

MAIN ORGANISER:



OFFICIAL COLLABORATORS:



الجامعة الإسلامية العالمية ماليزيا
INTERNATIONAL ISLAMIC UNIVERSITY MALAYSIA
بنيان المعرفة والقيم
Garden of Knowledge and Virtue

IKULLIYAH
EDUCATION



THE INTERNATIONAL COMPETITION ON SUSTAINABLE EDUCATION



20TH AUGUST 2025

TRANSFORMING EDUCATION, DRIVING INNOVATION AND
ADVANCING LIFELONG LEARNING FOR EMPOWERED WORLD

PICTO-PAIR DUEL: CHINESE CHARACTER BATTLE

Ting Hie Ling*

Academy of Language Studies, Universiti Teknologi MARA (UiTM), Cawangan Sarawak,
Kampus Mukah, Sarawak, Malaysia*

tinghieling@uitm.edu.my*

ABSTRACT

Mandarin is a popular third language in universities, but learners often struggle due to time constraints and the complexity of Chinese characters. Many students underperform, and some lose motivation. While various learning apps exist, not all meet learners' needs. To address this, Chinese character Battle (CCB) was developed to enhance mastery and motivation in learning Chinese characters. This study conducted at UiTM Sarawak, Mukah campus, involved Foundation Mandarin (Level II) students. An e-survey was distributed via WhatsApp to assess learners' perceptions of CCB's effectiveness after a trial period. Results showed that most learners found CCB helpful in improving their Chinese character recognition, reading, and comprehension. Pre and post test analyses confirmed progress in these areas. Given its positive impact, CCB is recommended as a teaching and learning tool for Chinese characters. Its engaging approach helps overcome traditional challenges, making Mandarin learning more accessible and motivating for students.

Keywords: *Learning Chinese character, Card game, Students' perception, Learning performance, Picto-pair duel*

INTRODUCTION

Learning a third language is a necessity in today's world. Therefore, various third languages have been offered at universities with the aim of producing competitive graduates. Mandarin is one of the third languages offered and has received a good response from the students. According to the Student Information Management System (SIMS) of Universiti Teknologi MARA, the number of student registrations in the Mandarin Language course increased in 2025 compared to the number of student registrations in 2024. Students who enroll in the Mandarin course are required to master Mandarin in terms of listening, speaking, reading, and writing (including writing Chinese characters). However, the

students' performance in the Mandarin course is unsatisfactory (Ch'ng, Ting, Chuah, 2018).

The lack of time exposure in teaching Chinese characters has caused students to be less proficient in writing Chinese characters. Furthermore, the Chinese writing system, which is vastly different from the alphabetical writing systems (such as English, Malay, and Spanish), also adds to the difficulty level in mastering Chinese character writing among students. According to a study conducted by Ch'ng, Ting, and Chuah (2018), non-native Chinese students recorded a very high frequency of errors in writing Chinese characters. A study by Jen and Xu (2000) reported that 91% of students decided not to continue learning Mandarin at a higher level due to the difficulty of learning Chinese characters. Such a situation needs to be addressed before the problem continues to persist.

The challenge of the Industrial Revolution 4.0, which emphasises the use of technology in teaching and learning (T&L), has driven the development and use of various applications as teaching and learning aids. Various Chinese character applications have been developed and can be obtained through the Google Play Store or Apple App Store, for example, Chinese Writer, Art of Chinese characters, CCcard-Chinese character card, zzHanzi Learn & Write Chinese, and so on. Although the applications can be used anywhere and at any time, their usage must meet certain conditions. For example, users need to have gadgets such as laptops, tablets, or smartphones when using the application. Users also need to have a stable internet connection to facilitate the use of the application. However, these requirements are difficult to meet for every user, especially those with heavy burdens or those located in remote areas where internet connectivity is hard to achieve. Therefore, board games and card games that do not require gadgets or internet connectivity have been widely produced as teaching aids. Picto-pair duel: Chinese Character Battle (CCB) is a card game that has been developed as an aid in learning Chinese characters. Various information related to Chinese characters has been provided to enhance students' knowledge of Chinese characters.

According to Shen (2005) and Allen (2008), recognising Chinese characters is the first step in learning Chinese characters. Therefore, CCB prioritises the step of "recognising Chinese characters" with the creation of pictographic Chinese characters. A study on students' overall perception of the use of CCB and the effectiveness of CCB in recognising Chinese characters was conducted by Ting and Lam (2021). This study is a review of the effectiveness of CCB in activities related to recognising and reading Chinese characters, as well as examining students' perceptions of the effectiveness of CCB in learning Chinese characters.

METHODS

This study was conducted at Universiti Teknologi MARA, Sarawak Branch, Mukah Campus. A total of 125 students enrolled in the Foundation Mandarin course (Level II) were selected as subjects for this study. The age of the subjects is in the range of 18-22 years. The number of subjects who are female (73.6%) is greater than males (26.4%). The use of instruments such as e-questionnaires has been generated through Google Forms for the purpose of data collection. The e-questionnaire consists of two sections, namely respondent information (Section A) and perception of the effectiveness of CCB

(Section B). Section B contains six questions regarding students' perceptions of the use of CCB in learning Chinese characters. The level of agreement of CCB users has been detailed through a five-point Likert scale, namely 1= Strongly Disagree, 2= Disagree, 3= Unsure, 4= Agree, and 5= Strongly Agree. The e-questionnaire has been shared in the WhatsApp group of students involved in this study. The Chinese character test question paper was prepared in the pre-test and post-test to evaluate the effectiveness of CCB as a tool for learning Chinese characters. A total of 55 Chinese characters were selected for this study. The Chinese characters selected in this study are the Chinese characters that were learned by the subjects during their enrollment in the Foundation Mandarin course (Level I), with the addition of several Chinese characters that exist in the syllabus of the Foundation Mandarin course (Level II). The data collected from the e-questionnaire forms and the Chinese character test results were analysed using the Statistical Package for Social Science (SPSS) software.

RESULTS AND DISCUSSION

Table 1 shows the frequency and percentage of students' perceptions regarding the effectiveness of using CCB in learning Chinese characters. The analysis of the collected data shows that majority of students agreed that the use of CCB benefits them in learning Chinese characters. Statement 1 (CCB meets my needs in learning Chinese characters) shows a high percentage of agreement with the total of 109 (44 agree, 65 strongly agree). The frequency of 29 agree and 71 strongly agree indicates that students agree with statement 2 (CCB helps me recognise Chinese characters easily). Additionally, the data also shows that majority of students agree that CCB enables them to understand the meaning of Chinese characters easily (25 agree, 74 strongly agree). 98 students (30 agree, 68 strongly agree) agree that CCB helps them become more confident when reading Chinese characters. The findings of this study also indicate that CCB enables students to recognise the origins of Chinese characters, with 28 agreeing and 71 strongly agreeing as recorded in Table 1.

Table 1.: Users' perception towards the usability of Chinese character card game

No	Statements	Strongly disagree (%)	Disagree (%)	Unsure (%)	Agree (%)	Strongly Agree (%)
1	CCB meets my needs in learning Chinese characters.	5 (4.0)	11 (8.8)	0 (0)	44 (35.2)	65 (52.0)
2	CCB helps me recognise Chinese characters easily.	3 (2.4)	12 (9.6)	10 (8.0)	29 (23.2)	71 (56.8)
3	CCB enables me to understand the meaning of Chinese characters easily.	2 (1.6)	14 (11.2)	10 (8.0)	25 (20.0)	74 (59.2)
4	CCB helps me become more confident when reading Chinese characters.	2 (1.6)	13 (10.4)	12 (9.6)	30 (24.0)	68 (54.4)
5	CCB enables me to recognise the origins of Chinese characters.	5 (4.0)	10 (8.0)	11 (8.8)	28 (22.4)	71 (56.8)

A pre-test and post-test on "Recognise and Read Chinese Characters" and "Understand the Meaning of Chinese Characters" were conducted in this study to test the effectiveness of using CCB in learning Chinese characters. Figure 1 shows the comparison of pre-test and post-test performance on "Recognise and Read Chinese Characters," while Figure 2 shows the comparison of pre-test and post-test performance on "Understand the Meaning of Chinese Characters" among students after using CCB during Chinese character learning. Based on Figure 1, it was found that the number of students who passed the pre-test on "Recognise and Read Chinese Characters" was 47 (37.6%), but the number of students who passed the post-test showed a significant increase to 107 (85.6%). Conversely, the number of student failures in the post-test decreased (18, 14.4%) compared to the pre-test (78, 62.4%). These findings prove that CCB is very effective in helping students recognise and read Chinese characters.

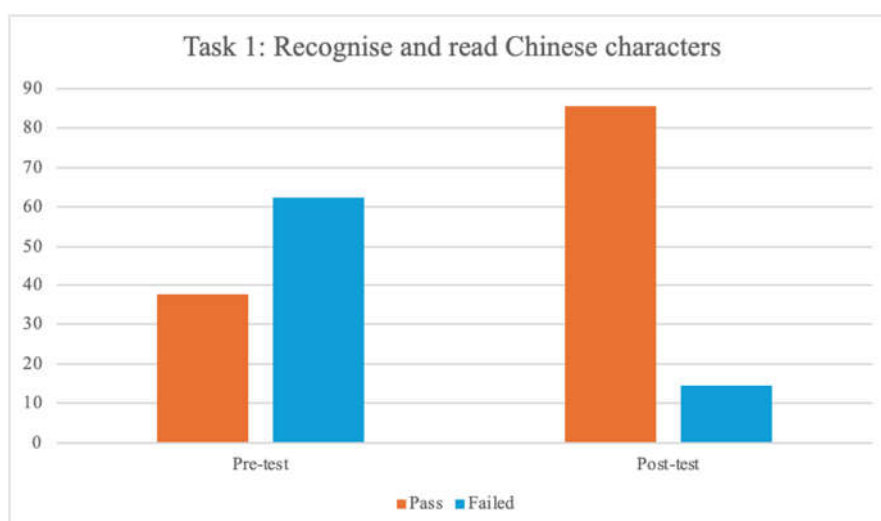


Figure 1.: Users' performance in recognising and read Chinese characters

Based on Figure 2, the number of students passing the post-test "Understanding the Meaning of Chinese Characters" increased from 89 (71.2%) to 104 (83.2%). The number of students failing the post-test decreased from 36 (28.8%) to 21 (16.8%). Although the number of students passing the post-test showed a slight increase, it cannot be denied that CCB is very effective in helping students understand the meaning of Chinese characters and CCB is very suitable to be used as a teaching and learning aid.

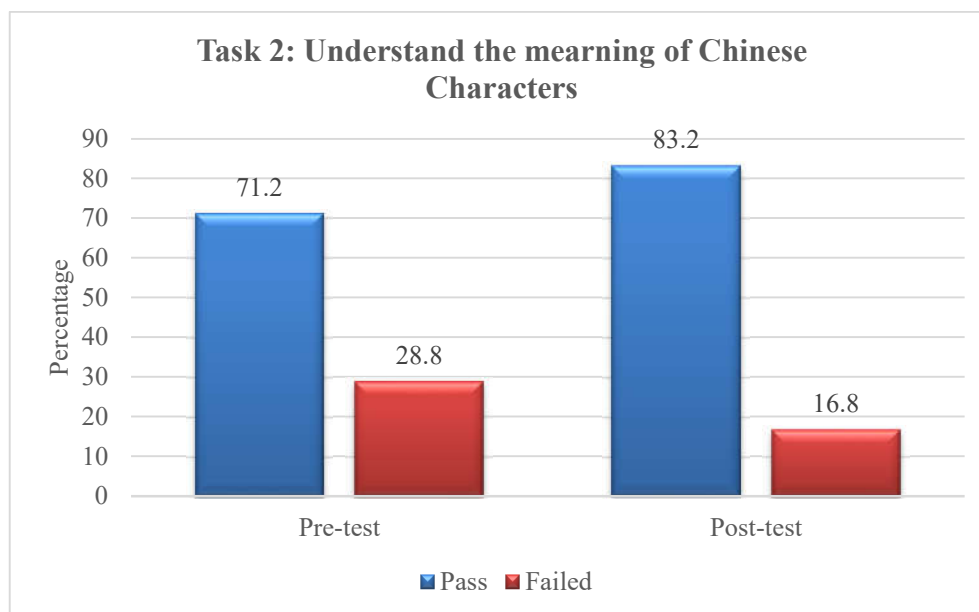


Figure 2.: Users’ performance in knowing the meaning of Chinese characters

CONCLUSION

In conclusion, the percentage and frequency of students who agreed and strongly agreed with all statements have shown that students have a positive attitude towards the use of CCB as an aid in learning Chinese characters. These findings were also supported by the post-test conducted after the use of CCB. The significant improvement in student performance in the post-test has proven that CCB is a highly effective teaching and learning tool for students in recognising, reading, and understanding the meaning of Chinese characters. The use of playing cards in learning Chinese characters can create a more enjoyable and happier atmosphere for learning Chinese characters. Student involvement in learning Chinese characters also increases through CCB games, thereby strengthening the relationship between students and Mandarin teachers. In addition, the use of CCB also increases students' motivation in learning Chinese characters compared to traditional techniques that emphasise repetitive rote memorisation. Therefore, the CCB intervention in Chinese character teaching and learning sessions can be considered by Mandarin teachers.

This study also created several limitations that need to be addressed in the future. Due to time constraints, CCB could only be played five times. Post-test delays also need to be implemented to evaluate the effectiveness of using CCB over a longer period. Student involvement in this study only includes students who are currently enrolled in the Foundation Mandarin course (Level II). Therefore, it is hoped that students who enroll in the Foundation Mandarin Course (Level I) will also be invited to participate in the next study. In addition, CCB was developed to assist non-native Chinese students and

native Chinese students who have just started learning Chinese characters. In this regard, the study sample is not limited to non-native Chinese students. A study on the effectiveness of CCB usage among native Chinese students also needs to be conducted.

ACKNOWLEDGEMENTS

We would like to express our gratitude to anonymous reviewers for their useful suggestions. We also would like to thank participants from Universiti Teknologi MARA, Sarawak Branch, Mukah campus who have contributed to the completion of this study.

REFERENCES

- Allen, J. R. (2008). Why learning to write Chinese is a waste of time: A modest proposal. *Foreign Language Annals*, 41(2), 237-251.
- Ch'ng, L. C., Ting, H. L., & Chuah, K. M. (2018). Common mistakes in Chinese character writing among Business Administrative students. *Academic Journal of Business & Social Science*, 2, 1-10.
- Jen, T., & Xu, P. (2000). Pen less Chinese character reproduction. *Sino-Platonic Paper*, 102, 1-15.
- Shen, H. H. (2005). An investigation of Chinese characters learning strategies among non-native speakers of Chinese. *System*, 33(1), 49-68.
- Ting, H. L., & Lam, K. C. (2021). Educational card game for Chinese character learning. *Voice of Academia*, 17(2), 177-185.