

EMPIRICAL STUDY ON THE USE OF PLECO FOR IMPROVING CHINESE CHARACTER INSTRUCTION: THE PERCEPTION OF NON-NATIVE LEARNERS OF CHINESE

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Abstract

This study was an attempt to find out whether engaging in the use of Pleco affects Chinese character acquisition of non-native Chinese learners or not. The study was conducted on the beginning level students at UiTM (Terengganu) in Malaysia. To accomplish the purpose of the study, the researchers chose a sample of 86 subjects, who were taking Chinese beginner and intermediate courses. Then, the subjects participated in the classroom activity using Pleco as a mean to Chinese character learning. The subjects were asked to fill up online questionnaire on their gain during this activity. The result indicated that there was a positive perception among the learners. It was concluded that the subjects who participated in Pleco classroom activity for Chinese characters learning, perceived that this activity can assist them to learn Chinese character better.

Keywords: Chinese characters; Pleco; Chinese character handwriting recognition application; mobile learning

1.0 INTRODUCTION

Learning Chinese character has been considered a difficult task for non-native learners of Chinese. The traditional way of learning Chinese characters is by mere copying and remembering the Chinese characters. Innovative way for Chinese character learning can be introduced for the betterment of the Chinese character instruction. Pleco is a mobile Chinese learning companion as well as an integrated dictionary with Chinese character handwriting recognition feature. Learners may write on the space provided and the application will show the learners if they have written correctly by providing suggested Chinese characters. Hence this application can be introduced for Chinese character instruction.

2.0 LITERATURE REVIEW

The development of Chinese characters teaching and learning focuses on incorporating the instructional techniques and practice on non-native novices' Chinese character learning performance and cognitive load (Chen, Wang, Chen, & Chen, 2014). The choice of any educational technology in the teaching Chinese characters has to look into the practicality of the tools in enhancing the performance in the learning process.

There are many other mobile apps, computer software or electronic devices that can be engaged in improving Chinese character instruction, e.g., Anki, Skritter, and etc. Surely Pleco is not the only device available for the same purpose. However Pleco is a brilliant app for Android and iOS, and it has a lot of user-friendly features that may assist the learners to learn Chinese characters better besides being an excellent dictionary. Pleco is an application that can be used for Chinese handwriting recognition, which can be downloaded for android and for other download options in mobile learning (Pleco Chinese dictionary iPhone app now handling real-time image translations, 2010). It is suitable for Chinese character learning. Non-native learners may write on the space provided to check if the characters written by them are recognizable by the application or not. It is assistive for self-checking and learning.

It is easier to learn Chinese with applications (Hio, 2014). This is because with the limited classroom interaction time, the instructors are now able to render ample of individual attention to each of the students in correcting their Chinese character writing. Chinese character recognition technology can be handy (Chen, Hu, Yang, Yu, & Chen, 2014). With the use of Pleco, it may assist the students to carry out the task of self-corrective actions and learning. Repetition is vital for Chinese character learning (De la Rouviere, 2013). Students may use Pleco repetitively for self-practice and drilling which instructors may not be able to offer. Some of the advantages of Pleco are summarized in figure 1 below:

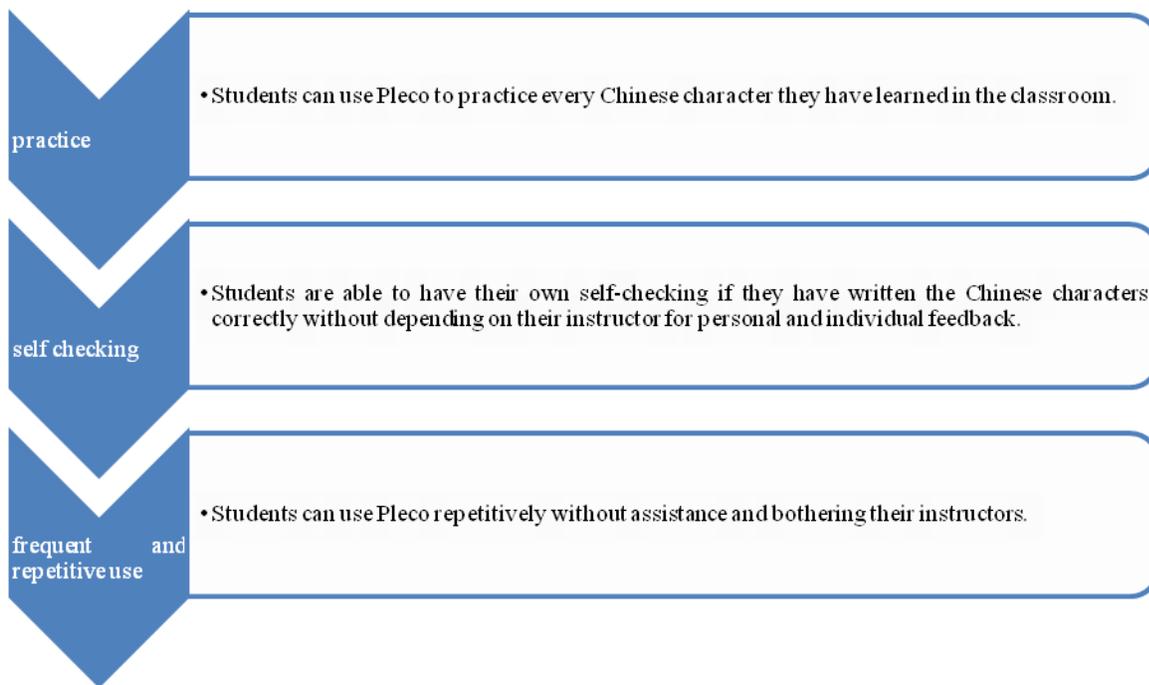


Figure 1 Advantages of Pleco

In sum, learning and practicing Chinese characters through the use of Pleco is an effective and interesting way that can be applied in any TCFL (Teaching Chinese as a foreign language) classroom and make the lessons more fascinating for the language learners. In order to validate the effectiveness of the use of Pleco in teaching Chinese characters, the following research question seem pertinent to be addressed: "Does the use of Pleco have any significant effect on Chinese characters learning among these non-native learners?"

3.0 METHOD

3.1 Participants

The participants of the study were 86 diploma students. They were all non-native speakers of Chinese and were taking preliminary and intermediate Chinese courses at UiTM Terengganu in Malaysia. The samples involved are shown in table 1 below.

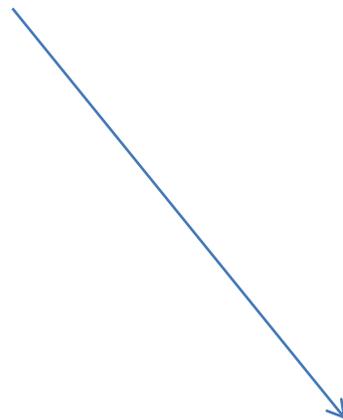
Table 1 Number of samples

Class	Number of students
1 Preliminary	23
2 Preliminary	21
Subtotal	44
3 Intermediate	26
4 Intermediate	16
Subtotal	42
Total	86

3.2 Instrumentation

Two instruments were used in this study. The first instrument was Pleco. This is shown in figure 2 below.

Students write the Chinese character on the space provided in the application, e.g. hua2 (Chinese). Some suggested Chinese characters will appear at the bottom of the bar.



Students may select the Chinese character that they think is the Chinese character that they want. They can then learn the meaning and the pronunciation of the particular Chinese characters.

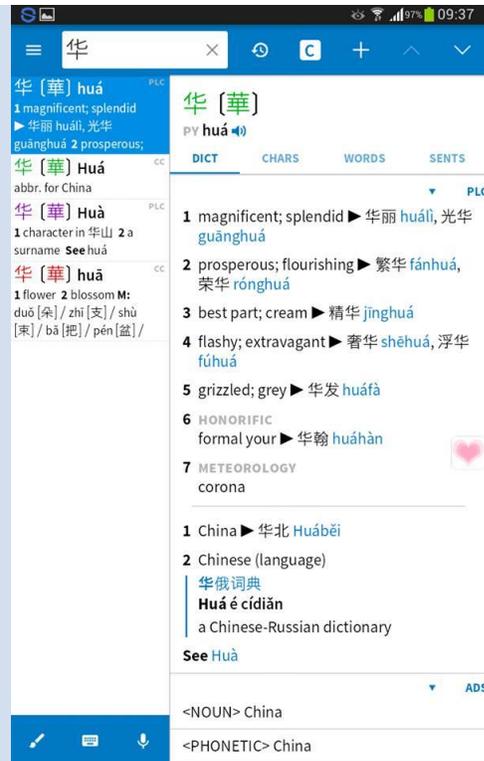


Figure 2 Interface of Pleco

There are 37 characters that the learners have tried out using Pleco. These include all the Chinese characters that the students need to learn for their introductory Chinese course. The students are to use this app in learning writing for one semester. The face-to-face guidance by the instructors is given during the Chinese character teaching time. It is an ongoing process until the students are able to use this tool independently. Technical support is given upon the need of individual learners. The second instrument was an online questionnaire, and administered to gather the perceptions of the students after participating in the Pleco classroom activity. This is a self-created questionnaire. Some of the items are adapted from Wang & Leland (2011). All the items in this questionnaire are to gain students' perceptions on the use of Pleco to support their Chinese character learning.

3.3 Procedure

Students participated in the Pleco Chinese character activity. After the activity, they were asked to participate in answering the online questionnaire. The descriptions of the procedure are shown in figure 3 below.

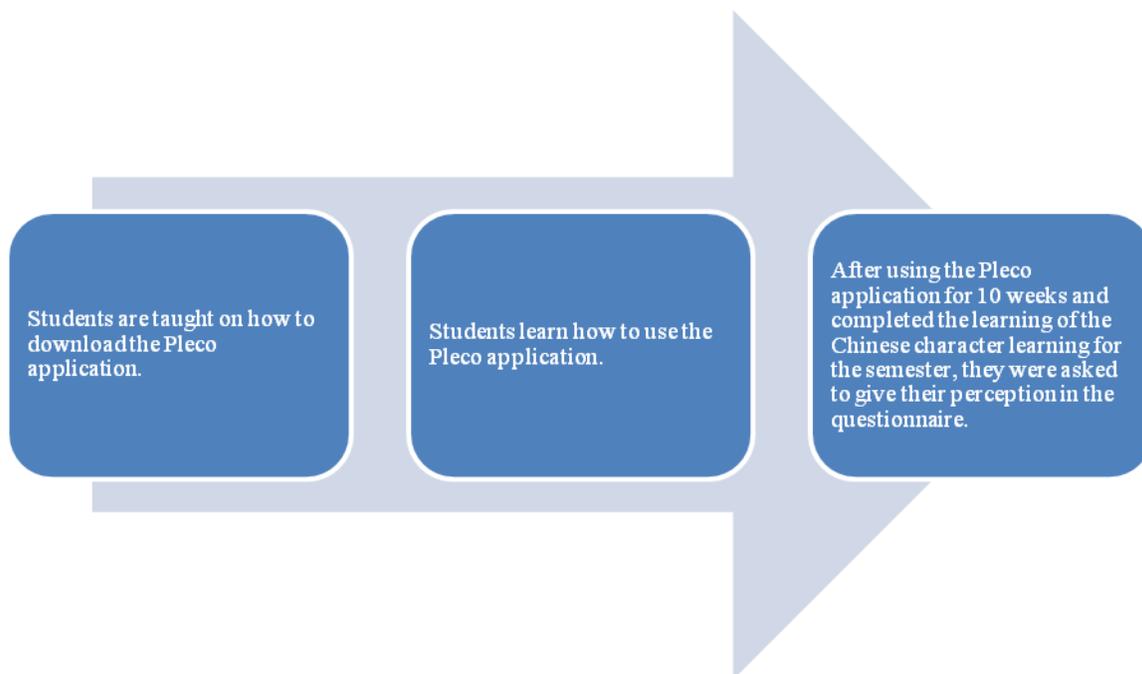


Figure 3 Procedure of the study

4.0 RESULTS

The students' perceptions on the use of Pleco Chinese character application activity to support their Chinese learning were positive (overall mean = 4.601). It showed that students agreed that this activity can assist them in their Chinese character learning (refer table 2 below).

Table 2 Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Pleco is suitable for Chinese learning.	86	3	5	4.49	.611
Pleco can motivate me to learn Chinese characters more enthusiastically.	86	3	5	4.49	.714
I am able to use Pleco for my self-Chinese learning.	86	3	5	4.62	.734
I feel comfortable to learn Chinese characters through Pleco without depending on my instructor.	86	3	5	4.85	.784
Pleco can help me enjoy Chinese character learning.	86	3	5	4.53	.754

Pleco can help me to check how much I have mastered the Chinese characters that I have learned in this course.	86	3	5	4.91	.669
Instructor should use Pleco in the Chinese classroom.	86	3	5	4.36	.697
I am interested to use Pleco very frequently and repetitively for self-revision and learning.	86	3	5	4.46	.689
Using Pleco allow me to learn Chinese character better.	86	3	5	4.47	.629
Pleco is suitable for Chinese character practice and drillings.	86	4	5	4.83	.510
mean	86	3.50	5.00	4.601	.57443
Valid N (listwise)	86				

The samples were consisted of students taking two levels of Chinese courses. Table 3 and 4 below showed the perceptions of students of the two levels. It showed that students of level 1 (mean = 4.650) were having a slightly more positive perception than students of level 2 (mean = 4.552). By running T-test, the difference in perception is significant ($t = -.519$, $df = 74$, $sig. value = .0298 < .05$). It means that the beginning students are more positive than the intermediate students on the use of Pleco for Chinese character learning in this study.

Table 3 Group Statistics

	Course level	N	Mean	Std. Deviation	Std. Error Mean
mean	1	44	4.650	.56151	.13619
	2	42	4.552	.62006	.17899

Table 4: T-test – Comparing two groups of students of two levels of Chinese learning

t	df	Sig. (2-tailed)	Mean Difference
-.519	74	.0298	-.12598

5.0 DISCUSSION

The main concern of this study was to test the assumption whether Pleco can bring about any positive perceptions among non-native learners of Chinese on Chinese characters learning. The current investigation has provided support for the value of Pleco as an effective teaching tool, and the use of Pleco as evidenced by the positive perceptions found among the students. The findings showed that the learners are very positive on the use of Pleco Chinese character application activity to support their Chinese learning were positive (overall mean = 4.601). It showed that students agreed that this activity can assist them in their Chinese character learning. Pleco is of such a great help to the students on the aspects of motivation to learn Chinese characters (mean = 4.49), self-learning (mean = 4.62), independent learning (mean = 4.85), and self-evaluation (mean = 4.91). With all these strengths, Pleco is highly recommended for the learning of Chinese characters.

The finding of significant difference between the two sample groups showed that the beginning students are more positive than the intermediate students on the use of Pleco for Chinese character learning in this study. It is due to the fact that the beginning learners need to have a tool such as Pleco to confirm that their writing of Chinese characters is correct. Hence there is a significant difference found for this study. In order to ensure the effectiveness on the use of Pleco for more advanced students, this tool can be utilized as supplementary tool for them to learn especially the more difficult Chinese characters as well as characters with more complicated strokes. The research finding also agreed to Gao, Jin, He, & Zhou, (2011), Tsai, Kuo, Horng, & Chen (2012), Wang, Ding, & Liu, (2011) and Shao, Wang, & Xiao, (2013) that educational tool is supportive for Chinese character handwriting instruction. Pleco and any other Chinese recognition systems or applications should be engaged in Chinese classroom as one of the Chinese character learning strategies. More offline Chinese character recognition applications such as Pleco are being approved of by the students as they can use them easily without going online (Wang, Fu, Ding, & Liu, 2014).

Additionally, Leland, & Wang, (2011) has found that the beginning students' perceptions of effective activities for Chinese character recognition were more positive. In this study, the difference in the perceptions between the beginning level and intermediate level was significant. It is concurrent with the findings of Leland, & Wang, (2011). Instructors should engage the use of Pleco to support the learning of Chinese beginning learners, as they need to have more drillings and practices for Chinese character learning. It is also important to be neutral in conducting a research and to acknowledge the shortcoming of a device, Pleco in this case, for any purpose, if any. One drawback to using tools like Pleco is that they can make the learners lazy and not bother in learning search by radical, for instance. Hence the instructors have to emphasize that this tool is to assist students to improve their Chinese character learning but not to hinder them in making advanced learning in the future. Learners in the process of using Pleco can have the opportunity to practice and drill their Chinese characters. Pleco thus have the advantage of creating active participatory learning as well in which students are able to participate in active learning of their Chinese characters.

6.0 CONCLUSION

The finding of this study shows that Pleco can be a valuable tool in Chinese language classroom for students in Chinese character learning and hence can be used to facilitate the process of Chinese character learning. Through the use of Pleco and other Chinese character recognition system whether in online and offline form (Wang, Ding, & Liu, 2011; Liu, Yin, Wang, & Wang, 2012; 2013), hand phone-based or computer-based, or cloud computing manner (Gao, Jin, He, & Zhou 2011), the learners are given opportunities to practice their Chinese characters without direct teacher assistance and being independent learning. In conclusion, Pleco should be engaged as a pedagogical tool in enforcing the effects of the teaching of Chinese characters.

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