

THE EFFECTIVENESS OF BOARD GAME IN TEACHING AND LEARNING MANDARIN

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Abstract: Mandarin learners often face difficulty in constructing correct Mandarin sentence pattern. This study examines the satisfactory level of undergraduate students when playing the Mandarin Sentence Builder board game and the effects of the board game on their sentence construction performance. The participants were selected from three classes which were assigned into experimental groups comprising 96 undergraduates. Data were obtained from pre- and post-writing tests and questionnaire. The questionnaire, measuring satisfactory level on sentence pattern and board game were adapted from Sasidharan and Tan (2013). The board game "Mandarin Sentence Builder" employed after the pre- writing test required players to construct correct sentence patterns within a given timeframe. The experimental group played the board game over three sessions. The results showed significant difference in the pre- and post- writing test scores. Students who initially failed to construct correct sentence patterns were able to organise the five important sentence elements and construct basic sentences correctly after playing the board game. The findings reveal that the Mandarin Sentence Builder board game is a useful teaching and learning tool to assist teachers in enhancing Mandarin learners' communication skills.

Keyword: Board Game, Mandarin, Teaching and Learning

Introduction

Mandarin is an extremely complicated language with an ever-growing presence in the world. However, third language learners of Mandarin must contend with numerous difficulties on their second language acquisition journey (Spencer, 2015). One of the difficulties faced by students, who are non-native speakers generally encounter difficulties in constructing Mandarin sentences following the correct word order, which violates Mandarin grammatical rules and sequence of sentence patterns. This happens because students are very unlikely to do away with the influence of sentence patterns of their own mother tongue. This phenomenon occurs frequently in language classrooms (Hoe & Mah, 2011). As noted by Halimah (2012), games often offer many opportunities for learners to practice and repeat the sentence patterns and vocabulary. This means that teaching by using games could help teachers to transfer their knowledge easier to students and create an active environment through the games. Games also lead learners well to revision exercises in helping them to recall materials in a pleasant and entertaining way (Uberman, 1998). In this case, Mandarin Sentence Builder board game incorporated Grouping, Arranging and Touch-up (GAT) methods can be used to assist non-native Mandarin learners in constructing correct Mandarin sentences (Hoe, Cheun & Ho, 2009).

The objectives of this study are to examine students' perception of Mandarin Sentence Builder Board Game and the effects of board games on the sentence building abilities of non-native speakers in learning Mandarin. Based on the research objectives, the research questions are as follow:

- a. What is the perception of non-native speakers towards Mandarin Sentence Builder Board Game?
- b. To what extent does the board game help non-native speakers in learning Mandarin?

Literature Review

Mandarin is believed to be one of the extremely complicated languages in the world, where learners face numerous difficulties in the learning process (Spencer, 2015). Learning to speak and communicate in Mandarin are the main objectives for non-native learners. Mandarin has its own grammatical and sentence sequence rules. Before students can learn to speak proper Mandarin, they need to master the correct Mandarin sentence sequence. However, non-native learners usually would face difficulties in constructing correct Mandarin sentences when they start learning the language (Hoe & Liaw, 2014). When non-native speaking students construct sentences in Mandarin, they are influenced by their mother tongue (Hoe & Kuek, 2004), thus the learners convey ideas in Mandarin sentences but mixed with the grammatical element of their mother tongue.

Non-native speakers often violate Mandarin grammatical rules and sentence sequence (Hoe & Mah, 2011). When these students build sentences which consist of subject, time, preposition, place and verb, they are often confused between Mandarin sentence sequence and Malay sentence sequence. This phenomenon occurred when the correct Mandarin sentence pattern [Subject + Time + Go to/ At + Place + Verb] is frequently violated with Malay sentence pattern which is Subject + Time + Verb + Go to/ At + Place. The three elements in the predicate (the Verb, Go to/ At and Place) are being misplaced in a sentence pattern. Students apply their

mother tongue language rule to the target language in the process of acquiring third language.

One of the ways to help learners to overcome their difficulties in constructing correct Mandarin sentence patterns is through language board game. Game is a teaching and learning tool to assist learners to practise and revise the sentence patterns repeatedly (Halimah, 2012) and in a fun way (Uberman, 1998). Language game, especially board game enhances students' proficiency and increases their interest in speaking the language (Yong & Yeo, 2016). Board game encourages interaction among learners while playing the game in accordance to the game system and the context presented during the game (Kapp, 2012). Lee (2012) argues that when learners, as players, can learn and apply part of a language through playing board game, if at the same time the board game is aligned with the learning objectives and curriculum, the board game will be a useful tool beneficial to both instructors and learners.

Non-native speakers can also learn and practise communication skill through board game. One of the communication skills learners can acquire through board game is turn-taking skills, where every player is given equal opportunity to play and communicate in the targeted language. Board game allows players to play as a team (Yong & Yeo, 2016) and at the same time nurture learners' creativity, curiosity and enjoyment under competitive and cooperative learning environment (Arslan, Moseley & Cigdemoglu, 2011). The use of board game in classroom has improved teaching and learning experience.

As the above literature review has revealed the benefits of using board game, this study therefore seeks to examine the effectiveness of using "Mandarin Sentence Builder (MSB)" board game as a tool to improve the teaching and learning of Mandarin as non-mother tongue language.

Framework

This study employs the „Word Sequence Diagram“ (WSD) proposed by Hoe and Mah (2011) to construct correct sentences. The WSD is incorporated in the GAT (Grouping, Arranging, Touch-up) module to help learners to construct and restructure sentences correctly. Learners with limited vocabulary, mother tongue interference and lack of communication environment could construct correct sentences with the word sequence diagram.

Research Methodology

This study employs an experimental research design to determine whether the use of board game has any effect on constructing correct Mandarin sentences. A total of ninety-six undergraduates (N=96) from three classes from *Universiti Teknologi MARA*, Malacca Campus were selected to participate in this study. These three classes were assigned into an experimental group. All of the participants are Malay students, ranging between 21 and 23 years old, majoring in Accounting, and had enrolled in the *Introduction to Mandarin Level 1* as their foreign language course. All the participants formed the experimental group, and the Mandarin course for all the three classes was taught by the same lecturer.

In this study, the research instruments are questionnaire, board game and writing tests. The questionnaire comprised of three parts: part one consisted of 8 items, part two consisted of 12 items and part three consisted of 21 items. The first part of the questionnaire was on the

knowledge of students regarding Mandarin Sentence Pattern, adapted from Sasidharan and Tan (2013). Each item was to be answered on a five-point Likert scale ranging from 1 (Strongly disagree) to 5 (Strongly agree). The second part of the questionnaire is to examine the level of satisfaction on Mandarin Sentence Builder board game, measured on a five-point Likert scale, ranging from 1(Strongly disagree) to 5 (Strongly agree). The third part of the questionnaire is to determine the participants' experience in board game, also on a five-point Likert scale ranging from 1 (Strongly disagree) to 5 (Strongly agree). The questionnaires were distributed to all the participants after playing the board game but before sitting for the post-writing test.

Secondly, the Mandarin Sentence Builder board game consists of a board and a deck of fifty-eight cards. The fifty-eight cards include five elements namely, *Subject, Time, Go to/At, Place* and *Verb*. The front of the cards show the words from one of the five elements which shown with Mandarin characters and *pinyin system*.

Thirdly, pre-writing test and post-writing test were administered to the participants. The purpose of the writing tests was to measure the participants' Mandarin sentence construction performance before and after playing MSB board game. All participants took the pre-writing test for the purpose of evaluating their respective ability to construct correct sentences before playing the board game. The participants were tested on their ability to construct Mandarin sentences by sitting for post-writing test after playing the board game.

Before conducting the game, the rules of the game were explained to the participants. A demonstration of how to play the game was carried out with the help of four volunteers from each class. Before playing the game, the participants were required to form groups of three or four players for each group. Every group spent approximately 45 minutes to complete 4 rounds of the game.

To start the game, every player was given nine cards. The remaining cards were stacked face down on the table. Every player was to take turn to place a card to construct a sentence on the board respectively according to Mandarin sentence order which consists of four elements [Subject, Time, Go to/ At, Place and Action]. The players were requested to read aloud the sentence displayed and the other players would correct their pronunciation if there was any mistake. Players could refer to the glossary list to check for the answers. The winner of the game will be the one who finished all the cards in hand and constructed the correct sentences.

Analysis and Findings

This section presents the analysis and findings of the participants' perception on Mandarin Sentence Builder Board Game and how the board game has helped them in learning the third language.

RQ 1: What is the perception of non-native speakers towards Mandarin Sentence Builder (MSB) Board Game?

To answer RQ 1, Table 1 and Table 2 lists the 19 items pertaining to the participants' perception on MSB Board Game with respect to the aspects of MSB board game design and participants' playing experience. The mean values for the board game design and players' experience exceed 3.70 for each item tested, which means that generally, the participants gave

positive responses on the board game. As shown in Table 1, the mean value is above 4.00 (for each of the B1, B2, B7, B8 items), indicating that the participants found the design of MSB board game in terms of images, text fonts and colour to be vivid and attractive. The participants also found the printed rules and instructions of the board game to be easily understood, which is also one of the important elements to create players' interest to play the board game.

Table 1. Mean and Standard Deviation Values for Respondents' Perception Towards MSB Board Game.

Item No.	Statements	Mean	Standard Deviation
B1	The game design is attractive (interface, graphics, etc.).	4.25	0.598
B2	The text font and colour are well blended and consistent.	4.26	0.567
B7	The game rules are clear and easy to understand.	4.17	0.709
B8	The fonts (size and style) used in the game are easy to read.	4.20	0.643

Following the participants' optimistic feedback pertaining to the MSB board game, another 15 items were listed to examine how the participants felt when playing the board game, such as their satisfaction, confidence, happiness, preference, emotion and enjoyment level. The mean and standard deviation values for each item are shown in Table 2.

Table 2. Mean and Standard Deviation Values for Players' Experience Towards MSB Board Game.

Item No.	Statements	Mean	Standard Deviation
B4	Learning to play this game was easy for me.	4.12	0.650
B5	Most people would learn to play this game very quickly.	4.10	0.704
B6	The game is easy to play.	4.08	0.706
B12	This game is appropriately challenging for me.	3.78	0.671
C2	The game does not become boring if I play repeatedly.	3.81	0.762
C3	It is a satisfying process after completing the game.	4.15	0.621
C6	It is good to interact with other players during the game.	4.21	0.582
C7	The game keeps me alert during the process.	4.11	0.613
C9	The game promotes cooperation and/or competition among the players.	4.17	0.592
C10	It is fun playing the game.	4.25	0.616
C11	Something happened during the game (game elements, competition, etc.) which made me smile/ laugh.	4.31	0.605
C12	Playing the games made me so involved that I lost track of time.	3.84	0.762
C15	The game can be played independently without help from teacher/ instructor.	3.93	0.775
C18	It is satisfying with the things that I learned from the game.	4.17	0.627
C21	It will be fun to play this game again.	4.29	0.631

As shown in Table 2, the mean value of items labelled B4, B5 and B6 is above 4.00, which means that the participants were having fun when playing MSB board game, as they could learn to play the game in a short time. In other words, the MSB board game made the participants feel easy to play while in the process of learning Mandarin. The item C15, with a mean value of 3.93 and standard deviation of 0.775 show that MSB board game could be played by learners without any guidance from instructors.

On the other hand, MSB board game had helped the participants to interact in Mandarin with their classmates. Apart from the teacher-centred learning, the participants were also exposed to the student-centred learning environment, where they can collaborate, tolerate and communicate in Mandarin with each other when playing MSB Board Game, which can be seen in the mean value for items C6 and C9.

In terms of the participants' experience, items B12 proved that MSB board game is a challenging task for players, yet it is a fun way to learn Mandarin, as reflected in items C2, C10 and C21. Based on the participants' experience, learning Mandarin through MSB board game in a fun way has made them feel that they are totally immersed in the game (item C12). The participants experienced that while playing the MSB board game made them "smile/ laugh" (item C11), but they are mindful of what they are doing (item C7). It clearly revealed that the participants who have played MSB Board Game achieved high level of satisfaction (items C3, C18) throughout the board game, as proven by the mean value 4.15 and 4.17 respectively.

RQ 2: To what extent does the board game help the non-native speakers in learning Mandarin?

Further analysis of the data is on the key participants' views regarding the level of effectiveness of MSB board game in assisting both instructors and learners in teaching and learning Mandarin, particularly sentence pattern.

Table 3. Mean and Standard Deviation Values of Respondents' Opinion Towards Effectiveness of MSB Board Game.

Item No.	Statements	Mean	Standard Deviation
A2	It is easy to master Mandarin Sentence Pattern. (Subject - Time – Go to/ At – Place- Action)	3.36	0.822
A3	It is easy to identify sentence sequence- subject.	3.75	0.754
A4	It is easy to identify sentence sequence- time.	3.82	0.696
A5	It is easy to identify sentence sequence- verb.	3.72	0.767
A6	It is easy to identify sentence sequence- place.	3.84	0.759
A7	It is easy to identify sentence sequence- action.	3.84	0.689
A8	It is easy to construct a complete sentence through game.	3.89	0.800
C14	The game enables me to remember the sentence pattern.	4.11	0.722

C16	The game enables player to learn new vocabularies through playing the game.	4.05	0.705
C19	The game motivates me to learn Mandarin.	4.32	0.624
C20	The game motivates me to speak Mandarin.	4.25	0.632
C21	It will be fun to play this game again.	4.29	0.631

Before mastering Mandarin sentence pattern, the participants need to study the vocabularies provided in the list attached in MSB board game. The participants admitted that MSB board game enables them to learn new vocabularies when playing the game, as clearly shown by the mean value of 4.05 for item C16.

With sufficient knowledge of the vocabularies, the participants are required to study the 5 elements (A3, A4, A5, A6 and A7) of Mandarin sentence pattern before they started to play the board game. After the participants are familiar with the 5 elements of sentence pattern, they are able to remember Mandarin sentence pattern (item C14, mean value of 4.11). From the participants' point of view, as shown in item A2, mastering Mandarin sentence pattern has become an easy task for them. As a result, the participants feel that learning Mandarin is an enjoyable learning process (item C21) which has motivated them to communicate more using Mandarin in the classroom or in real life context after playing MSB board game.

To assess the level of mastering of the vocabularies and sentence pattern of the participants after playing MSB board game, a comparison was made by conducting pre- and post-test before and after the game.

Table 4. Pre-test and Post-test Scores.

Score	N	Mean	Standard Deviation	Standard Error Mean
Pre-test	96	69.30	13.210	1.183
Post-test	96	76.60	11.587	1.348

Table 5. Correlation between Post-test & Pre-test.

Pair	N	Correlation	P-value (two-tailed)
Post-test & Pre-test	96	0.933	0.000

Table 4 reports a summary of the pre-test and post-test scores. The mean of the post-test scores is 76.60 while the mean of the pre-test scores is 69.30. Detail analysis show that some students who failed in the pre-test, after playing the board game, they passed their post-tests. While other students show substantial improvement in their grades. This indicates that the participants obtained higher marks after playing the board game. We also noticed that the variability of both test scores is close to each other. At the 5% significance level, *ceteris paribus*, Table 5 shows that there is a strong positive correlation between post- test and pre-test scores.

Table 6. Paired Samples Test.

Pair	Mean	Standard Deviation	Standard Error Mean	95% Confidence Interval of the Difference		T	df	P-value (two-tailed)
				Lower	Upper			
Post-test - Pre-test	7.30	4.814	0.491	6.328	8.279	14.863	95	0.000

From Table 6, the mean difference between post-test and pre-test scores is 7.30, which suggests that learning Mandarin by integrating the board game had helped the participants to have a better understanding on vocabularies. This also improves the ability of the learners to construct Mandarin sentences, and thus enable them to do well in the post-test. The paired sample t-test is carried out to compare the mean values between post-test and pre-test scores. At the 95% confidence level, the mean difference between post-test and pre-test scores is between 6.328 and 8.279. It is also found that at the 5% significance level, *ceteris paribus*, the p-value of 0.000 shows that there is statistical evidence that the mean difference between post-test and pre-test scores is significantly greater than zero.

Based on these findings, it can be concluded that the integration of the board game in acquiring third language such as Mandarin enables learners to gain numerous benefits, such that they can have better understanding of Mandarin sentence structure. Learning language through playing board game is effective as Soo et al. (2017), Zainab et al. (2016), Yong and Yeo (2016) and Tengku and Rahmah (2012) found

that using board games in classroom will benefit both instructors and learners in teaching and learning targeted language.

Conclusion, Limitation and Future Research

Learners perceived that MSB board game will smooth the learning process of Mandarin with its enjoyable and nonchalant informal setting. MSB board game subsequently elevates motivation, sustains interest, and boosts the confidence level of the participants to communicate in Mandarin. Furthermore, the performance of the participants in constructing sentence has significantly improved, which can be seen in the scores of post-test. In addition, the use of MSB board game enables instructors to diversify their teaching style by encouraging learners to learn a targeted language. Therefore, MSB board game is a wizard educational tool and is handy to the learning of Mandarin for learners and educators.

This study did not employ any control group, perhaps future study can include control group in order to obtain a more comprehensive result on the effectiveness of board game. In addition, this study was conducted in one higher institution of learning, perhaps future research could be conducted on a wider scope, such as other institutes of higher learning and schools which offer Mandarin as third language.

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