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Application Research of CALT in Teaching Chinese as a Foreign Language - Taking Pontifical Catholic University of Rio de Janeiro as an Example

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Abstract The development of information technology and the application of computer have had a great impact on language teaching. Computer Assisted language teaching (CALT) is a new trend in the development of teaching Chinese as a foreign language. Based on the theory of CALT, this paper makes a detailed investigation and analysis of the present situation of teaching Chinese as a foreign language in the Pontifical Catholic University of Rio de Janeiro in Brazil. It compares the traditional language teaching with CALT, and concludes that CALT has had a positive impact on the learning effect and learning interest of students.

Keywords: *CALT, teaching Chinese as a Foreign Language (TCFL), traditional teaching, questionnaire survey*

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1. Introduction

Computer Assisted Language Teaching (CALT) is a young branch of applied linguistics. Over the past decade, the theory and practice of computer assisted Chinese language teaching have made great progress. In theory, it mainly expresses in the development of Chinese information processing and Chinese computer assisted instruction; the combination of multimedia and network technology and Chinese computer assisted instruction, and the development of Chinese computer assisted instruction in the background of modern educational technology. In practice, it is embodied in Chinese computer assisted instruction and the supporting environment, multimedia classroom teaching design method, multimedia teaching material and resource construction, teaching experiment and test and teaching management.

Based on the existing theories and through the investigation and research, this paper takes multimedia teaching Chinese as a foreign language of Rio de Janeiro Catholic University in Brazil as the research object, investigates the attitudes and needs of foreign students on computer technology assisted instruction, and understand the students' evaluation of the effectiveness of computer assisted instruction. This will contribute to promote communication between teachers and students, to help teachers improve the application of multimedia technology, to improve student motivation and learning efficiency, and finally, to have a very positive impact on promoting the application of modern education methods in the teaching.

2. Application Research and Design of CALT in Teaching Chinese as a Foreign Language

2.1. Research Questions

The research question to be discussed in this paper are as follows:

(1) Whether the CALT in teaching Chinese as a foreign language can improve the Chinese language proficiency of students ?

(2) Which teaching form of CALT in teaching Chinese as a foreign Language is effective?

(3) What are the advantages and problems of CALT in teaching Chinese as a foreign Language?

2.2. Research Subjects

The research subjects of this paper is the Chinese zero-based sophomore students of Pontifical Catholic University of Rio de Janeiro, who are 19 years old, majoring in accounting and public administration.

2.3. Research Procedure

Qualitative and quantitative research methods to be used in this paper.

First, relevant literature and information should be collected and familiar with the relevant theories and research methods;

Second, two parallel classes should be selected to do the experimental study, the number of classes is about 20 people. One for the experimental class, using methods of computer assisted teaching; one for the control class, using the traditional method of writing on the board, which lasts a period of three months.

Third, the method of questionnaire survey should be used to understand the students' mastery level of primary Chinese before and after the experiment;

Fourth, The pre-test and post-test methods should be used to compare the study effect of the experimental class and the control class in the three months, and to analyze the advantages and problems of the CALT.

3. The Research Results and Analysis of CALT

3.1. The Questionnaire Survey and Data Analysis of Students

After a short-time study of Chinese, students have a certain degree of adaptability of the teacher's teaching methods and patterns. The teaching methods and patterns are different, whether the student's response is also different or not? After the introduction of Chinese learning, what is the experience of two classes students? Therefore, the questionnaire for students mainly concentrated on the following three aspects: First, the degree of computer knowledge and the use of the network of students; Second, students understanding of computer assisted language teaching and studying; Third, students use the computer to learn Chinese. Questionnaire of 46 items were distributed, of which 23 were in the experimental group, 20 were valid questionnaires; and 23 in the control group, of which 22 were effectively recovered. Group 1 is the control group (the traditional writing on the blackboard teaching group), group 2 is the experimental group (computer assisted teaching group), the specific comparison table is as follows:

(1) The degree of computer knowledge and the use of the network of students

Table 1. Time of student's access to computer network

		<1year	1year	2years	>2years	Total
control	1	1	1	1	19	22
experimental	3	1	0	1	18	20
Total		2	1	2	37	42

It can be seen that the experimental group and the control group of students have no obvious differences, student groups access computer networks are more than two years in the information age. Student's daily life and study are also draw support from various functions of computer media and network. On the one hand, it shows that the experiments of computer assisted Chinese teaching are relatively objective and oriented to the same group characteristics.

Table 2. Student's acceptance of teaching methods

		Computer	Non-computer	Indifferent	Total
control	1	20	1	1	22
experimental	3	19	1	0	20
Total		39	2	1	42

As can be seen, the students of control group are generally hope that teachers use computer assisted teaching. There are only one student agrees with no matter what kind of teaching methods, which can be ignored. It is concluded that students are overwhelmingly inclined to the computerization of classroom teaching under the influence of the modern educational environment. Even if some traditional teaching methods is conducive to students' language acquisition, students will also be affected by the use of computer assisted instruction in other courses, they prefer to use computers, and thus they cannot fully accept the traditional language acquisition. But almost all the students of experimental group choose the way of computer assisted teaching without suspense.

(2) Students' understanding of CALT

Table 3. Student's acceptance of teaching methods

	Detailed understanding		Have some understanding	Not very understanding	Not understanding	Total
control	1	7	4	7	4	22
experimental	3	6	10	3	1	20
Total	13		14	10	5	42

On the degree of understanding of CALT, one-third of the control group and experimental group of students choose " Detailed understanding ", which means that It shows that there are some students in the two classes has a certain understanding of the computer assisted language teaching and learning before, they are more familiar with the application of this area, who belongs to a group with better foundation on class. There are some differences in the degree of "understand", of which only four students in the control group have understanding with CALT, while most of the students of experimental group have a certain understanding of it, and initial contact and start learning to use this means, which is a good learning situation.

Table 4. The attitudes of students to computer assisted instruction

		Like	Indifferent	Total
control	1	9	13	22
experimental	3	14	6	20
Total		23	19	42

Table 5. The attitude of students to teachers in computer assisted instruction

		Like	Indifferent	Total
control	1	12	10	22
experimental	3	13	7	20
Total		25	17	42

There is no significant difference between the two classes in the attitudes of computer assisted instruction. Because group 1 is the control group, they did not contact with CALT method at this stage, so most students holds the attitude of "indifferent"; and group 2 is the experimental group, so the majority of the students holds the attitude of "like", minority of the students holds the attitude of "indifferent". However, in general, students tend to choose the computer to assist teachers in teaching. Students are inclined to choose the computer to help teacher assisted teaching.

(3) The situation of students use computer assisted Chinese learning

Table 6. The frequency of Chinese learning by means of computer multimedia technology

		Usually	Sometimes	Seldom	Never	Total
Control	1	4	8	9	1	22
Experimental	3	12	3	5	0	20
Total		16	11	14	1	42

According to Table 6, there are statistical differences between the experimental group and the control group on “whether the students learn Chinese by means of computer multimedia technology”, and this conclusion also reflects the role of computer assisted Chinese teaching and learning. According to the results of data comparison of this group, there are 12 students in the experimental group "often use computer assisted Chinese learning ", while there are only 4 people in the control group, the gap is obvious, which shows that teachers will influenced under the guidance of the use of computer assisted instruction, and they will generate consciousness of using computer to help learn Chinese under this technology atmosphere. Less contact with CALT during the traditional writing process and not too much guidance and emphasis from teacher, the students in the control group is not sensitive enough with the use of computers for Chinese learning. In addition, the table can also be found that there are no one in the experimental group "did not use computer to help Chinese learning", while there are 1 person in the control group. It means that CALT still requires teachers to lead the way.

Table 7. Students' views on whether CALT can promote Chinese language learning

		Greatly promotion	Relative promotion	Indifferent	Not promotion	Total
Control	1	15	4	2	1	22
Experimental	3	14	6	0	0	20
Total		29	10	2	1	42

Table 7 shows that all students in the experimental group believes that CALT can promote Chinese learning, while a total of 3 people in the control group thinks that "indifferent and no promotion". This result is sufficient to illustrate the use of CALT has a significant role on assisted teaching Chinese as a foreign language

In the control group, there were 15 people who chose " CALT can promote learning", which was one more than the experimental group. The reason for this questionnaire is that the students in the control group, when communicating with the students in the experimental group, found that they had little knowledge of the Chinese language and the origin of Chinese culture, and that if the teachers could use CALT to assist teaching, the interest in learning Chinese will be greatly improved. The Sapir-Wulf hypothesis argues that "The cultural concepts and classifications involved in different languages affect the perception of the real world of the language user." Contextual knowledge appears to be irrelevant to the textbook content, but it can affect the cognition of language learners to the language learning. Only grasp the law of the language in macro, can we get a better follow-up learning.

Table 8 shows the students' preference for learning media. There are 31 Brazilian students agree undesignedly to choose the "audio and video" as the primary means of the media. Simultaneous visual and sound effects enable the learner to produce a deeper imprint of learning. The choice of "text" is only 1 people, but it also reflects the general learning attitude of Brazilian college students is prefer to watch video and audio than text. Chinese beginners are less sensitive to words, and It would be meaningless for a Brazilian beginner to present a large volume of text on a computer. Students do not want to receive knowledge means failure of classroom teaching. Therefore, understand the student’s choice of learning media is very important for CALT to choose means.

Table 8. Student preferences for learning media

		Text	Image-text	audio and video	Others	Total
Control	1	1	5	15	1	22
Experimental	3	0	3	16	1	20
Total		1	8	31	2	42

3.2. Chinese Post-test Results of the Level of Analysis

After the completion of Chinese learning at this stage, the author test the two classes of students use the form of examination. The contents of the examination paper are the same, which is designed according to the content of the primary Chinese learning. It includes the following three parts: recognizing Chinese pinyin, identifying and marking tones, and selecting simple dialogs. The examination time is the same, after correcting, the following results are obtained in Figure 1.

(1) The test of Chinese language proficiency of the experimental group

A total of 20 people in the experimental group participate in the test, the results is very satisfactory. There are 14 people in the 90-100 score section; 5 people in the 80-89 scores section; only 1 person in the 70-79 scores section. Among them, there are 2 students got the full score. As can be seen from Figure 1, Students in the experimental group were mainly concentrated in the 90-100 partition, accounting for the total number of 70%, indicating that the students in the experimental group have a good grasp of the knowledge learned in this period, and the learning structure is firm.

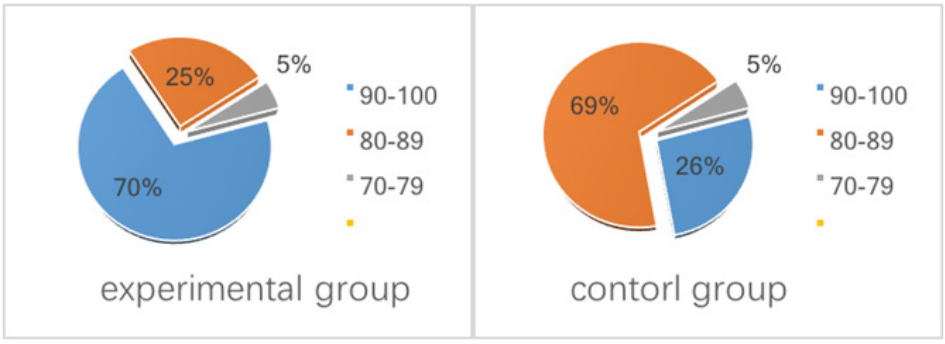

Figure 1. Score distribution

(2) The test of Chinese language proficiency of the control group

A total of 20 people in the control group participate in the test, the test situation is in the expected. As can be seen from Figure 1, there are 5 people in the 90-100 score section; 13people in the 80-89 scores section; 2 person in the 70-79 scores section. Among them, there is no students get full score, the highest score is 97 points. Students in the control group were mainly concentrated in the 80-89 partition, accounting for the total number of 69%, indicating that the students in the experimental group generally grasp the knowledge that learned in this period, most of them are in the middle level.

(3) Comparison of test between the experimental group and the control group

The author conducted a statistical analysis on the Chinese test of the experimental group and the control group. It was found that the effect of using computer assisted teaching of Chinese as a foreign language was very obvious for the Chinese learners of the Brazilian university. Compared with the control group, In the experimental group, the test scores of most of the students increased to 90-100 points, while the score of the majority of students in the control group were between 80-89 points. The level of learning and enthusiasm of the students in the experimental group have improved, compared with the experimental group, the students of control group still need to consolidate learning at the next stage. It shows that the use of computer assisted instruction in teaching Chinese as a foreign language has significantly improved the students' academic performance, and has a significant effect on the mastery of knowledge.

4. Advantages and Problems of CALT in Teaching Chinese as a Foreign Language

4.1. Advantages of CALT in Teaching Chinese as a Foreign Language

Xu Jialu (1999) believes that "teachers can improve teaching methods and teaching means from the internal language teaching to makes foreign language classroom more lively and interesting, thus foreigners will feel a little easier in learning Chinese." Indeed, Chinese ontology knowledge teaching is an important and difficult task for the teaching of Chinese as a foreign language. To realize the win-win of teaching and learning, students' interest and curiosity in Chinese and Chinese culture should be aroused. Insert the CALT into the Chinese teaching process is one of the effective ways to change the traditional teaching methods. The author systematically summarizes the advantages of CALT in Brazilian Chinese teaching as follows:

(1) The interactive of CALT adapts to the characteristics of Brazilian students

CALT is interactive. In this process, learners are not "passive", but take the initiative to accept information. The use of computer assisted Chinese teaching of as a foreign language can activate the thinking of Brazilian students and mobilize their enthusiasm so that they can not only access to information and learning the knowledge through the teaching video, but also simulate the computer audio correction and correct their pronunciation. In addition, the computer assisted teaching software display the correct, standard Chinese stroke order repeatedly to students, saving a lot of manpower. Under the help of the computer multimedia technology, teachers can have more time and energy to go to the students in personal guidance, and always implement human-computer interaction and teacher-student interaction in the teaching process, highlight the subjective role of man and emphasize the auxiliary role of the computer.

(2) The CALT makes the single model of the Brazilian Chinese learning classroom become an integrated training course with listening, speaking, reading and writing.

Brazilian students, unlike Chinese students, grew up in a more relaxed, less stressful environment. They are strong in their hands and strongly focus on vivid forms of video, music and pictures. In view of its distinctive features, computer assisted Chinese language teaching can simultaneously apply different information to students 'senses, which can strengthen students' memory, improve learning efficiency, make full use of classroom time and obtain more oral and written practice opportunities.

With the help of computers, teachers can insert audio-visual, speaking, reading, writing and other content, so that Brazilian students can not only get vivid visual images and auditory effects, but also imitate and have more time training reading and writing skills. The four-in-one integrated Chinese training class with listening, speaking, reading and writing can greatly enhance the attractiveness of the students.

(3) Multimedia courseware contains more knowledge to help teachers' ideas more open and flexible in the classroom.

Compared with the traditional teaching process, multimedia includes more knowledge. Teachers can also combine it with the learning characteristics of Brazilian students and put the interesting content of students into the multimedia courseware. This will not only save time writing on the blackboard, but also allow teachers to more focus on the organization of Chinese teaching. Students save time for taking notes in class, and can better participate in knowledge learning and interaction between teachers and students.

(4) Achieve sharing of network learning resource to help develop students' self-learning ability.

In the process of using CALT in teaching process, teachers provide students with classroom-related multimedia courseware information to facilitate students to learn on class and review after class. In addition, teachers recommend a variety of Chinese learning sites for students to learn independently and to find information relevant to their knowledge, which can expand their knowledge and enhance their understanding of China. The sharing of online learning resources enables students to learn at anytime and anywhere, and helpful to cultivate Brazilian students' autonomous learning ability.

4.2. Problems of CALT in Teaching Chinese as a Foreign Language in Brazil

The application of multimedia technology to traditional language teaching can promote the application of language. At the same time, the author has also received some negative feedback about CALT in the investigation and interview of students.

First of all, the multimedia courseware is a "mass production" of the product, which led to a typical problem is that the large amount of information courseware, if the teacher improperly handled, may occur to read the case according to the textbooks. The feeling of students is just like a replica of the traditional model "teacher reads and I repeat", which cannot highlight the innovation of CALT in the teaching methods. Second, the excessive use of multimedia teaching and ignore the interaction and communication between the students will make the lively and interesting classroom boring. In addition, it is understood that many Brazilian native Chinese teachers are accustomed to traditional teaching methods, they don't have modern teaching consciousness and don't attach importance to the computer assisted teaching methods. The multimedia courseware will take a lot of time and effort. For some objective reasons, teachers often do not use this method, which leads to the low utilization of multimedia courseware.

5. Conclusion

In this paper, a questionnaire and interviews were conducted with Chinese elementary students at the Catholic University of Rio de Janeiro, Brazil, to understand the application of CALT in teaching Chinese as a foreign Language, and to summarize the role of multimedia technology in teaching Chinese as a foreign language. It is found that the function of CALT in Brazilian Chinese classroom is obvious. Through computer assisted language teaching, students can increase their interest in Chinese language learning, activate the classroom atmosphere and produce better learning results. In addition, there are shortcomings in the future. The level of multimedia technology, multimedia teaching facilities, as well as multimedia applications in the form of choice should be improved in future to improve teaching effectiveness.

References

[1] Liu Xun. A Brief Discussion on the Teaching of Chinese as a Second Language. Beijing: Beijing Language and Culture University Press, 1995.

[2] Li Jin. A Brief Discussion on Computer Assisted Instruction in Teaching Chinese as a Foreign Language. Language Teaching and Research, 2008.

[3] Zheng Yanqun. Theoretical Research on Computer Assisted Instruction of Chinese as a Foreign Language. Beijing: The Commercial Press, 2006.

[4] Wang Tiantian. The Application of Multimedia Teaching in Teaching Chinese as a Foreign Language. Huazhong University of Science and Technology, 2011.

[5] Liang Lei. Analysis of the Application of Computer Assisted Language Teaching in Teaching Chinese as a Foreign Language. Automation and Instrumentation, 2016, (4).

[6] ZHONG Zheming. The Reform of Modern Educational Technology and Teaching Chinese as a Foreign Language. Language application, 1999, (4).