

Research on the Application of Chinese Teaching Based on Social Media Video Platforms

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ABSTRACT

Video platform is not only a social tool but also an educational tool. The survey found that Vietnamese Chinese learners widely use YouTube to learn Chinese. However, there is not much research on it. Under the guidance of constructivism, language acquisition theory, and immersion theory, this study aims to explore the effectiveness of using YouTube for Chinese teaching. Through the comprehensive methods of questionnaire survey and teaching experiment, the study found that the use of YouTube teaching has a positive impact on Chinese learning. They generally believe that YouTube creates a more real language environment, which is conducive to Chinese learning.

KEYWORDS

Chinese Language Learning, Online Education, Social Media, Student Achievement, YouTube

INTRODUCTION

In recent years, the invention of the internet has led to the digital revolution and the emergence of communication and information sharing technology. The demand for affordable, portable and accessible information and communication technology has led to the emergence of social media (Barrot, 2021). Social media can be shared and accessed due to its platform integration. It can be also used for collaborative, collective learning because of its connectivity. (Xue & Churchill, 2019). Social media-based learning (SMBL) uses social media-based platforms, such as Twitter, Google Plus, Facebook, and YouTube, for learning purposes. It promotes real-time interaction, participation and cooperative learning among people in real time (Rahman, Yang, Noh & Lee, 2021). The progress of science and technology has a great influence on language teaching. Social networking sites have great potential to influence language learning because these technologies have become an integral part of young people's lives (Blattner & Fiori, 2009). At present, there is little research on the educational application of mobile social media in language learning. Therefore, it is necessary to use some research to prove the effectiveness of social media on language learning.

China and Vietnam belong to the cultural circle of Chinese characters. The two countries have a long history of language and culture. China and Vietnam are neighbors. They have frequent economic

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and trade exchanges and people-to-people exchanges. Therefore, there are more Chinese learners in Vietnam. Most students who use Chinese as a foreign language lack sufficient opportunities to practice their language skills. However, the development of social networking sites provide these learners with new opportunities for meaningful learning (Sun et al., 2017). According to the questionnaire, this study found that more people were using YouTube in Vietnam. The questionnaire also investigated the cognition and willingness of Vietnamese learners of Chinese to use YouTube. Based on the investigation, this study carried out an experiment applying YouTube to Chinese teaching. Further, it proved that YouTube was beneficial to Chinese learning through interviews.

LITERATURE REVIEW

An advanced search was conducted in the CSSCI database (Chinese Social Sciences Citation Index), doctoral dissertation database of CNKI in Chinese, Springer link and SCI and SSCI source journals on the Web of Science in English. The search criteria were “(subject: social media/website)”, (subject: language + Chinese) and (subject: education + language)”. The time span was not limited. The search results were manually screened for invalid literature, and these studies were analyzed and summarized.

There are four main social media platforms, Facebook, Instagram, Twitter and YouTube, which are widely used in education. Facebook is a popular social networking site worldwide. Like many other new technologies, it has the potential of teaching and learning because it has unique built-in functions and provides inspiration for teaching, society and technology (Wang, Woo, Quek, Yang & Mei, 2012). There are many studies on using Facebook for language education. Compared with Facebook, there are few studies on the use of Instagram, Twitter and YouTube in language education.

The widespread use of social media platforms is a double-edged sword for language learning, which brings much convenience to language learning. For example, it creates more language learning opportunities and increases learning enthusiasm. Still, social media can also bring adverse effects, such as distracting students' attention, affecting students' independent thinking and communication in the real language environment. Previous studies mostly focused on the beneficial effects of social media on English learning, but there were few studies on the adverse effects. The research on social media language education in the past few years has mainly focused on the application of social media in English extracurricular teaching. The research wanted to prove whether the use of social media was beneficial to language learning through questionnaires or experiments. Aubry (2013) experimentally studied the influence of teachers' use of Facebook for self-disclosure on students' motivation types in language learning. The research results proved that teachers' use of the Facebook social network platform was beneficial to students' language learning. Fewell (2014) mentioned that the rise of Twitter has increased second language learning opportunities for students. The application of Twitter in a project has promoted the language communication of foreign language learners after class. Balcikanli (2015) studied the influence of future English teachers' use of Facebook. The study found that using Facebook had positive significance, and students felt that the learning environment using social networks provided a more interesting learning experience. Taskiran, Gumusoglu and Aydin (2018) investigated the social networking site Twitter and formed an online community for foreign language learning. Research showed that on Twitter, social interaction was convenient for creating a community for online learning. Twitter has proved to be a platform for promoting and facilitating extracurricular writing activities. Mansor & Rahim (2017) investigated the situation of students using the Instagram platform for language learning. The research showed that Instagram was an effective platform for students to interact. It also proved that Instagram could stimulate students' interest in language learning. Throughout the collected literature, most studies showed that social media was beneficial to language teaching. Still, a few studies showed that social media was not conducive to language teaching. For example, Alm (2015) conducted a questionnaire survey to investigate the use of Facebook in extracurricular informal language learning. The results showed that learning experiences on Facebook were not considered useful for formal language learning environments.

In the last two or three years, research on social media has gradually deepened. According to the existing literature, social media has always been used for extracurricular language teaching. Social media created a real language and interactive learning environment. It was conducive to improving students' language skills and other aspects. The research suggested that social media should be applied to classroom teaching. Blattner and Dalola (2018) investigated that Twitter as a real and dynamic online language environment not only helped to enrich learners' language culture, but also improved practical social awareness. Moreover, Twitter could cultivate their multi-literacy skills in the second language. Taskiran (2018) found that extracurricular English learning on Twitter could help students' language learning experience. The author suggested that social networks such as Twitter should be incorporated into language teaching. Soviyah and Etikaningsih (2018) used the method of experimental research to investigate whether using Instagram to teach students picture writing was more effective than not using Instagram. Borekci and Aydin (2020) studied the interaction between English teachers and students on Facebook. The study suggested that English teachers should create a positive interactive environment on Facebook to support learners' personal and academic development. Sumi and HyeonCheol (2021) used qualitative methods to study the use of YouTube by Korean students in the United States. The study showed YouTube helped students learn language and culture.

English is the most widely used language globally, and most of the current studies use social media platforms to learn English. By contrast, there are far fewer social media platforms for Learning Chinese. Through understanding and investigation, more people in Vietnam are using YouTube to learn Chinese. In the post-epidemic era, face-to-face communication has plummeted. Therefore, it is meaningful to study the use of YouTube for Chinese education based on learners' interests, which is a difficult language to master.

THEORETICAL BASIS

Constructivist Theory

Constructivist learning theory originated from the works of Bruner (1961), Vygotsky (1962) and Piaget (1980). Constructivism advocates a student-centred teaching mode, emphasizing student-centred, problem-based learning, cooperative inquiry learning and situational learning. Constructivism posits that learning is a process of the positive and active construction of knowledge. According to constructivism, learning is determined by the complex interaction between learners, learners' existing knowledge, social background and problems to be solved (Tam, 2000). To promote students' learning, it is necessary to create a learning environment for learners to have direct contact with the materials they have learned. Only by experiencing the world directly can learners obtain meaning from it. That is, constructivist learning must be carried out in an appropriate constructivist learning environment (Olusegun, 2015).

In the classroom, constructivism learning can point to many different teaching practices. In the most common sense, it usually means encouraging students to use positive skills to create more knowledge (Oliver, 2000). Teachers use social media as teaching resources to introduce the outside world into the classroom. Students can obtain learning experiences close to the real world, accelerate the integration of learning and life, create corresponding language learning situations for students, and stimulate students' learning initiative. Students use the cultural situation, language situation and knowledge situation created by social media to store, process and construct the meaning of language information in an autonomous, personalized and open way.

Krashen's "Input Hypothesis"

Krashen, an American linguist, proposed the input hypothesis in the early 1980s. The Acquisition-learning hypothesis is one of them. The hypothesis is the foundation of modern language learning theory and the core of Krashen's second language acquisition theory. Krashen believes that learning

and acquisition are two different language learning processes. Learning refers to consciously learning a language in a regular classroom and school environment; acquisition, on the other hand, refers to the process of natural language learning without formal means. Although adults cannot learn a language completely through natural acquisition as children do, they can make foreign language learning close to natural acquisition by simulating a “natural language acquisition environment”. Social media provides the necessary material conditions for the creation of a natural environment for foreign language learning. It integrates audio-visual, oral and sensory functions. It also integrates sound, image, text and other information dissemination functions so that students can learn a foreign language in a more real language environment.

Immersion Theory

Mihaly Csikszentmihalyi, a psychologist in Chicago, came up with the “flow theory” in 1975. Mihaly believes that when people are engaged in some everyday activity, they are fully engaged, intensely focused, filtering out all irrelevant perceptions and entering a state of immersion. There are four characteristics of immersion (Mendoza, 2021).

First, immersion requires attention. Brow and Cairns (2004), in a study conducted with video game players, identified three sources of attention: visual, auditory and mental. Second, immersion involves emotional engagement. Third, if one is immersed in an activity, multi-sensory stimulation is important. Finally, the combination of attention, emotional engagement, and stimulation may cause an individual to stay focused and continue to work on a particular task, giving the impression of being detached from the real world. Social media applies real-life situations to teaching and stimulates visual senses through image elements, stimulating the auditory senses with sound. The use of social media in teaching can stimulate learners’ multiple senses and immerse them in attention and emotion, promoting the improvement of learning efficiency.

RESEARCH METHODS

A hybrid approach was adopted in this study. First, a questionnaire survey was conducted on Vietnamese students’ use of social media platforms to understand their use of these platforms. Second, a widely used social media platform was selected to survey students’ views and intentions of using it. Third, an experimental study was conducted to investigate the learning effects of using social media platforms using pretests and post-tests. Finally, the experimental group members were interviewed to further understand the experimental group’s views on experiencing a social media platform for Chinese learning after the experiment.

RESEARCH OBJECT AND BACKGROUND

A questionnaire survey was conducted on Chinese learners at three universities in Vietnam. The three Vietnamese universities are respectively: Da Nang University of Foreign Studies, Duy Tan University, and Eastern Asia University. All three universities are in Da Nang, Vietnam. They are ranked 6th, 89th and 3rd in Vietnam. The data collected by the questionnaires were divided into two parts. The first part was the survey results of demographic statistics, which mainly include the names, surnames, ages and Chinese learning time of participants. The second part is the survey of Chinese learners’ use of social communication media. The questionnaires were written in Vietnamese and in Chinese.

According to the survey, the most popular social communication media platform for Chinese learners in Vietnam is YouTube, which almost everyone uses. The second most popular platforms are Instagram and Twitter. The following is Facebook. Other platforms, such as Pinterest and LinkedIn, are not very popular social media platforms. Since Chinese learners in Vietnam widely use YouTube as a social communication media platform for Chinese language learning, there is little research

Table 1. Demographic Survey Results

	Survey	Frequency	Percent
Gender	Male	86	40.6
	Female	126	59.4
Age	18 and below	9	4.2
	18-22	103	48.6
	23-25	85	40.1
	25 and over	15	7.1
Chinese-Language Level	HSK2 and below	28	13.2
	HSK3-5	132	62.2
	HSK6 and over	31	14.6
	Did not take HSK test, but can communicate basically	21	9.9

Table 2. Survey of users of social communication media platforms

Platform	YouTube	Instagram	Twitter	Facebook	Pinterest	Linkedin	Other
Number of people	212	132	113	102	54	32	24

on social media YouTube for language education. This study explores Vietnamese learners' use of YouTube for Chinese language learning, the learning effect of using YouTube for Chinese language teaching and the learners' views after using YouTube for Chinese language learning.

STUDY DESIGN

Questionnaire Survey

The questionnaire investigated Vietnamese learners' use of YouTube for Chinese learning. The questionnaire was divided into four sections. The "perceive the usefulness of YouTube Chinese learning" (Items 1-7) section was adapted from Alsharidi's (2018) Twitter for the language learning questionnaire. The section titled "perceive the scale of Chinese learning on YouTube" (Items 8-11) was from Zhou (2017), Lin, Wu and Tsai (2004). The "satisfaction survey on the use of YouTube" (Items 12-16) section was recomposed from Oliver's (1980) and Battachejee's (2008) questionnaires. Finally, the section titled "willing to continue to use YouTube for Chinese learning" (Items 17-19) was from Battachejee's (2008), Xie's (2016) and Chen's (2018) questionnaires. The items structure of the survey ranged from students' basic cognition to their perception of the scale of YouTube use and then to their satisfaction with the use and their intention to continue using it. The survey items were reviewed by experts in the fields of education and linguistics. The accuracy, appropriateness and clarity of the items were revised to ensure the scale's fluency, accuracy and surface effectiveness. The scale adopted 5-scale Likert scoring form (1 represents "strongly disagree", 2 represents "strongly disagree", 3 represents "generally", 4 represents "strongly agree", and 5 represents "strongly agree"). The higher the score was, the stronger the cognition and willingness.

Experimental Study

To investigate YouTube for the effect of Chinese teaching, this research employed a group of experts to formulate the teaching content, teaching process and assess the results of audit work. The panel consisted of three members. Two of them were Chinese and one was Vietnamese. All of them were doctors in linguistics. The experts have worked with a speciality in Chinese education for more than 10 years. They had a senior title among professional teachers, as well as were proficient in Vietnamese, English and Chinese.

To ensure the learning effect of participants, this study selected second-year students of Da Nang University of Foreign Studies to participate in the teaching practice. They have the same level of Chinese. The selection criteria were as follows:

1. The time spent learning Chinese was more than 100 hours but not more than 150 hours.
2. According to the learning time, the expert group selected 15 Chinese proficiency test questions of the corresponding level from the HSK test bank. 100 people participated in the test. The two students with the highest score and 10 with the lowest score were removed from the study. Based on the experts' comprehensive evaluation of the reading and conversation ability of the students, 60 students were finally selected.

Through the comprehensive evaluation of the pretest Chinese proficiency, it was found that the final selected 60 students had a unified standard Chinese language proficiency, which was conducive to the subsequent test regarding the evaluation of the teaching effect. Then, the selected 60 students were randomly assigned into two classes. 30 students were the experimental class. The other 30 were the control group. The experiment was ensured that the distribution of their pretest scores was a normal standard distribution.

The course name was HSK4 Level Guidance. The textbook used by both groups was Standard Course HSK4. The teacher of the two classes was the same Vietnamese expert with a senior professional title. He has been working as an international teacher of Chinese for more than 10 years. He was proficient in Vietnamese. The Chinese level of him has reached an advanced level or above. The teacher had a teaching assistant, who was Chinese with a senior title, engaged in Chinese international teaching for more than 10 years, and proficient in Chinese and English.

The teaching experiment lasted from October 5, 2020 to November 30, 2021. The experiment lasted for 8 weeks, with 4 classes per week and 50 minutes per class. The total teaching time was 1600 minutes. The same teacher team taught the experimental group and the control group in turn. The experimental group was at Monday and Tuesday every week. The control group was at Wednesday and Thursday every week. Each of the 4 lessons was a teaching session, teaching one course of the teaching material. The teaching practice flow for each teaching session was shown in Table 1 below:

After eight weeks of the experiment, students learned eight lessons in total, and the expert group selected Chinese proficiency test questions from the HSK4 test bank according to the learning content.

HSK is an international standardized test of Chinese language proficiency, the interrater reliability of HSK test is up to standard. The students have never touched any of the tests. After the experiment, the expert group conducted a quantitative analysis of the students' pretest and post-test scores using the SPSS Statistics 21.0 tool.

Interview Survey

To understand Vietnamese learners' views on their experience of learning Chinese with YouTube, researchers collected data through interviews. The interviews were also accomplished in Vietnamese and in Chinese. The researchers transcribed the data into text content for analysis to determine the categories and themes in the interviews.

Table 3. Teaching practice flow of each teaching session

The experimental group	The control group
1.Teaching materials are introduced by the teacher and students listen, read and learn (30mins)	1.Teaching materials are introduced by the teacher and students listen, read and learn (30mins)
2.The teacher choose videos on YouTube with similar themes to textbooks, and students watch the videos to learn (30mins)	2.The teacher plays the recording of the textbook, students listen to the tape to learn (30mins)
3.panel discussion (40mins)	3.panel discussion (40mins)
4.The group recorded videos around the theme and uploaded them to YouTube, and students made interactive comments (40mins)	4.Groups make comments around the topic and students evaluate each other (40mins)
5.The teacher commented on the students' performance (20mins)	5.The teacher commented on the students' performance (20mins)
6.Quiz and analysis (40mins)	6.Quiz and analysis (40mins)

Findings for Research Question 1

To confirm the reliability of the Chinese learning questionnaire on the YouTube platform, the reliability of the questionnaire was tested. The total reliability of the aggregate table was 0.859, and the reliability of the perceived value of using YouTube for Chinese learning was 0.746. The scale reliability of the perceived value of using YouTube for Chinese learning was 0.800. The scale reliability of the perceived value of using YouTube for Chinese learning was 0.833. The willingness to continue using YouTube for Chinese learning was 0.728. Devellis (1991) proposed that the value range of Cronbach's α coefficient between 0.70 and 0.80 was quite good. Cronbach's α coefficients ranging between 0.80 and 0.90 were good. The reliability test of the questionnaire scale showed that the scale had good reliability, and the factors had good internal consistency and stability.

Table 4. Reliability analysis of Chinese learning questionnaire using YouTube

Scale dimension	Perceive the usefulness of YouTube Chinese learning	Perceive the Scale of Chinese Learning on YouTube	Satisfaction survey on the use of YouTube	Willing to continue to use YouTube for Chinese learning	Total table
Item number	7	4	5	3	20
Cronbach's α	0.746	0.751	0.800	0.728	0.859

This questionnaire was based on the reference literature. The opinions were consulted from educational technology experts, linguistics experts and Chinese language teachers. The questionnaire was revised according to their feedback results. The questionnaire containing 19 items about Chinese learning on the YouTube media platform was finally formed. The review by experts and scholars better ensured the surface validity of the questionnaire. After exploratory factor analysis, the KMO value was 0.814 (>0.8), indicating that the original data were strongly correlated (Kaiser & Rice 1974). The Sig value of the Bartlett test was 0.000 ($P < 0.001$), and 4 factors were finally extracted, indicating that the questionnaire had good structural validity.

In the analysis of the survey items on Vietnamese students' use of YouTube for Chinese learning, descriptive statistics were conducted according to the students' answers. The mean value was between

Table 5. Validity analysis of Chinese learning questionnaire using YouTube

Sampling the Kaiser-Meyer-Olkin measure of adequacy		.814
Bartlett's test of sphericity results	Approximate chi-square	752.535
	df	171
	Sig.	.000

0 and 1, indicating that students completely disagreed with the items. The mean value was between 1 and 2, indicating that students disagreed with the items. The mean value was between 2 and 3, indicating that students were neutral. The mean value was between 3 and 4, indicating that students agreed with the items. The mean value was between 4 and 5, indicating that students completely agreed with the items.

In the section of the questionnaire survey titled “Using YouTube to Learn Chinese”, the students’ perceived value, satisfaction and willingness to use YouTube were understood through data. According to the questionnaire survey, students believed that they could not only learn many new Chinese vocabulary words (M=3.82) and Chinese grammar structure (M=3.78) but also learn Chinese language and culture (M=3.75) from YouTube. They also believed that YouTube provided a real language environment (M=3.79), there was no pressure to learn Chinese on YouTube (M=4.27), they could watch meaningful Chinese videos on the YouTube media platform, and they could learn Chinese naturally (M=4.02). Overall, students generally believed that their Chinese proficiency has improved by learning Chinese on YouTube (M=3.80).

Table 6. Perceive the usefulness of YouTube Chinese learning

	N	Min	Max	Mean	Std.Deviation
When I learn Chinese on You Tube, I learn a lot of new vocabulary.	212	2	5	3.82	.625
I've found that my Chinese has improved since I started studying on YouTube.	212	1	5	3.80	.600
I believe You Tube can help me learn Chinese language structure.	212	3	5	3.78	.554
I prefer You Tube, because I can learn more about Chinese language and culture from it.	212	3	5	3.75	.550
When I'm learning Chinese on You Tube, I'm exposed to real language.	212	3	5	3.79	.568
When I'm learning Chinese on YouTube, I have no pressure.	212	3	5	4.27	.634
I think YouTube is a natural place to learn Chinese because I can watch meaningful videos.	212	2	5	4.02	.596

In the scale survey of students’ perception of using YouTube to learn Chinese, the results showed that students generally felt that people learning Chinese were You Tubers (M=4.01) and that many people were using YouTube to learn Chinese (M=4.03). They believed that an increasing number of people would use YouTube to learn Chinese (M=4.12) and that their friends would use YouTube to learn Chinese in the future (M=4.09).

Table 7. Perceive the scale of Chinese learning using YouTube

	N	Min	Max	Mean	Std.Deviation
I think a lot of people who are learning Chinese are YouTube users.	212	2	5	4.01	.605
I think a lot of people are using You Tube to learn Chinese.	212	3	5	4.03	.482
I think more and more people will use You Tube to learn Chinese.	212	3	5	4.12	.491
I think my friends will use YouTube to learn Chinese in the future.	212	3	5	4.09	.463

Table 8. Satisfaction survey on the use of YouTube

	N	Min	Max	Mean	Std.Deviation
I am satisfied with the information on Chinese learning provided by YouTube.	212	3	5	4.16	.500
I am satisfied with the process and experience of using You Tube to learn Chinese.	212	2	5	4.12	.554
I am generally very satisfied with using You Tube to learn Chinese.	212	1	5	4.10	.716
I think it is a wise choice to use You Tube to learn Chinese.	212	3	5	4.11	.433
Compared with other Chinese learning platforms, I am more satisfied with You Tube.	212	2	5	4.19	.556

In the survey of students' satisfaction with Chinese learning on YouTube, the research results showed that students were satisfied with the Chinese learning information provided on YouTube ($M=4.16$). They were satisfied with the process and experience of using YouTube to learn Chinese ($M=4.12$). Students were satisfied with YouTube as a whole ($M=4.11$) and thought it was a wise choice to use YouTube to learn Chinese ($M=4.11$). Compared with other Chinese learning platforms, students were more satisfied with YouTube ($M=4.19$).

In the survey of students' continuous willingness to use YouTube to learn Chinese, the research results showed that students were willing to continue to use YouTube to learn Chinese ($M=4.23$) and would often use YouTube to learn Chinese ($M=4.26$). Students also recommend the use of the YouTube platform for relatives and friends who were learning Chinese ($M=4.42$).

Table 9. Survey on Continuing Intention to Learn Chinese Using YouTube

	N	Min	Max	Mean	Std.Deviation
I will like to continue to use You Tube to learn Chinese.	212	3	5	4.23	.496
I often use You Tube to learn Chinese.	212	3	5	4.26	.534
I will like to recommend my friends and relatives who are learning Chinese to use YouTube.	212	2	5	4.42	.598

Findings for Research Question 2

Before the experiment, the two classes were pretested, and the test results showed a normal distribution so that the independent sample T test could be carried out.

Comparison Of Experimental Group and Control Group In Pretest Chinese Scores

The pretest results showed that the average score of the experimental group was 61.33, and the average score of the control group was 60.73. The average score of the two classes showed no significant difference. After the independent sample T test, Levene’s test results showed homogeneity of variance ($F=0.786$, $Sig.=0.379$), $t=0.235$, $Sig. (2-tailed) =0.815$, independent sample t test results showed no significant statistical difference in the performance between the experimental class and the control class. These results indicated that there was little difference between the two classes’ pretest scores.

Table 10. Statistics of pretest scores of the experimental group and the control group

		N	Mean	Std. Deviation	Std. Error Mean
Pretest scores	Experimental group	30	61.33	9.353	1.708
	control group	30	60.73	10.432	1.905

Table 11. Statistical results of pretest scores of the experimental group and the control group

		Levene’s Test for Equality of Variances		T-test for Equality of Means			
		F	Sig.	t	df	Sig. (2-Tailed)	Mean Differences
Pretest scores	Equal variances assumed	.786	.379	.235	58	.815	.600
	Equal variances not assumed			.235	57.322	.815	.600

The above data showed that the independent sample t test was adopted for students’ test results. There was no significant difference in the scores of the two classes, which indicated that the Chinese proficiency of students in the two classes was similar. After an 8-weeks experiment, the two classes were tested again, and the results of this test were taken as the post-test data.

Comparison Of the Post-Test Chinese Scores Of The Experimental Group And Control Group

In the experiment process, teachers in the experimental group used the resources on YouTube to teach. In contrast, the control group used the teaching materials with their own resources. After the intervention of YouTube for a period of time, the experimental group and the control group were tested on the same type of question. The test examined the effect of using different language teaching resources and Chinese learning levels. The test results showed that the average score of the experimental group was 74.87 and the control group was 65.83, which was significantly higher in the experimental group than in the control group. After the independent sample t test, Levene’s test results showed a homogenization of variance ($F=0.966$, $Sig.=0.330$), $t=4.600$, $Sig. (2-tailed)$

=0.000, independent sample t test results showed that there was a significant statistical difference in the performance between the experimental and the control class. This difference showed that students' Chinese level had made great progress in language teaching by using YouTube teaching resources.

Table 12. Statistics of post-test scores of the experimental group and the control group

		N	Mean	Std. Deviation	Std. Error Me
Post-test scores	Experimental group	30	74.87	8.316	1.518
	control group	30	65.83	6.823	1.246

Table 13. Results of post-test scores of the experimental group and the control group

		Levene's Test for Equality of Variance		T-test for Equality of Means			
		F	Sig.	t	df	Sig.(2-Tailed)	Mean Differences
Post-test scores	Equal variances assumed	.966	.330	4.600	58	.000	9.033
	Equal variances not assumed			4.600	55.869	.000	9.033

Comparison Of Score Data Between the Pretest And Post-Test In The Experimental Group

To further test the learning effect of Chinese learners using YouTube, a paired sample t test was used to test the mean value and correlation of the pretest and the back data.

Table 14. Paired samples correlations between pretest and post-test of the experimental class

		N	Correlation	Sig.
Experimental group	Pari1 pretest-post test	30	.961	.000

Table 15. Paired samples t test results of pretest and post-test in the experimental class

		Paried Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Experimental group	Pari1 pretest-post-test	-13.533	2.675	.488	-14.532	-12.535	-27.713	29	.000

From the correlation analysis of the pretest and post-test, it could be seen that the correlation coefficient between the pretest score and the post-test score was 0.961, sig.=0.000, which showed that the pretest score and the post-test score were significantly related. The paired t test results showed that $t=-27.713$, Sig. (2-tailed)=0.000, that was $p<0.005$, indicating a significant correlation between the pretest scores and the post-test scores, which proved that the YouTube video platform was used for Chinese teaching. Students' Chinese learning performance had a significant impact.

Through data analysis before and after the experiment, the research results showed that in the YouTube social media language teaching environment, the students' Chinese learning level was significantly improved. The use of the YouTube video streaming media platform as a language education tool was statistically significant.

Findings for Research Question 3

After using the YouTube platform for Chinese teaching in the experimental group, the depth interviews were conducted with the students in the experimental group who volunteered to participate in the interviews. The topics of conversation with the students were classified. The main topics were listed below.

Table 16. Recurring Themes emerged in the interview of students in the experimental group

Themes	Participants
Exposure to Language, The language environment	A,B
Focus on learning Chinese	C,E,F
Improve Chinese language ability	A,B,C,D,E,F
Reduce the pressure of learning Chinese in class	A,C
Enhance the motivation of learning Chinese	A,B,C
Others	E,F

According to the students who volunteered to participate in the interview, they found that YouTube was an indispensable part of their daily life. Student A said, "Whenever I have a moment of free time, I open YouTube and watch it for a while. If I don't watch a video every once in a while, I feel something is missing. Since we use YouTube for Chinese language teaching, I will pay more attention to comments related to the course content." Student B said, "I usually open YouTube when I'm out on the bus or I'm in the coffee shop or I'm relaxing in my dorm room and I learn a lot from it."

YouTube played a positive role in the development of students' Chinese language ability. All the students who participated in the interview believed that they could practice Chinese pronunciation through video clips, which could not only improve their oral Chinese expression ability but also improved their listening level. At the same time, they also believed that they could improve their Chinese reading skills by using YouTube to learn Chinese. Student C said, "When I watch idioms, stories or phrases on YouTube, I can not only learn more words or phrases but also understand the meaning of the words or phrases, which is conducive to improving my Chinese reading comprehension." "Some idioms or stories on YouTube can help you understand Chinese culture and improve your reading skills," Student D added. Student E and student F said, "We post our oral practice videos on YouTube. Not only do we find them interesting, but teachers, classmates or friends can also help me correct my mistakes and increase my enthusiasm for learning Chinese."

Using YouTube as a Chinese teaching tool could make students more focused on Chinese learning. Student C said, "I used to watch all kinds of videos on social media, but now the teacher

uses YouTube in Chinese teaching, so I pay more attention to learning Chinese. I often focus on preview or review of the course content. I also often discuss with my classmates which Chinese videos are more interesting.” Student E said, “We will focus on learning the content of the video in class. In addition to this, we will exchange and learn some Chinese knowledge related to the course after class.” Student F also said, “I used to get distracted by playing my mobile phone. Now, when I want to finish my course work, I will focus on YouTube and continue my Chinese learning task.”

The use of YouTube teaching resources in class could relieve students’ pressure on Chinese learning. In classroom learning, teachers and students communicated face to face and participated together, and some students felt very depressed. Still, in the language learning environment of YouTube, it would relieve students’ anxiety. Student A said, “I will feel shy in class. I’m always afraid of making mistakes. I’m afraid that the teachers will laugh at me. But now I don’t feel any pressure to make comments, ask or answer questions on YouTube, or send exercise videos.” Student C said, “When I’m in a large group, I feel their eyes are on me. I feel very nervous and under great pressure. But now when I’m on the video account, I feel free and relaxed.”

The use of YouTube teaching could enhance students’ motivation to learn Chinese. Student A said, “When I watch the videos, I felt Chinese is very interesting. I’m very interested in Chinese language and culture, folk customs, special scenic spots and so on. I hope I will come to China to study and live. These videos have enhanced my motivation to learn Chinese well.” Another student B said, “When I’m shooting videos related to Chinese learning, I practice over and over again. I’m very motivated until I get the best result. I felt it is very interesting to learn Chinese in this way.” Student C said, “But after I send the Chinese practice videos, I often read the posts in the comments section. These posts are very interesting. Whether they are praise or criticism, they can motivate me to learn Chinese.”

The improvement of Chinese proficiency was closely related to contact with the language environment. Student E said: “In Vietnam, the language environment for learning Chinese is limited. I can’t often communicate with Chinese people. The Chinese language and cultural environment presented on YouTube can give me more opportunities to learn in the Chinese environment, which is very helpful for language learning.” Student F said, “With the development of science and technology, language learning cannot always adopt traditional teaching methods but should be closely combined with modern science and technology. In this way, we can not only have fun but also learn Chinese easily, which is a very happy thing.”

DISCUSSION AND CONCLUSION

Social media can stimulate discussions, increase engagement and facilitate knowledge sharing. So social media is favoured by learners and educators for these ability. However, up to now, there are few studies on the use of social media in the classroom teaching experience. This study explores the application of YouTube to Chinese teaching and discovers the following points:

1. The YouTube video platform is often used by Vietnamese learners of Chinese. Through the questionnaire survey, it was found that almost all learners of Chinese were using YouTube. In terms of perceiving the value of using YouTube, learners of Chinese believed that the YouTube platform was helpful for them to learn Chinese vocabulary, language structure and Chinese culture. They also thought that they can learn Chinese very naturally and easily in a relatively real language environment. In the scale survey of the perception of the use of YouTube, learners generally perceived that people were using the YouTube platform to learn Chinese. They also believed that an increasing number of people would use the YouTube platform in the future. In the survey on the satisfaction of Chinese learning on YouTube, learners of Chinese were satisfied with the Chinese learning information provided by the YouTube platform, the process and experience of learning Chinese. They generally believed that they were more willing to choose YouTube than

other platforms. They also believed that it was better to choose the YouTube platform. According to the survey on the willingness to continue using YouTube to learn Chinese, Vietnamese students were willing to continue using YouTube to learn Chinese. They would often use YouTube to learn Chinese in the future. They also recommend their relatives and friends who were learning Chinese to use the YouTube platform.

2. In the past, the number of studies on YouTube by scholars was limited, especially the application of the YouTube platform in language education. This research was carried out through experiments. In Chinese teaching, teachers used YouTube as an auxiliary language teaching method. After a period of learning, teachers assessed students from four aspects: listening, speaking (mainly to assess communication ability), writing ability and reading ability. The results showed that the students' Chinese learning performance has been significantly improved. The experiment proved that the use of YouTube in Chinese teaching was helpful to improve students' Chinese competence and level.
3. Through interviews with the experimental group of students, the effects of the application of YouTube in Chinese education were perceptually understood. The interview results showed that students in the experimental group generally believed that YouTube video teaching was more colourful. It created a good language environment. Students were placed in a Chinese background and immersed in the Chinese environment, which could boost focus on learning Chinese and promote motivation. Interviewed students also believed that using YouTube for video teaching could relieve anxiety and discomfort in the process of learning Chinese. They also thought using YouTube could improve their Chinese proficiency in a relaxed environment by combining teaching with fun.

LIMITATIONS OF THE STUDY

Although this study has been carefully designed and implemented, it also has some limitations. In terms of the design of the questionnaire, we drew on the previous research results and tried our best to meet the ideal requirements in terms of reliability and validity, but the stability of the questionnaire need to be further verified.

In the selected samples, this study selected students from three Vietnam schools with Chinese learning. Although we adopted many investigation strategies, the sample was still small. Different countries, different regions and different groups had different ways of using YouTube as a learning resource. In the future, we will choose a more reasonable investigation method. We will expand the scope and quantity of sample as much as possible. We also will improve the representativeness of the sample and the scientific nature of the data.

In terms of experimental research, the duration of the experimental teaching is short, so it can't be ruled out that the use of new teaching tools increase students' interest, leading to the rise of short-term academic performance. The long-term experimental effects need to be further tracked and demonstrated

In the interviews, fewer students volunteered to participate, so the interview process is highly subjective and arbitrary. In future research, more representative interviews should be carried out to improve the interview quality and research effect.

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