

# EMPIRICAL STUDY ON THE USE OF PUZZLE GAMES FOR IMPROVING CHINESE CHARACTER ACQUISITION OF NON-NATIVE LEARNERS OF CHINESE LANGUAGE

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## Abstract

This study was to find out the effects of students' engagement in Chinese character puzzle game on language acquisition. The study was conducted on students of the first level of Chinese beginner course at UiTM (Terengganu) in Malaysia. To accomplish the purpose of the study, the researchers chose a sample of 30 subjects, who were taking Chinese beginner course and at the same time participated in a Chinese character puzzle game competition. The subjects were asked to fill up online questionnaire on their benefits gained after the competition. The result indicated positive perceptions among the learners. It was concluded that the subjects who participated in puzzle game, viewed this activity can act as a tool to assist them to recognize more Chinese characters.

**Keywords:** Chinese characters, puzzle, game

## 1.0 INTRODUCTION

Learning Chinese character has been considered a difficult task for non-native learners of Chinese. The techno savvy learners expect instant gratification from educators. The traditional way of learning Chinese characters, by mere copying and remembering the Chinese characters, has to look for other alternative to satisfy learners' needs. Many language instructors agree that playing games is an innovative way to learn Chinese characters that creates engaging and motivating environment for the learners. Clever instructors often uses non-traditional tool, such as puzzle game, to encourage learners to have fun while learning. Learners often think they are merely playing; they are unaware that they are simultaneously learning.

Games are associated with a feeling of happiness. For this reason, most learners appreciate games and enjoy participating in them. Puzzle game hence can be used creatively in the Chinese learning process. Games provide language drills, it engages learners in healthy activities that challenges mind and thus promotes active learning and social skills. To assess the effectiveness of learning Chinese characters through games in the classroom, it is important to find out how the learners benefit from such experience.

Puzzle game is one of many instructional games that reinforce word-level onto a grid and persuades the class to make suggestions for the puzzle clues. This game is ideal to review general vocabulary, without

causing any boredom to the learners. Learners often find it attention-grabbing to review the Chinese characters that have learned. In most of the puzzles, the words may be hidden in any direction: horizontally, vertically, diagonally, and forwards and backwards. Learners have to comprehend the meanings of the Chinese characters before they are able to solve the puzzle.

## **2.0 LITERATURE REVIEW**

Harmer (2001) explains that games give learners a feeling of competition to participate in the process of learning vocabulary and motivates them to repeat them with enthusiasm. He also maintains that games which depend on an information gap encourage learners to negotiate with a partner to solve a puzzle, draw a picture, and find similarities and differences between the pictures. Therefore it is good to use puzzle game to motivate the non-native learners in the learning of Chinese characters enthusiastically.

Thornbury (2002) states that lack of vocabulary knowledge impedes language comprehension and production. Students have to obtain sufficient knowledge of the Chinese characters before they can actually participate in puzzle game and it can thus be used as an interesting tool to measure the knowledge of the Chinese characters the students had learned. Moreover, it is crucial to see whether games can be effective in helping learners feel more comfortable and interested in the subject of vocabulary (Huyen & Nga, 2003). This encourages the instructors to use puzzle games to help learners to enjoy learning Chinese characters in a fun way.

The non-native learners of Chinese find that it is difficult to remember Chinese characters that they have learned. The verbal sections of the high-stake standardized tests used in most states to gauge student performance are basically tests of vocabulary and reading comprehension (Johnson & Johnson, 2004). In general, learners are required to sit for formal test to gauge their knowledge of Chinese characters. Hence, interesting activity such as puzzle game should be fully utilized to allow learners to gauge their mastery of Chinese characters.

In sum, learning and practicing Chinese characters through puzzle 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 explore the effectiveness of the use of puzzles in teaching Chinese characters, the following pertinent research question is addressed: "Does the use of puzzle game have any significant effect on Chinese characters learning among these non-native learners?"

## **3.0 METHOD**

### **3.1 Participants**

30 students were taken as the participants of the study. They were all non-native speakers of Chinese and were taking Chinese courses at UiTM in Malaysia.

### **3.2 Instrumentation**

Two instruments were used in this study. The first instrument was Chinese character puzzle where words were chosen from what the students had learned in their course. Samples of puzzle used were shown in the Appendix.

The second instrument was an online questionnaire which can be accessed at [https://docs.google.com/spreadsheets/viewform?usp=drive\\_web&formkey=dDhZZ1gtdW92UzN5andLTHFVNWFcd0E6MA#gid=0](https://docs.google.com/spreadsheets/viewform?usp=drive_web&formkey=dDhZZ1gtdW92UzN5andLTHFVNWFcd0E6MA#gid=0), and administered to gather the perceptions of the students after participating in the puzzle games.

**Puzzle game**

Purpose: This questionnaire is to get your view on the use of puzzle game for Chinese character learning. Thank you.  
\*Required

### Information

Your Mandarin group: \*

Gender \*

Male

Female

Chinese course you are taking: \*

BMD101

BMD151

### Questionnaire

Your perceptions of this module. \*

	strongly disagree	disagree	neutral	agree	strongly agree
1) I am interested to solve a Chinese character puzzle	<input type="radio"/>				
2) Using Chinese character puzzle allow me to learn Chinese character better.	<input type="radio"/>				
3) The puzzle game is suitable	<input type="radio"/>				

Figure 1: Online questionnaire

### 3.3 Procedure

Students participated in a Chinese character puzzle game activity. After the activity, they were asked to participate in answering the online questionnaire at [https://docs.google.com/spreadsheet/viewform?usp=drive\\_web&formkey=dDhZZ1gtdW92UzN5andLTHFVNWFCd0E6MA#gid=0](https://docs.google.com/spreadsheet/viewform?usp=drive_web&formkey=dDhZZ1gtdW92UzN5andLTHFVNWFCd0E6MA#gid=0).

### 4.0 Results

The students' perceptions on the use of Chinese character puzzle game activity to support their Chinese learning were positive (overall mean = 4.4200). It shows that students agreed that this activity can assist them in their Chinese character learning.

**Table 1 The Students' Perception**

	N	Minimum	Maximum	Mean	Std. Deviation
The choice of Chinese characters is suitable for my level of Chinese learning.	30	3	5	4.40	.621
Puzzle game can motivate me to learn Chinese characters more enthusiastically.	30	3	5	4.40	.724
I am able to solve the puzzle.	30	3	5	4.40	.724
I feel comfortable to learn Chinese characters through puzzle.	30	3	5	4.40	.724
Puzzle games can help me enjoy Chinese character learning.	30	3	5	4.40	.724
Puzzle game can measure how much I have mastered the Chinese characters that I have learned in this course.	30	3	5	4.47	.629
Instructor should use puzzle in the Chinese classroom.	30	3	5	4.27	.691
I am interested to solve a Chinese character puzzle	30	3	5	4.47	.629
Using Chinese character puzzle allow me to learn Chinese character better.	30	3	5	4.47	.629
The puzzle game is suitable for Chinese character practice.	30	4	5	4.53	.507
Mean	30	3.50	5.00	4.4200	.57440
Valid N (list wise)	30				

The samples were taught by two different lecturers. Table below shows the perceptions of students from the two lecturers. It shows that students of instructor 2 (mean = 4.5083) were having more positive perception than students of instructor 1 (mean = 4.3824). However, by running T-test, the difference in perception is not significant ( $t=-.570$ ,  $df=27$ ,  $sig. value=.573 > .05$ ). It means that we cannot claim that the instructors may cause any interference of the effect of the use of Chinese character puzzle games for this study.

**Table 2 Perception of student from two lecturer**

Group Statistics					
	lecturer	N	Mean	Std. Deviation	Std. Error Mean
mean	1.00	10	4.3824	.56151	.13619
	2.00	20	4.5083	.62006	.17899

**Table 3 T-test – Comparing two groups of students from two instructors**

t	Df	Sig. (2-tailed)	Mean Difference
-.570	27	.573	-.12598

## 5.0 DISCUSSION

The main concern of this study was to test the assumption whether puzzle games can bring about any positive perceptions of non-native learners of Chinese on Chinese characters. The current investigation has provided support for the value of puzzle as effective teaching tools, and the use of puzzle game has further proven through the positive perceptions shown among the students.

The research finding agreed to Azar (2012), Seda (2012) and Widyasari (2010). Puzzle game should be incorporated in the classroom to increase learner- learning experiences. Puzzles can improve the brain (Raymonko, 2010). Hence, puzzles intrigue curiosity and interest, it motivates learners to participate in active learning resulting in out-of-the-box thinking and risk taking.

Puzzle game also encourages a change of atmosphere in the class and add excitement to the learning environment. Learners have the opportunity using the given Chinese characters actively during the game. In short, puzzle games have the advantages of creating active participatory learning as well.

## 6.0 CONCLUSION

The finding of this study shows that puzzle game is a valuable technique to be used in the classroom for Chinese character learning and hence can be further used to facilitate the process of language learning. The exciting nature of playing puzzle games creates stealth learning opportunities and encourages skill of decision making.

Puzzle game is currently considered as a suitable teaching tool by educators. Through games, learners are given opportunities to practice their Chinese characters without any interference. In conclusion, puzzle game should be adopted as pedagogical game in the teaching of Chinese characters.

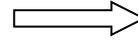
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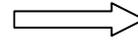
1. A female student.
3. greeting a few people.
5. not available.
7. This is my sister's husband.
9. male companion.
11. buddy



2. 5 male teachers & 5 female teachers.
4. your students are here.
6. unmarried woman
8. home sweet home.
10. wear white shirt with school logo and trousers.
12. an educator



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ANSWER

