

Phonetics for College Students: The Use of Multimedia Network Technology

Linyang Yuan^{1,*} Li Zhang²

¹School of Foreign Languages, Harbin Institution of Petroleum, Songbei, Harbin, 150028, China

²College of Arts and Sciences, Northeast Agricultural University, Xiangfang, Harbin, 150030, China

*Corresponding author. Email: alic717119@163.com

ABSTRACT

The development of multimedia network technology gives Chinese EFL students a new way to learn English phonetics and can meet their needs. How teachers can help students learn English phonetics on their own with the help of multimedia? And how teachers can help students learn English phonetics and improve their English skills in a multimedia environment? Although phonetics is the cornerstone of language learning, it is still the weakest link in the teaching of English phonetics in colleges and universities. Multimedia network technology, which represents the rapid development of current education technology, provides creative ways and spaces for teaching and learning English phonetics in colleges and universities, and may fulfill the particular demands of students' phonetics learning. Based on talking about the benefits of multimedia network technology, this paper focuses on how multimedia network technology can help Chinese EFL learners learn English phonetics on their own. Finally, some suggestions are made for colleges, teachers, and students about how to use multimedia network technology to help students learn English phonetics on their own in a more independent, interactive, and mobile way.

Keywords: College students, Multimedia network technology, English Phonetics.

1. INTRODUCTION

As an integral aspect of a language's structure, speech sounds serve as the foundation for communication and serve as the beginning point for language learning. The pronunciation of foreign languages is still a major issue for college students notwithstanding their progress in vocabulary and grammar. Local colleges and universities are particularly vulnerable to this issue. Sometimes, the influence of local dialects and teachers' level on students' pronunciation is obvious, so traditional English phonetics teaching cannot meet students' needs with regard to lesson time and content relevance. Consequently, it is necessary to implement new teaching methods.

In recent years, multimedia network technology has advanced significantly, enabling a new method of learning English phonetics. Multimedia teaching has numerous advantages due to the open-typed learner-centered learning environment and unique teaching approaches [1]. Although English phonetics classes in colleges and universities have benefited from the rapid growth of multimedia network technology in the twenty-first century, which has opened up new teaching and learning options for students. Students' individual needs for learning English phonetics and how to provide them with appropriate multimedia technology support and

network environment are still unanswered questions in the field of English phonetics teaching. Thus, how to effectively utilize multimedia network technology to assist Chinese college students in autonomously learning English phonetics remains a topic of interest. The purpose of this research is to discuss the use of multimedia network technology in the autonomous learning of English phonetics by Chinese college students.

2. INDEPENDENT LEARNING AND MULTIMEDIA TECHNOLOGY

Independent learning, namely autonomous learning, has been popular in recent decades, particularly in the study of foreign languages. Henri Holec coined the phrase "learner-autonomy" in 1981, and it refers to the ability of learners to take charge of their own education [2]. "Independent learning" is learning in which the learning subject is self-reliant, self-directed and self-disciplined. Self-reliance, self-direction and self-discipline are the three aspects of learning autonomy, which are the three basic characteristics of "independent learning". Among them, self-reliance is the foundation of independent learning, self-activity is the essence of independent learning, and self-discipline is the guarantee of independent learning. These three characteristics all

illustrate the same idea: the learning subject is the master of his or her own learning, and learning is ultimately led and completed by the learning subject himself or herself. Acknowledging and affirming this idea is undoubtedly a particularly important function and significance for reforming and correcting many unreasonable education and teaching methods and modes, and thus exploring and creating new ones. Based on the students prior experiences, learners actively generate knowledge by engaging with the environment around them and constructing new cognition based on what they've learned in the past. Because of factors such as social and cultural background and values, each person has his or her own way of building knowledge and the constructive system of learners constantly evolves as they grow in their emotional and cognitive development [3]. Because self-directed learning corresponds to human cognition, it also fulfills the cognitive and psychological needs of human beings, as well as embodying the concept of lifelong learning. " When used in conjunction with computer network technology, self-directed learners can access a wealth of educational materials, do quick searches and retrieve data with ease, all while building their knowledge through direct contact with other people as well as direct contact with computers.

It is now possible to teach and learn on a multimedia network because multimedia network technology has revolutionized the teaching and learning process. It is the integration of multimedia and network technology that merges diverse media functions and network functions into one item that organically blends text, sound, images, information, and animations together and transmits among them with one another[4]. Therefore, multimedia network technology has a significant impact on college students' phonetic teaching. In addition, multimedia networks provide high-quality learning materials for students to learn phonetics by focusing on multiple media and providing examples for students to imitate, compare, and correct phonetics, which is a good assistance for students to learn phonetics. The popularity of fourth-generation mobile communication and wireless local area networks, as well as the application of mobile communication terminals such as smart phones, Pads, and other similar devices, as well as the development of multimedia instant messaging platforms such as WeChat and QQ, have all proven to be beneficial for learning English phonetics.

Learners may easily access many learning materials by searching for relevant information and also acquire knowledge via human-computer interaction and contact with other people in a multimedia network technology environment [5]. It is clear that multimodal network learning offers significant benefits.

3. THE ROLE OF MULTIMEDIA NETWORK TECHNOLOGY IN COLLEGE STUDENTS' LEARNING OF ENGLISH PHONETICS

Is Multimedia Networking Technology Helping Students Learn English Phonetics on Their Own? Students practice listening, sound recognition, and sound correction before moving on to stress, rhythm, flow, and intonation training, among other things. This is how students acquire English phonetics. Finally, the use of standard pronunciation and natural and suitable intonation to express ideas in order to achieve communication is combined with phonetics, listening and oral expression. For independent study of English phonetics, multimedia network technology should be based on the rules and needs of English phonetics learning and highlight the advantages of multimedia and network technologies to help phonetics learning.

3.1. Composing the Infrastructure Necessary for Students to Learn Phonetics

Using multimedia network technology, students can study speech on their own terms, including the conditions of their equipment, technical support, and learning situations. On the other hand, as previously said, English students at local colleges and universities face a major challenge in learning English phonetics, and it is far from sufficient to rely solely on the teaching of phonetics courses[6]. To counter this, students should recognize that human linguistic intelligence plays a unique role in language learning, thus they should practice phonological skills on their own outside of class. Speech teaching resources that incorporate multimedia technology and interactive speech allow students to listen, identify and mimic sounds, and the network technology creates a learning context where students can organize their learning according to their individual needs and become true masters of their learning. " This is due to the fact that students have the option to study autonomously, which means they can choose their own learning objectives, content, resources, and techniques, as well as when, when, and how they learn them.

3.2. Facilitating Active Learning of Phonetics for College Students

To learn phonetically, students need a significant volume of high-quality English language input and a diverse set of English language output. As a result, language acquisition relies more on cognitive and interactive contexts than on vocal input and output. Mobile learning has emerged as a viable option for

students in the 21st century, thanks to the fast development of wireless technology like smartphones and other mobile phones. Students may interact with one another in a number of ways thanks to mobile learning. Learning English on one's own requires students to engage in a broad variety of activities ranging from choosing resources to real English voice input, listening and imitating, and practicing listening and imitation. In a matter of seconds, he may look for appropriate audio or visual examples of how to pronounce that sound online. By entering in essential terms, a student may also quickly mimic British English. Media resources may be easily accessed through multimedia web technologies, as well as media engagement and communication, among other advantages. Learners have the freedom to learn at any time, from any location, and in any manner they see fit. It is possible for students to connect addresses and access phonetic materials as they see fit while studying English phonetic intonation. It is feasible to master English phonetic intonation in its entirety even if your time is fragmented. Students may utilize computers, tablets, multimedia players, or cellphones as interactive human-computer learning tools, such as playback devices. To make interactive learning more accessible and successful for everyone, students may also connect with their lecturers and peers over the Internet. As a result, studying English phonetics on one's own using multimedia network technology has grown easier and more efficient. In addition, students' interest in studying will be piqued due to the availability and accessibility of online learning materials.

In the end, multimedia network technology facilitates and speeds up human-to-human and human-to-computer communication. In interactive learning, students build their own mental and intellectual infrastructure.

4. APPROACHES TO INTEGRATE MULTIMEDIA TECHNOLOGY INTO STUDENTS' INDEPENDENT ENGLISH PHONETICS LEARNING

It is possible for a large number of students to overcome the limitations of time and location, develop cooperative learning methods, construct a learning environment, and transform the conventional method of learning phonetics thanks to multimedia network technology. Therefore, it is extremely vital to apply it to college students' autonomous acquisition of phonetics. A discussion at how this technology may be used to increase the efficiency of English phonics self-study is shown below.

4.1. Constructing an Immersive Phonetic Learning Experience

In order to acquire English phonetics, students need a learning environment that engages their eyes, mouths, brains, and ears as they listen, speak, and express themselves orally. Multimedia network technology can create a diversified learning environment. In contrast to the one-dimensional learning environment provided by conventional media, the three-dimensional, humanized learning environment provided by multimedia network technology may be a reality. Creating a conducive learning environment is a central tenet of constructivism [7]. The learning environment should be diverse, including generating circumstances, offering information resources, and arranging cooperative learning. Multimedia technology creates a learning environment where students are exposed to knowledge in a variety of media formats, such as video, audio, and text. The best way for English learners to improve their phonetic intonation is to converse with native speakers of the language, as well as with teachers and peers from other English-speaking countries, as well as by looking at phonetic pictures and listening to recordings of native speakers' intonation and rhythm. Using a multimedia network in a speech learning environment is unquestionably an excellent idea.

4.2. Assisting Students in Developing Rich Phonetic Resources

Traditional learning resources largely originate from instructors and textbooks, whereas the methods of integrating learning resources by employing multimedia technology has improved the status of weak traditional learning resources. Rich phonetic learning resources are vital for autonomous learning, and a vast range of phonetic learning resources may be offered that are better matched to the key demands of college students' phonetic learning. For practice outside of class, students may see video demonstrations of proper pronunciation, which include examples of proper rhythm, stress, and intonation, as well as animation showing the process. Movie dialogues, English songs, poetry and prose from numerous dubbing applications are all vital and wonderful tools for learning English phonetics. Students' interest in phonics may be piqued by a variety of phonics learning tools. Chinese learners of English may quickly and simply perfect English pronunciation skills by studying online or downloading some of them. Therefore, in the independent learning of English phonetics, English learners should make full use of these rich phonetic resources, choose the learning resources that are suitable for them according to their English phonetic level,

pronunciation characteristics and problems, and carry out targeted imitation and training by learning online or downloading.

4.3. Learning Phonetics in a Personalized Manner

Various people progress at varying speeds and acquire different degrees of proficiency while learning a second or foreign language. It is impossible for all students to study phonetics in the same manner because of the wide range of individual differences in their linguistic talents, motivation, approach to learning, personality type, and time and effort invested in the endeavor. Developing a learning style that is unique and tailored to the needs of the learner is thus critical [8]. Monophonic pronunciation mistakes are common among certain pupils. For example, in some parts of southern China, English learners often mix up /r/ and /l/, /h/ and /f/, /ai/ and /æ/, and other similar sounds. Certain college students can speak English properly, but they have some challenges in acquiring the accent, rhythm and intonation of English. In the classroom, it is hard for the instructor to take into consideration every student's learning circumstance. Therefore, students must select appropriate learning materials and communication interactions according to their phonetic difficulties and deficiencies can motivate students to improve their ways and means of phonetic learning, and it is necessary and important to build a personalized learning atmosphere with the help of multimedia network technology. In autonomous learning of speech, learners should better select learning materials suited for their present level and pick the right interactive learning mode given by multimedia network technology.

5. MEASURES TO PROMOTE THE APPLICATION OF MULTIMEDIA TECHNOLOGY IN INDEPENDENT ENGLISH PHONETICS LEARNING

In order to apply the countermeasures of multimedia network technology mainly evident in the building of a phonetic platform under the guidance of professors and students' active use, teachers and students must work together on a systematic initiative to implement multimedia network technologies in phonetic learning.

5.1. Working in Groups to Improve the Effectiveness of Multimedia Networking Technology Knowledge and Abilities

Users profit from multimedia network technology for college students is the topic of English phonics learning. However, interest and curiosity are what boost students'

knowledge of employing multimedia network technology for application. How to raise people's knowledge and capacity to utilize multimedia network technologies is an inescapable challenge. As noted above, in order to develop the capacity to utilize multimedia web technologies to assist learn English phonics, learners may seek guidance from instructors. In addition, building learning teams is an effective strategy to overcome this issue. For example, during the first week, phonics learners might organize a study group comprising several students and an instructor. The instructor offers phonics learning assignments, and the group participants utilize the phonics learning platform to perform the activities. The group members may also assist each other with pronunciation problems. In the second week, the instructor will concentrate on tutoring and verify the pupils' learning using the language output of the previous week. At the same time, the learners themselves should be aware that multimedia online technologies are a vital part of the future. Over time, students' capacity and knowledge of the usage of multimedia technology will grow.

5.2. Guiding Students to Use Multimedia Network Technology to Enhance Phonics Learning

Teachers are the topic of instruction, hence they play a significant role in learning. Teachers have moved their focus from imparting information to assisting and directing students in the construction of meaning [9].

The growth of autonomous learning must go through three phases, according to the Methods and Approaches of Independent Learning. Practice and repetition on a regular basis, reflection on the learning task, and entire concentration on the learning process [10]. The third stage is also the process of achieving learning objectives on one's own, which is tough for most students. In other words, developing autonomous learning abilities without outside assistance is challenging for them.

Modelling and directing the use of multimedia network technologies should be a priority for teachers. Teachers, for starters, are frequent consumers of multimedia network technologies. Teachers should use technology in the classroom and out of class to establish a multimedia web-based teaching environment and progressively impact pupils. Raise English learners' understanding of the benefits of using multimedia network technologies to aid voice independent learning. Second, instructors should become multimedia network resource builders and combine numerous phonetic learning tools to make learning easier for students. Course instructors, for example, have a fundamental

obligation to design English phonics courseware [11]. Finally, instructors should create an engaged learning environment for their students. Teachers, for example, should be online for a certain amount of time to answer students' inquiries, review the solutions to specific exercises supplied by students online, and so on. Teachers could also encourage pupils to use multimedia online technologies for speech learning.

Finally, independent English phonics learning with the assistance of instructors will become more and more successful. Learners might also build confidence in their ability to study phonetics on their own.

5.3. Building a More Stable Foundation for English Phonetic Education

Software and hardware play a major role in the development and implementation of multimedia networks. Because they are the architects of teaching circumstances and hold the duty of generating good teaching conditions, colleges and universities bear both the building job and the promotion task in the use of multimedia network technology. Relevant network communication channels and multimedia application platforms are critical for college students because, with the advancement of multimedia network technology, students can quickly search and explore multimedia materials and create an atmosphere conducive to diverse voice learning. As a result, schools and institutions should focus on building a voice platform based on the original multimedia technology platform. As a result, schools may design an English phonetics and intonation network teaching platform to match the demands of students, allowing them to learn English phonetics in a more creative and effective manner. They may also create multimedia network labs based on existing language laboratories at our colleges and institutions in order to disseminate phonetics knowledge in a fun and engaging manner. Phonetic learning systems may be built independently by schools. Students may study in language laboratories or connect to the platform through smart mobile devices in this manner. In addition, colleges should hire expert multimedia network specialists to maintain the necessary gear and software so that students may learn to speak effectively and freely. Providing students with a place for mobile learning has become a major focus of current educational technology development, and institutions should take note.

6. CONCLUSIONS

The influence of multimedia network technology on students' learning practices and learning results is becoming more important as information technology advances. Multimedia network technology offers students with technological assistance in improving their phonetics, as well as new possibilities for classroom reform and practice of English phonetics. Colleges and universities should pay close attention to and fully exploit the role of multimedia network technology in supporting speech learning, provide excellent network services and learning resource support, guide and encourage students to consciously use multimedia network technology, create a personalized and three-dimensional multimedia speech learning environment, and improve the effect of speech learning and English speech level. Encourage students to employ multimedia network technology to create a tailored and three-dimensional multimedia phonetic learning environment, which will boost the phonetic learning impact and English phonetic level even more.

ACKNOWLEDGMENTS

Fund Project: Heilongjiang Philosophy and Social Science Research Planning Project for 2020: An Empirical Study on the Social-Psychological Mechanism of English Phonological Learning for Students of Colleges and Universities in Heilongjiang Province from the Perspective of SLA (Subject No. 20YYE257)

REFERENCES

- [1] C. Y. Shang, Y. H. Bu, X. M. Wang, Promoting English phonetic teaching with multimedia [J] Journal of Jiangxi Finance College, 2009, Vol.22, No.6, pp. 206-207
- [2] Holec. Henri *Autonomy and Foreign Language Learning*, Oxford: Pergamon Press, 1981.
- [3] Fu Lingfang, Yang Firm. Research on Independent Learning Ability Based on Network Multimedia College English Teaching Model [J]. *Foreign Language and Foreign Language Teaching*, 2007, (10): 36-38.
- [4] Jia Yinjie, et al. *Multimedia Technology Foundation* [M]. Beijing: Peking University Press, 2014:10.
- [5] Z. Q. Nong, The Network-Based Course of Audio-Visual English for Students' Autonomy [J]. *Higher Education Forum*, 2009, No.3, pp.99-101.
- [6] David Little, et al. *Self-Directed Learning Methods and Approaches* [M]. Qiu Yongzhong, Eddie Lin,

- Jiang Qin, et al. Fuzhou: Fujian Education Publishing House, 2010:15.
- [7] He Kekang. Reflections on Constructivism [J]. China University Teaching, 2004, (7):15-18.
- [8] Chen Mengxi, Tan Jingde. The Change of Students' Learning Style under the Vision of Constructivist Knowledge View [J]. Journal of Hunan University of Science and Technology (Social Science Edition), 2008, (4): 124-127.
- [9] Li Youliang. English Learning Strategies and Independent Learning [M]. Shanghai: Shanghai Jiaotong University Press, 2011.
- [10] David Little, Qiu Yongzhong, Lin Yun, Jiang Qin, et al., Trans. Methods and Approaches of Independent Learning [M] Fuzhou: Fujian Education Press, 2010:17.
- [11] M. Y. Huang. CAI Application for English Phonetic Teaching [J]. Journal of Fuzhou Teachers College (Social Science Edition), 2000, Vol.20, No.1, pp.78-80.