THE EFFECT OF USING THE TRAINCHINESE DICTIONARY ON THE LEARNING OUTCOMES OF CHINESE STUDENTS IN CLASS X IN HIGH SCHOOL

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Abstract

Understanding Chinese is not just about the spoken word, but also the written word. Chinese has thousands of strokes that need to be understood, one of the oldest being the 汉字 (hànzi) strokes. In the scope of education, teaching 汉字 (hànzi) strokes and Chinese sentence construction is a challenge. The reason is that students have not found it easy to learn the material. The results of Chinese 汉字 (hànzi) strokes and sentence construction are the variables to be tested. Using a quantitative approach with an experimental nonequivalent control group design, this study involved 45 students who were divided into experimental and control groups. The results showed a significant improvement in the learning outcomes of the experimental group after being assisted with the Trainchinese digital dictionary.

Keywords: Digital Dictionary, China Trains, Mandarin, Sentence, Scars

INTRODUCTION

China's economic improvement shows positive development and strengthens (Andika & Aisyah, 2017). This phenomenon has an impact on bilateral relations between China and Indonesia, especially on increasing employment. One of the mandatory requirements for labor absorption is mastery of Mandarin. This is in line with the function of language as a means of communication and as a medium for establishing cooperation between countries (Raharja, 2023). Therefore, good language skills are needed both orally and in writing in order to organize ideas systematically (Umami et al., 2022).

Seeing the great potential related to labor absorption in China, the need for workers with Chinese language skills is also getting bigger. As a form of support, the Government provides alternative solutions by offering Chinese language learning in schools. This has been regulated by the government through the Regulation of the Minister of Education and Culture No. 36 of 2018 concerning the 2013 curriculum for Senior High Schools or Madrasah Aliyah which contains foreign language learning, one of which is Mandarin. Mandarin has become an additional subject at various levels of Indonesian education units. Mandarin is present as a compulsory, cross-interest, and extracurricular subject in schools (Lianawati, 2011). In reality, there are still problems in the Chinese learning process. One of the problems that often arises is that students still have difficulty in the stroke material 汉字 (hànzi) and sentence construction in Chinese.

Based on observations that have been carried out at SMA Selamat Pagi Indonesia on January 11, 2022, several information was found that can support research. First, the high school has made good use of technology in Chinese language learning. This is supported by schools that allow the use of smartphones during learning. Second, in the process of learning

Chinese, students find it difficult to write strokes 汉字 (hànzi) and construct sentences. This problem arises because learning aids have not been used optimally. Some applications are also often used such as google translate, but in practice google translate has not been able to fully help students to understand the writing of strokes 汉字 (hànzi) or sentence construction. Reflecting on these conditions, it is necessary to use media or learning support tools that can help students in an effort to understand the learning material being taught, this will certainly have a good effect on achieving learning objectives optimally (Nurrita, 2018).

Currently, the use of technology is growing very rapidly, it has even penetrated the world of education. On the one hand, Chinese language learning has also taken advantage of technological advances (Wijayati et al., 2013). The advantage of using technology is the ease and speed of accessing learning materials. One of the many types of supporting media for Chinese language learning that can be used to help students is a digital dictionary. Digital dictionaries are technological devices in the form of dictionaries with more complex features than conventional dictionaries (Klein & Planck, 2015). Basically, digital dictionaries are divided into three types, the first is online digital dictionaries that must be connected to the internet, offline digital dictionaries that can be accessed without the internet, and digital dictionaries in the form of e-books (Agussalim et al., 2019). This dictionary has various advantages such as being easier to use, practical, and efficient (Widyaningsih, 2019; Winardi & Siddik, 2020). Digital dictionaries are also an effective and optimal medium in helping students improve language skills and student achievement (Elyana & Chaprin, 2018; FATIMAH, 2018).

Today's digital dictionaries have been widely developed, not only English dictionaries but also Chinese. Some of these digital dictionaries can be used to aid learning. One of the Chinese digital dictionaries that can be used is the Trainchinese digital dictionary. Trainchinese is a digital dictionary application that provides various features such as how to write strokes 汉字 (hànzi), pronunciation of Chinese vocabulary, and also various examples of using words in correct sentence patterns (Olmanson & Liu, 2017). Trainchinese users will be facilitated because this application is an offline digital dictionary that can be accessed even without internet. The Trainchinese application is also equipped with additional features such as game features and writing exercises that provide opportunities for students to do various types of Chinese questions (Wang & Leland, 2012).

The use of the Trainchinese digital dictionary in this study was based on students' needs in understanding 汉字 (hànzi) strokes and Chinese sentence construction. Based on the urgency in learning, this study is considered important to be carried out, considering to determine the effect of using the Trainchinese digital dictionary in improving the results of 汉字 (hànzi) strokes and Chinese sentence preparation for high school students. This study will compare how the ability of the group of students who use the Trainchinese digital dictionary in learning with the group of students who do not use the dictionary. Furthermore, it will examine the effect of using the Trainchinese digital dictionary for Chinese language learning for students.

METHOD RESEARCH

The method in this study is a nonequivalent control group design experiment by dividing the research subjects into two groups, namely, the experimental group and the control group with a quantitative approach. This study conducted two types of treatment, namely the experimental group that received treatment using the Trainchinese digital dictionary in Chinese language learning, and the control group that received learning treatment as a comparison group, there was a different treatment, namely the use of google translate. Both groups of experimental subjects had equal Chinese language skills, especially in terms of stroke writing 汉字 (hànzi) and phrasing. Learning treatment is carried out for 5 face-to-face meetings for each class.

Chinese character 汉字 (hànzi) (hànzi) as an independent variable, strokes 汉字 (hànzi) and Chinese sentence structuring as a dependent variable. The measurement instrument uses test questions to test the stroke results 汉字 (hànzi) and the results of validated sentence building using Gregory's validity formula. The data obtained is then analyzed again using normality tests, homogeneity tests, and hypothesis tests with the help of data processing software, namely SPSS. Here is Gregory's validity formula;

$$Validasi = \frac{D}{A+B+C+D}$$

Remarks: A: If the two subject matter experts disagree
B: If subject matter expert 1 agrees and material expert 2 disagrees
C: If subject matter expert 1 disagrees and material expert 2 agrees
D: If both subject matter experts agree

(Bailey et al., 2015)

RESULT AND DISCUSSION

The question validation process needs to be carried out by expert validators before testing students. The validation results of the 汉字 (hànzi) stroke question and the sentence construction that have been analyzed obtained 0.93 and 1 respectively which indicate that both types of questions are relevant and very valid. Furthermore, the research process was carried out for 5 times termasuk didalamnya terdapat kegiatan. The question validation process needs to be carried out by expert validators before testing students. The validation results of the Chinese character (hànzi) stroke question and the sentence construction that have been analyzed obtained 0.93 and 1 respectively which indicate that both types of questions are relevant and very valid. Furthermore, the research process was carried out for 5 times termasuk didalamnya terdapat kegiatan Chinese character (hànzi) Stroke material 汉字 (hànzi) Chinese character. Stroke material 汉字 (hànzi) In the experimental group it was 44.78 while the control group got an average value of 45.00. Further, the average of the grades (hànzi) in the experimental group was 44.78 while the control group got an average score of 45.00. Further, the average of the grades

The first treatment carried out is to provide various Chinese vocabulary to students with the theme of desire, liking, and will. Then students were divided into four study groups to carry

out discussions related to various information about the vocabulary provided. The experimental group learners used the Trainchinese digital dictionary, while the control group only used google translate. Based on this treatment, the discussion process in the experimental group was helped a lot so that the learning process became morelively. This is because in learning students are helped a lot by the use of the Trainchinese digital dictionary which provides many example sentences and how to write strokes 汉字 (hànzi). Another case in the control group, in the implementation of Chinese language learning there are still many students who experience difficulties because the digital dictionary (google translate) only functions as a translator.

Furthermore, the second treatment is carried out by doing games. This game is done in groups by giving cards containing vocabulary strokes 汉字 (hànzi) 歌, 菜, 茶, 咖啡, and 去. Students are asked to find information about the strokes and arrange sentences on each vocabulary and write them on the board. Assessment is based on speed in answering questions and accuracy in answering. In the experimental group, students in groups searched for information and examples of words using digital dictionaries Trainchinese, while in the control group, students in groups searched for information from Google Translate. Based on the second treatment, it appears that students in the experimental group are faster and more accurate in answering questions.

In the third treatment there are differences with previous treatments. The third treatment is carried out individually in the form of a game. Students are again given Chinese vocabulary such as 饭, 看, 电视, 书, 音乐, dan 吃. Then learners race to find information and answer on the board. As in the previous treatment, in the experimental group the learning atmosphere was more active and students were more challenged to do the questions. One of the factors is because in learning they are more helped by the use of digital dictionaries Trainchinese. Unlike the case with the control group which tends to be passive because it is still confused and difficult in answering the questions presented.

After conducting several trials by treating the experimental group and the control group, a posttest was carried out which aimed to measure the level of understanding of students after being given treatment. There are 20 stroke questions汉字 (hànzi) and 20 problems composing sentences with the subject matter of desire, liking, will. For stroke questions 汉字 (hànzi) in the form of essay questions and for sentence-building questions in the form of multiple choice. The data obtained show that the average value of the stroke material 汉字 (hànzi) In the experimental group it was 81.30 while in the control group the average value showed 67.95. Furthermore, in the Chinese sentence preparation material, the average score of the experimental group showed 83.69 while in the control group showed an average value of 72.50.

The pretest and posttest result data are then analyzed again for normality testing on the data using the Kolmogorov-Smirnov statistical method, then testing the homogeneity of the data using the Levene Based on Mean method, and testing paired samples using the paired sample t-test method. The results of normality and homogeneity testing showed that the data were normally distributed sig (p>0.05) and homogeneous (p>0.05). Furthermore, the analysis was carried out using the paired sample t-test method to determine the difference in the effect

of learning Chinese with digital dictionaries on the two groups. The three data analysis processes are carried out using statistical data processing software, namely SPSS. The results of the normality test, homogeneity test, and paired test are presented respectively in the table below.

Kelompok	Nilai Guratan汉字 (hànzi)		Nilai Menyusun Kalimat	
	Pre test	Post test	Pre test	Post test
Kontrol	0,057	0,200	0,200	0,200
Eksperimen	0,200	0,200	0,106	0,191

Figure 1. Results of the Normality Test of Learning Outcomes Data Stroke汉字 (hànzi) and Composing Sentences

Based on table 1 significance values (p-value) In the data of learning outcomes of strokes 汉字 (hànzi) and composing sentences is more than 0.5, the research data is stated to have a normal distribution.

Kelompok	Nilai Guratan汉字 (hànzi)		Nilai Menyusun Kalimat	
	Pre test	Post test	Pre test	Post test
Kontrol vs Eksperimen	0,149	0,150	0,732	0,738

Figure 2. Test Results of homogeneity of Learning Outcome Data Stroke汉字 (hànzi) and Composing Sentences

Based on table 2, the significance value (p-value) in the learning outcomes data of stroke 汉字 (hànzi) and composing sentences is more than 0.5. This shows that the research data is expressed homogeneously distributed.

Pre test	Post test	t hit	Sig.	Ket.
45,00	65,68	6,544	0,000	Signifikan

Figure 3 Paired Sample t-test Learning Outcomes Strokes 汉字 (hànzi) Control Group

The paired sample t-test results in the control group showed that there was a significant increase in learning outcomes of 汉字 (hànzi) strokes greater than 0.05 without any treatment in using the Trainchinese digital dictionary

Pre test	Post test	t hit	Sig.	Ket.
44,78	81,30	20,722	0,000	Signifikan

Figure 4. Paired Sample t-test Learning Outcomes Strokes 汉字 (hànzi) Experimental Group

The results of the analysis showed that the experimental group had a calculated t value of 20.722 with a significance of 0.00. It can be seen that there was a significant improvement

in the learning outcomes of experimental group students related to the stroke 汉字 (hànzi) after being treated using the Trainchinese digital dictionary.

The results of the analysis showed that the experimental group had a calculated t value of 20.722 with a significance of 0.00. It can be seen that there was a significant improvement in the learning outcomes of experimental group students related to the stroke 汉字 (hànzi) after being treated using the Trainchinese digital dictionary.

Pre test	Post test	t hit	Sig.	Ket.
46,09	83,26	22,026	0,000	Signifikan

Figure 5. Paired Sample t-test Learning Results Composing Sentences Experimental Gro

The results of the paired sample t-test calculation of the t-value of 22.026 and the significance value of 0.000, showed a significance value of less than 0.05, so there was a significant increase in the learning outcomes of composing sentences in the experimental group after being treated using the Trainchinese digital dictionary.

Kontrol	Eksperimen	t hit	Sig.	Ket.
45,00	44,78	0,056	0,956	Tidak signifikan

Figure 6. Independent Sample t-test Learning Outcomes Strokes 汉字 (hànzi) Before Treatment

Kontrol	Eksperimen	t hit	Sig.	Ket.
65,68	81,30	4,220	0,000	Signifikan

Figure 7 Independent Sample t-test Learning Results Strokes 汉字 (hànzi) After Treatment

The results of these calculations, the calculated t value of 4.220 and the significance value of 0.000, with a significance value of less than 0.05, it shows that there is a very significant difference in the learning outcomes of 汉字 (hànzi) strokes after treatment between the two groups of research subjects.

Kontrol	Eksperimen		t hit	Sig.	Ket.
46,14	46,09		0,012	0,990	Tidak signifikan

Figure 8 Independent Sample t-test Learning Outcomes Composing sentences Before Treatment

The results of the calculation above obtained a calculated t value of 0.012 and a significance value of 0.990, the data showed no significant difference in learning outcomes before treatment was given between the two groups of research subjects.

Kontrol	Eksperimen	t hit	Sig.	Ket.
67,95	83,26	5,313	0,000	Signifikan

Table 9. Independent Sample t-test Learning Results Composing Sentences After Treatment

The results of these calculations showed that the calculated t value was 5.313 and the significance value was 0.000, this showed a significant difference in the learning outcomes of composing sentences after being treated in the experimental group using the Trainchinese digital dictionary.

Communication of a language is not only through oral, but also through writing, this also applies to Chinese. One of the oldest characters that is often used is the script with the stroke 汉字 (hànzi). The writing of these strokes also has rules, one of which is the number of strokes. The excess or lack of the number of strokes 汉字 (hànzi) will affect the intended meaning. Therefore, students' knowledge of how to write hanzi汉字 (hànzi) will affect the correctness of writing (Supriadi, 2018: 40). After conducting research with various treatments, it was shown that the group of learners who made use of the Trainchinese digital dictionary had a deeper understanding of writing strokes 汉字 (hànzi). For example, 汉字 (hànzì) '了' has two strokes. Before using the Trainchinese digital dictionary students have an understanding of 汉字 (hànzì) '了' is one stroke because 汉字 (hànzì) looks one step only, but is actually two steps. If it is only one stroke, then the writing will not form 汉字 (hànzì) '了'. 汉字 (hànzì) in question is not conveyed because it has no meaning. After learning with the help of the Trainchinese digital dictionary, students can see through the writing feature 汉字 (hànzì) as much as 20汉字 (hànzì) according to the material taught.

Based on the results of the learning that has been carried out, the experimental group has a significance value of less than 0.05. This shows that the use of the Trainchinese digital dictionary can improve the learning outcomes of 汉字 (hànzi) strokes in students. During the learning process, students feel the ease of learning because it is more helpful in understanding 汉字 (hànzi) strokes using the Trainchinese digital dictionary. Previously, students felt less helped by using the Google Translate dictionary, because the features offered were limited to translation, there was no feature on how to write strokes 汉字 (hànzi) or games to train skills. This phenomenon is in line with research conducted by Olmanson & Liu, 2017; Wang & Leland, (2012) which states that the Trainchinese digital dictionary has a feature on how to write 汉字 (hànzi) so that it helps learners know the steps to write 汉字 (hànzi) and the number of strokes 汉字 (hànzi).

The use of a learning medium will not be useful if it technically does not meet the criteria needed by students in learning. Reflecting on these conditions, then to reach the level of

usefulness of a dictionary. need several technical criteria that must be met . In this study before carrying out the learning process using the Trainchinese digital dictionary, students are first asked to understand the technical use and recognize various features that can be utilized in the Chinese learning process. This aims to help students in an effort to maximize the learning process so that the objectives in learning can be achieved optimally.

In addition to writing strokes 汉字 (hànzi), the arrangement of sentences in Chinese is also important because it will affect the meaning of the sentences composed. In line with Odinye & Odinye, (2021) which states that composing sentences using the correct sentence pattern will help the speaker convey the meaning of the sentence correctly and help the listener to understand the meaning of the sentence conveyed. After the study, the learning outcomes of Hoe & Lim, (2010) students, especially the experimental group in composing sentences, showed a significant increase of less than 0.05 after utilizing the Trainchinese digital dictionary. In composing a sentence, students feel very facilitated and helped by the existence of a Trainchinese digital dictionary. Moreover, this digital dictionary can be accessed offline without the need for an internet network so that it can facilitate students in learning (Darmawan et al., 2017).

One other thing that is an advantage of this Trainchinese digital dictionary is related to writing accuracy and good sentence patterns. Unlike the case with the Google Translate dictionary which often occurs errors in Chinese sentence patterns. This can happen because the google translate dictionary only interprets according to vocabulary, so the sentence pattern follows the initial sentence. In line with this statement, there is a study conducted by Handayani & Ekantari, (2019) which states that the circulating dictionaries cannot guarantee the quality in it. Therefore, the use of Trainchinese digital dictionaries can help improve understanding and experience in learning Chinese to be further improved, especially in 汉字 (hànzi) stroke material and sentence preparation in Chinese

CONCLUSION

Communication of a language is not only through oral, but also through writing, this also applies to Chinese. One of the oldest characters that is often used is the script with the stroke 汉字 (hànzi). The writing of these strokes also has rules, one of which is the number of strokes. The excess or lack of the number of strokes 汉字 (hànzi) will affect the intended meaning. Therefore, students' knowledge of how to write hanzi汉字 (hànzi) will affect the correctness of writing (Supriadi, 2018). After conducting research with various treatments, it was shown that the group of learners who made use of the Trainchinese digital dictionary had a deeper understanding of writing strokes 汉字 (hànzi). For example, 汉字 (hànzì) '了' has two strokes. Before using the Trainchinese digital dictionary students have an understanding of 汉字 (hànzì) '了' is one stroke because 汉字 (hànzì) looks one step only, but is actually two steps. If it is only one stroke, then the writing will not form 汉字 (hànzì) '了 '. 汉字 (hànzì) in question is

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The use of a learning medium will not be useful if it technically does not meet the criteria needed by students in learning. Reflecting on these conditions, then to reach the level of usefulness of a dictionary. need several technical criteria that must be met (Terng &; Giap, 2010: 1). In this study before carrying out the learning process using the Trainchinese digital dictionary, students are first asked to understand the technical use and recognize various features that can be utilized in the Chinese learning process. This aims to help students in an effort to maximize the learning process so that the objectives in learning can be achieved optimally.

In addition to writing strokes 汉字 (hànzi), the arrangement of sentences in Chinese is also important because it will affect the meaning of the sentences composed. After the study, the learning outcomes of students, especially the experimental group in composing sentences, showed a significant increase of less than 0.05 after utilizing the Trainchinese digital dictionary. In composing a sentence, students feel very facilitated and helped by the existence of a Trainchinese digital dictionary. One other thing that is an advantage of this Trainchinese digital dictionary is related to writing accuracy and good sentence patterns. Unlike the case with the Google Translate dictionary which often occurs errors in Chinese sentence patterns. This can happen because the google translate dictionary only interprets according to vocabulary, so the sentence pattern follows the initial sentence. Therefore, the use of Trainchinese digital dictionaries can help improve understanding and experience in learning Chinese to be further improved, especially in 汉字 (hànzi) stroke material and sentence preparation in Chinese.

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