Using Technology-Flashcard to Encourage Students Learning Mandarin

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Abstract. The use of learning media in learning Mandarin is very diverse. One of the media used is online-flash card. The objectives of this study are (1) to find out the increase of students interest in learning Mandarin; (2) to determine the ability to master Mandarin vocabulary through a technology flashcard, and (3) to find out the improvement in writing Mandarin characters. This research uses descriptive analytical qualitative method in which the researcher distributes questionnaires and conducts experiments on the use of online-flashcards to elementary school students in Pelita Kasih elementary school. The data obtained comes from the results of the questionnaire and the comparison of values before and after learning by using a flashcard. Based on the analysis of the data obtained by researchers, it can be concluded that the 5th grade students of Pelita Kasih SDS like learning Mandarin by using a flashcard. Through learning with flash cards, the Mandarin scores of 5th grade students at Pelita Kasih SDS have increased. In addition, the students vocabulary mastery also increased. Thus grade 5 elementary school students can learn vocabulary using technology flash card.

1. Introduction
Mandarin is a logographic language and its non-alphabetical character creates additional difficulties for Mandarin language learners to recognize and memorize Chinese characters. To help students effectively learn and memorize Chinese words, flash cards serve as an effective strategy for developing vocabulary for Mandarin learners. In addition, researchers have found that flashcard exercise has a positive effect on the accuracy of word reading and growth in vocabulary size. Study of the use of flashcards in learning English for 2nd grade students concluded that this media could support vocabulary learning [1]. Research using flashcard media for learning English in Class II SD Ar-rochman Semarang Garut concluded that the students' English ability improved [2]. Flashcard media can help effectiveness in writing simple essay skills in German [3].

The use of flash cards in learning English vocabulary for foreign learners (EFL) [4]. From the results of comparative methods of teaching flash cards and traditional methods, it was concluded that learning with flash cards had a positive effect. Teaching with flash card aids interspersed with games increases the
attractiveness of students to learn vocabulary. The acquisition of a second language, especially vocabulary, is a topic of concern to teachers and curriculum designers and education observers. He has experimented with the use of flash cards as a learning medium for 39 university students. From the results of his research, flash cards are not suitable for university students and vocabulary learning should be combined with other learning methods [5].

From the experiments on English language learners, students who learned vocabulary using the flash card method found it easier to remember vocabulary, and were motivated to learn English since they felt it was easy to learn. In addition, their vocabulary mastery has increased compared to students who do not learn with the help of flash cards [6]. Oleh karena itu, penelitian ini bertujuan untuk mengetahui keefektifan penggunaan teknologi flash card dalam belajar kosa kata Mandarin.

2. Methods
This research uses a qualitative method in which the researcher demonstrates learning by using flash cards to 5th grade students of an elementary school. This research began on March 25, 2019 until May 23, 2019, conducted in 5th grade class of SDS Pelita Kasih, in class 5A with a total of 24 students and class 5B with a total of 24 students. Researchers compared the Mandarin scores obtained by students before and after learning with flash cards. The results of the comparison of scores are then analyzed to find out whether there is an increase in interest in learning Mandarin using flash card method. The increase in interest is measured by the increase in scores obtained by students.

3. Results and Discussions
3.1 Final Conditions of Students in Class 5A and 5B After Learning Mandarin Using Flashcards
After researchers conducted a teaching using flash cards for a month to 5th grade student of elementary school, an increase in students interest can be seen from an increase in their Mandarin learning assessment scores.

![Figure 1. Daily 5th Grade Student Assessment After Learning Mandarin Using Flashcard](image)

From diagram 4.10, as many as 48% of respondents or 23 students get an A, 4% of respondents or 1 student get an A-, 4% of respondents or 2 students get a B+, 7% of respondents or 3 students get a B-, 6% of respondents or 3 students got a C+, 4% of respondents or 1 student got a C, 2% of respondents or 1 student got a D+ and 25% of respondents or 12 students got a D.

From the exposure to the results of daily assessment in 5th grade, after learning Mandarin using flashcards, students get a significant increase in scores when compared to the daily assessment before learning Mandarin using flash cards (diagram 4.1). The increase obtained is as much as 35%. This is due to the respondents are interested in learning by using flash cards and that make them interested in learning.
Mandarin. In addition, interest can also be interpreted as a motive that shows the strength and direction of individuals on an object. An interest in themselves becomes a strong urge to learn. In addition, flash card teaching aids are also used with interesting methods such as learning games that are more interesting than traditional teaching [4].

From diagram 4.11, as many as 48% of respondents or 23 students get A, 25% of respondents or 12 students get A-, 4% of respondents or 2 students get B +, 2% of respondents or 1 student get B, 4% of respondents or 2 students get C +, 6% of respondents or 3 students received C, and 11% of respondents or 5 students received D.

From the exposure to the results of daily assessment in 5th grade, after learning Mandarin using flashcards, students get a significant increase in scores when compared to the daily assessment before learning Mandarin using flash cards (diagram 4.2). The increase obtained is as much as 31%. This is due to in learning to listen by using a flashcard, researchers mention repeatedly the vocabulary contained in the flashcard so that respondents are trained in their listening. The Flash Card is also a teaching strategy that is easily implemented in helping students to better understand the lesson [7]

From diagram 4.12, 54% of respondents or 26 students received A, 35% of respondents or 17 students received A-, and 11% of respondents or 5 students received B +. From the exposure to the results of daily assessment in 5th grade, after learning Mandarin using flashcards, students get a significant increase in scores when compared to the daily assessment before learning Mandarin using flash cards (diagram 4.3). The increase obtained is as much as 6%. This is due to in learning to speak, researchers ask respondents to follow researchers to read the vocabulary in a flashcard so that respondents are trained in their speaking. Speaking must make people understand what is conveyed [8]. By increasing the ability to speak in Mandarin with the help of flash cards, communication in Mandarin will also be smoother. Speaking ability is supported by mastering vocabulary, with flash cards, learning vocabulary will become easier and students will not feel burdened to learn it, instead they feel motivated to learn because they do not feel having difficulties in the learning process [6].
Figure 4. The Score of Reading After Learning Mandarin Using Flash Cards

From diagram 4.13, 84% of respondents or 40 students get A, 4% of respondents or 2 students get A-, 4% of respondents or 2 students get B, 6% of respondents or 3 students get B-, and 2% of respondents or 1 student get a D.

From the exposure to the results of daily assessment in 5th grade, after learning Mandarin using flashcards, students get a significant increase in scores when compared to the daily assessment before learning Mandarin using flash cards (diagram 4.4). The increase obtained is as much as 6%. This is due to in learning to read by using a flashcard, the researcher asks the respondent to read over and over the vocabulary in the flashcard, by reading over and over, the respondent is able to remember the Hanzi that is read.

Figure 5. The Score of Writing After Learning Mandarin Using Flash Cards

From diagram 4.14, 56% of respondents or 27 students got A, 11% of respondents or 5 students got A-, 6% of respondents or 3 students got B +, 4% of respondents or 2 students got B-, 2% of respondents or 1 student got A C +, 2% of respondents or 1 student received C, and 19% of respondents or 9 students received D.

From the exposure to the results of daily assessment in 5th grade, after learning Mandarin using flashcards, students get a significant increase in scores when compared to the daily assessment before learning Mandarin using flash cards (diagram 4.5). The increase obtained is as much as 23%.

This is due to when learning to write using a flashcard, the researcher shows how to write the correct Hanzi and asks respondents to follow the Hanzi written by the researcher. Thus, respondents are indirectly able to remember the strokes from Hanzi taught by researchers. Writing must be in the correct sequence and stroke. From the exposure to the scores of listening, speaking, reading, and writing, the scores of reading and writing is the highest compared to the scores of listening and speaking. This is due to the students in 5th
grade are not only trained in recognizing Chinese characters but are also trained in how to write Chinese characters correctly so that they are indirectly able to write Chinese characters and recognize Chinese characters [8].

Writing learning is basically a lesson that is considered difficult for students [9], but because this is done using an interactive method through flash cards, difficult lessons become easy and interesting. By increasing students' interest in learning how to write, it will increase students' scores in writing and reading.

4. Conclusion
In general, the researchers concluded that before learning to use a flashcard, 5th grade students were less interested in learning Mandarin so the scores obtained were not satisfactory. After learning Mandarin using flashcards, grade 5 students become more interested in learning. The value obtained has increased significantly. For further research, it is recommended to design flash cards by combining them with technologies such as e-flash cards. Students rely on visual resources to build word-image associations, and video and audio resources to learn Mandarin pronunciation. Thus, there is no need to read any paper-shaped flash cards, just download the flash card into a smart phone. Thus, anyone can learn it at his/her convenient time and place.

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