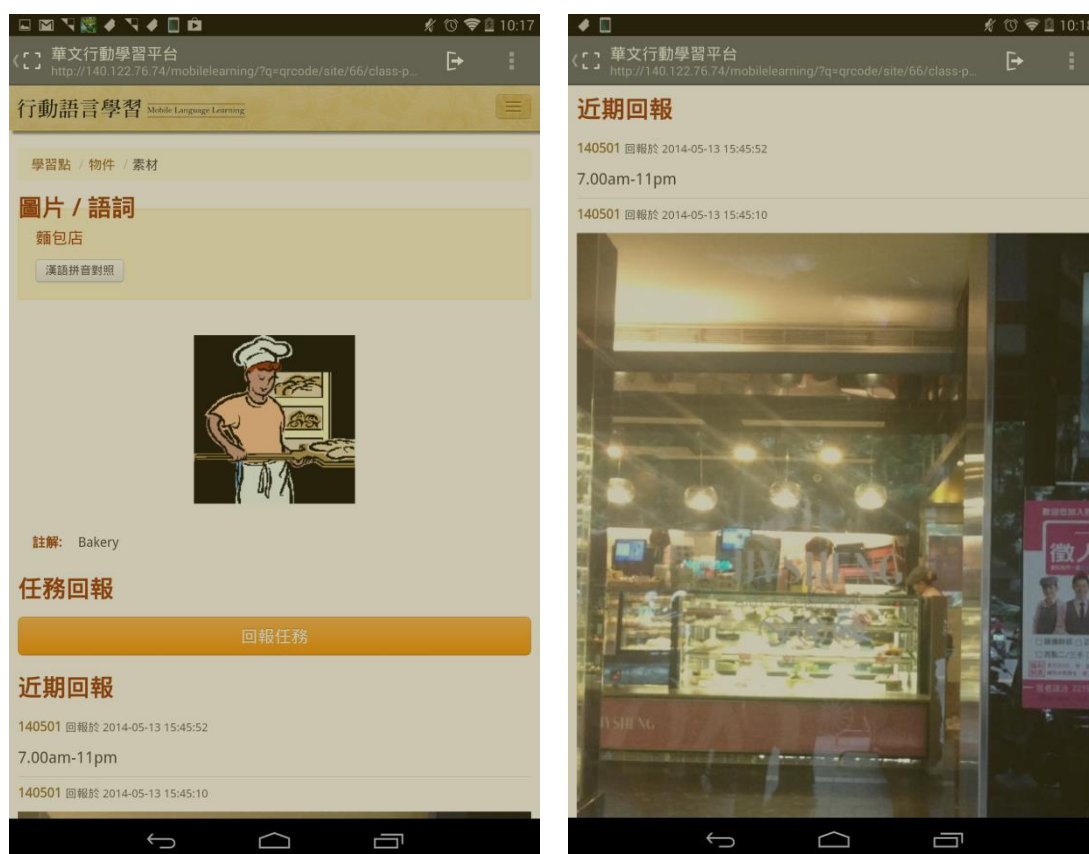


Figure 1. A display of the web-based collaborative learning system

Mandarin language oral performance test

To determine the communication abilities of the foreign students of Chinese, they took language oral performance online test as the pre- and post-test. The test included 21 items of Mandarin dialogue in the audio format. Students had to choose the correct answers to the questions. All of the items were first confirmed by two content experts, and then uploaded to an online test system

developed by the 1st author.

Oral performance record

The participants' performance was recorded during the learning activity, and has been coded.

Experimental Results and Analysis

In the study, a two-way multivariate analysis of variance (two-way MANOVA) was employed to analyze the interaction between groups and gain scores of Mandarin language oral performance test. Table 1 shows that the interaction did not reach statistical significance ($F=.04, p=.835 >.05$). Concerning the main effect, there are significant differences within the group ($F=143.53, p=.000 <.001$), but no significant differences between the groups ($F=.42, p=.523 >.05$). On the other hand, Table 2 shows the differences of the actual oral performance between two groups, the results from the coding of videotapes.

Table 1. The two-way MANOVA of interaction between groups and scores of oral performance test

	Sum of Squares	df	Mean Square	F	Sig.
Groups	5.06	1	5.06	.42	.523
Oral performance test	1677.69	1	1677.69	143.53	.000***
Groups * Test	.51	1	.51	.04	.835

Notes: * $p < .05$ ** $p < .01$ *** $p < .001$

Table 2. The results from the coding of videotapes

	Experimental group	Control group
Questions match the situation	96.77%	53.13%
Unexpected dialogue	For details (76.00%) For politeness (20.00%) For error corrections (4.0%)	For error corrections (90.91%) For details (9.09%)
Compensation strategies	Gesture (60.00%) Code-switching (20.00%) Circumlocution (6.67%) Asking for help (6.67%) Approximating (6.67%)	Mother tongue (54.17%) Gesture (45.83%)
Code-switching	Asking in English (16.67%) Peer communications in the mother language (45.83%) "OK" (37.50%)	Asking in the mother language (52.94%) Peer communication in the mother language (5.88%) Answering in the mother language (41.18%)

Conclusions and future works

To help the CSL students use the target language more in the real life, this study used *Mobile Language Learning*, a web-based collaborative learning system to support 18 foreign students in the experimental group during the outdoor learning activities. The other 16 students learned Mandarin by doing role-playing exercises and scenarios in the classroom as the control group.

The results of the Mandarin language oral performance test scores reveal no significant difference between the two groups. However, many differences in actual oral performance were found by coding the videotapes. The students in the experimental group while joining the outdoor learning activities used more language learning strategies and received the input and produced the output in the target language more than the students in the control group.

In the future, it is worth investigating other factors, such as cognitive load and oral communication strategies that might affect students' oral performance while participating in outdoor language learning activities.

Acknowledgements

The authors would like to thank the Ministry of Science and Technology, Taiwan, R.O.C., for financially supporting this research under Grant Nos. NSC 101-2511-S-003-031-MY3, MOST 103-2628-S-003-002-MY3, and MOST 104-2911-I-003-301. They are also thankful that this research is partially supported by the Aim for the Top University Project and Center of Learning Technology for Chinese of National Taiwan Normal University (NTNU), sponsored by the Ministry of Education, Taiwan, R.O.C., the International Research-Intensive Center of Excellence Program of NTNU and the Ministry of Science and Technology, Taiwan, R.O.C. under Grant No. NSC 103-2911-I-003-301.

References

- Burston, J. (2013). Mobile-assisted language learning: A selected annotated bibliography of implementation studies 1994–2012. *Language Learning & Technology, 17*(3), 157–224.
- Chang, K. E., Lan, Y. J., Chang, C. M., & Sung, Y. T. (February 2010). A mobile-device-supported strategy learning for Chinese reading comprehension. *Innovations in Education and Teaching International, 47*(1), 69-84.
- Chen, N. S., Hsieh, S. W., & Kinshuk. (2008). Effects of short-term memory and content representation type on mobile language learning. *Language Learning & Technology, 12*(3), 93-113.
- Ellis, R. (2005). Principles of instructed second language acquisition [electronic version]. *System, 33*(2), 209–224.
- Johnson, L., Adams Becker, S., Cummins, M., Estrada, V., Freeman, A., & Ludgate, H. (2013). *NMC Horizon Report: 2013 Higher Education Edition*. Austin, Texas: The New Media Consortium.
- Kelly, T., & Minges, M. (2012). *IC4D 2012: Maximizing Mobile*.
- Krashen, S. D. (1981). *Second Language Acquisition and Second Language Learning*. Oxford: Pergamon.
- Lan, Y. J. (2014). Does second life improve mandarin learning by overseas Chinese students? *Language Learning & Technology, 18*(2), 36-56.
- Swain, M. (1993). The output hypothesis: Just speaking and writing aren't enough. *Canadian Modern Language Review, 50*(1), 158-164.
- Tam, V., & Huang, C. (2012). An Intelligent E-Learning Software for Learning to Write Correct Chinese Characters on Mobile Devices. *Interactive Technology and Smart Education, 9*(4), 2012 pp. 191-203
- Wong, L-H., Looi, C-K., Boticki, I., & Sun, J. (2011a). Improving the scaffolds of a mobile-assisted Chinese character forming game via a design-based research cycle. In T. Hirashima et al. (Eds.) *Proceedings of the 19th International Conference on Computers in Education*. Chiang Mai, Thailand: Asia-Pacific Society for Computers in Education.