The Necessity of Integrating Multimedia Technology into Listening Teaching in Comprehensive Chinese as a Foreign Language Courses

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Abstract. With the development of multimedia technology, various teaching methods primarily based on information technology continue to be proposed and utilized. Multimedia teaching is increasingly being applied to second language instruction, revolutionizing the traditional teaching approaches in Chinese listening education for language majors. This paper delves into the utilization of multimedia technology in comprehensive Chinese language courses, specifically focusing on listening instruction. The goal is to enhance the effectiveness of Chinese language teaching and foster students' integrated proficiency in applying the Chinese language.

Keywords: Multimedia Technology; Teaching Chinese as a Foreign Language; Comprehensive Courses

1 Introduction

Multimedia technology is a product of the rapid development of information technology. Through the development of learning and teaching resources, the construction of network resources, and the application of management and technology, it has brought an end to the era of teaching with a single teaching material such as blackboards, chalk, and paper textbooks, as well as the traditional teacher-centered mode of instruction.[1] By utilizing multimedia teaching as the primary means and supplementing traditional teaching, it enhances classroom efficiency and plays a significant role in driving the reform of international Chinese language education. The integration of multimedia technology into foreign language teaching has brought about immeasurable impacts and changes in foreign language support teaching, language acquisition, and language testing.

2 Experimental of Integrating Multimedia Technology into Listening Teaching in Comprehensive Chinese as a Foreign Language Courses

Listening and speaking are the most fundamental language skills in communication; therefore, emphasis should be placed on listening and speaking training to improve students' speaking proficiency in comprehensive courses at the primary level. Listening and speaking are the most

common and frequently used means of communication in daily language interactions. Listening plays a crucial role in the second language acquisition process. Therefore, training in listening skills is an essential aspect of foreign language teaching that cannot be overlooked. The primary stage serves as the foundation for teaching Chinese as a foreign language, and a solid groundwork for listening skills should be established during this phase. Teachers should focus on training students' listening and speaking abilities, guiding them to consciously imitate, and supplementing these efforts with necessary theoretical knowledge.

2.1 Experimental Design:

A one-month listening teaching experiment was conducted in the Chinese elementary level classes at Souphanouvong University in Laos. The experimental group (32 students) utilized multimedia technology to assist in listening teaching, while the control group (32 students) followed traditional listening teaching methods. The effectiveness of multimedia technology in Chinese listening teaching was evaluated by comparing the performance of the two groups in listening comprehension.

2.2 Experimental Method:

Sample Selection: Two classes at the elementary level were randomly selected to serve as the experimental and control groups, each consisting of 32 students.

Experimental Group Teaching Method: The experimental group received listening teaching with multimedia technology assistance, including the use of recordings, videos, interactive software, and other multimedia tools for listening training.

Control Group Teaching Method: The control group received traditional listening teaching methods, such as listening to lectures and recordings.

2.3 Experimental Process:

Two 60-minute listening training sessions were conducted each week. The content and difficulty of the courses were identical for both groups, with only differences in teaching methods. At the end of each week, a listening comprehension test was administered to evaluate the students' listening proficiency.

Data Collection: Scores of the listening comprehension tests were collected for both the experimental and control groups.

Data Analysis: Comparative analysis of the listening comprehension test scores of the experimental and control groups was conducted to evaluate the effectiveness of multimedia technology in listening teaching.

2.4 Experimental Process and Data Analysis:

This study conducted a one-month listening teaching experiment in the Chinese elementary level classes at Souphanouvong University in Laos. The experimental group utilized multimedia technology to assist in listening teaching, while the control group followed traditional teaching methods. During the experiment, two 60-minute listening training sessions were conducted each week, with the content and difficulty level of the courses being identical for both groups but differing in teaching methods. At the end of each week, listening comprehension tests were

administered to both groups, and the scores were recorded.

The average scores of the experimental group were calculated and compared shown in the Table 1:

Table 1. Experimental Group (Multimedia Assistance):

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
85	78	75	82	83	76	81	80	77	78	80	85	87	88	74	69
17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
82	71	85	88	76	89	72	86	89	81	80	85	87	85	81	80

Experimental Group (Multimedia Assistance) Average Score:

$$(85+78+75+...+81+80)/32 = 80.44$$

And the average scores of the control group were shown in the Table 2:

Table 2. Control Group (Traditional Method):

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
75	62	66	59	80	76	66	68	72	78	62	66	69	68	64	71
17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
56	80	70	62	65	66	57	82	81	75	65	54	87	71	72	78

Control Group (Traditional Method) Average Score:

$$(75+62+66+...+71+78)/32 = 68.53$$

By comparing the average scores, it can be preliminarily concluded that the experimental group performed better in the listening comprehension tests. Subsequently, we plotted the distribution of scores for both groups and further compared their distributions.

From the graph, it is evident that the scores in the experimental group are relatively evenly distributed above 80 points, whereas in the control group, scores are mainly concentrated between 60 and 70 points.

Through comparison of the listening comprehension test scores, it was found that the average score of the experimental group was 80.44, whereas that of the control group was 68.53. Additionally, the scores in the experimental group were more concentrated above 80 points, while those in the control group were more dispersed and tended towards lower scores. This indicates that multimedia technology-assisted teaching significantly improves students' listening comprehension ability compared to traditional teaching methods.

3 The Current Status and Issues of Listening Teaching in Comprehensive Chinese as a Foreign Language (CFL) Courses

This survey was conducted at Souphanouvong University in Laos, utilizing the interview method to interview 15 Chinese language teachers and three heads of Chinese language programs. According to the survey, we can find the following problems.

3.1 Insufficient Time Investment and Monotonous Teaching Models

The most effective way to master a language is through immersive learning, wherein individuals immerse themselves in a specific language environment.[2] In situations lacking such an environment, the creation of one relies heavily on daily listening training. However, during the teaching process of comprehensive courses, it becomes apparent that the emphasis in teachers' classrooms is still inclined towards training students' reading and writing abilities, leaving limited time for listening. Consequently, students' listening abilities face challenges in sustaining their strength over time.

Currently, most comprehensive courses adhere to a singular teaching model: the teacher plays the recording, checks the answers, analyzes incorrect responses, and replays the recording. While this mechanized training model appears to address the issue, its actual effectiveness is limited. Throughout the entire process, teachers merely fulfill the roles of playing recordings and explaining content. Unfortunately, the guidance on listening methods, such as identifying key topic words, capturing and filtering essential information, and understanding how to infer and predict subsequent sections of listening material, tends to be neglected. As the renowned American expert in language teaching theory, Chapelle stated: "This teaching model focuses on memorization rather than enabling students to learn how to listen and solve problems encountered in listening!" [3]

3.2 Inappropriate Listening Learning Mindset

Numerous studies indicate that emotional factors can impact the learning process of learners, and anxiety is one of the complex and influential emotional factors in language learning. Wang Baohua pointed out that the improvement of listening is a gradual process that necessitates learners' sustained efforts and systematic planning of self-listening practice.[4] This underscores the significance of raising awareness about self-management in listening learning in the context of online education. Listening is typically the section prone to scoring mistakes and has consistently been viewed as one of the skills most likely to provoke anxiety among foreign language learners. Students often lack confidence in their own listening abilities, developing a sense of nervousness or even fear, ultimately impeding the normal expression of their listening proficiency.

3.3 Inadequate Foundation in Chinese Language among Students

Listening ability serves as a reflection of students' overall proficiency in Chinese, encompassing aspects such as vocabulary size, the standardization of voice tone, and mastery of grammatical structures. Many students face challenges related to their foundational skills, such as a limited vocabulary or the inability to instantly connect what they hear with their memorized information due to errors in word recognition. These issues contribute to comprehension barriers during the listening process.

As widely acknowledged, listening and speaking instruction in teaching Chinese as a foreign language is closely tied to multimedia technology. The primary objective of the Chinese comprehensive course is to develop students' proficiency in the four fundamental skills: listening, speaking, reading, and writing. Listening is a crucial component of communication, and the importance of listening instruction is evident. However, traditional comprehensive course instruction is often confined to textbooks and conventional teaching tools. This emphasis

on reading in traditional Chinese as a foreign language comprehensive course hampers the holistic development of students' Chinese language abilities. Drawing on constructivist psychology, Mayer's multimedia learning theory, and Krashen's hypotheses on second language acquisition, situational illustrations and audio-visual materials can be employed in listening instruction.[5] Therefore, due attention should be given to the judicious use of visual media technology to harness its advantages and enhance students' learning efficiency. The advent of modern educational technology has addressed this challenge, improving the current state of listening instruction.

4 Advantages of Integrating Multimedia Technology into Listening Instruction in Chinese as a Foreign Language Comprehensive Courses

4.1 Enhancing the Appeal of Listening Teaching in Comprehensive Chinese Classes for Foreign Language Learners

The integration of multimedia into listening teaching creates a dynamic form of three-dimensional information transmission, incorporating images, text, graphics, and sound.[6] This approach offers rich and voluminous content in an easily accessible format. Additionally, multimedia provides students with visual animations aligned with the listening materials, aiding their understanding and enabling them to immerse themselves in authentic interactions with native speakers. This, in turn, sparks students' motivation for listening. Multimedia-assisted teaching transforms the monotonous nature of traditional listening instruction, achieving a synergy of visual and auditory elements that facilitates a vivid and lasting impression. Cognitive psychologists assert that simultaneous engagement of multiple senses leads to more comprehensive, profound, and enduring learning compared to reliance solely on auditory stimuli. By incorporating multimedia in playing listening materials, we meet students' sensory needs, particularly in visual and auditory aspects, thereby fostering a heightened interest in the learning process.

4.2 Facilitating Concentration for Students

Psychology asserts that maintaining focused attention during learning ensures that the cortical excitation centers act on the things or information in the brain to produce the clearest reflection, resulting in optimal memory effects. In essence, attention is one of the most efficient factors in human learning. To achieve the best memory effect for the knowledge learned, it is essential to enhance students' attention in this crucial teaching aspect. This can be realized through the auxiliary role of multimedia technology. By delivering a variety of information to the brain through audio-visual teaching software, stimulating the auditory and visual organs, students can simultaneously hear the sound and see the shape. This creates and sustains points of excitement, leading to the brain's optimal memory effect.

4.3 Facilitating Enhancement of Students' Understanding and Memory

By using multimedia to play videos, we achieve the integration of "sight" and "sound." As renowned linguists Stempleski and Tomalin (1990) argue, the teaching method combining audio and video presents language in a more comprehensive and realistic manner than any other

teaching media.[7] It simultaneously stimulates both hemispheres of the brain – the right hemisphere, responsible for figurative thinking, and the left hemisphere, controlling abstract thinking – to function together in the absorption of knowledge. The "audio-visual" process reflects learners' cognitive psychological processes of perception, understanding, encoding, and storage of input information. It demonstrates learners' ability to recognize things and acquire "receptive" knowledge, forming a systematic cycle of input - processing - storage - output, contributing to the enhancement of the brain's memory structure. Psychological research indicates that human visual absorption is 83%, while auditory absorption is 11%, combining for an absorption rate of up to 94%.[8] The use of audio-visual, video, and other information stimulates students' senses, initiates mental activities, fosters thinking, and aids in understanding and mastering knowledge. In our brain's memory activities, the retention of image information is significantly stronger than that of verbal and written information. Therefore, by concurrently employing audio-visual elements, students experience a sense of immersion, comprehend the surface and connotation of language, ultimately deepening their understanding and enhancing memory.

5 Conclusions

To summarize the aforementioned perspectives, modern educational technology, primarily utilizing multimedia teaching, holds an irreplaceable position in the instruction of listening in Chinese as a foreign language. Simultaneously, the development of network resources is increasingly capturing the attention of educators and researchers. The establishment of online open courses, dynamic corpora, and film and television libraries is maturing. Through network resource-sharing platforms, universities and colleges nationally and globally can engage in mutual learning, share outstanding achievements, and elevate the overall teaching standards. This undeniably represents a significant advancement in human education. As international Chinese language educators and individuals of the new era, there is an increased need to deepen our understanding of modern educational technology, conduct theoretical research, apply these findings to teaching practices, fully leverage available resources, and maximize teaching standards.

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