

## Research Article

# Holistic Language Teaching Method in College English Vocabulary Teaching under Big Data and Multimedia Environment

**Xiaoxia Peng** 

*School of Foreign Languages, Mianyang Teachers' College, 621000 Sichuan, China*

Correspondence should be addressed to Xiaoxia Peng; [xiaoxia\\_peng@outlook.com](mailto:xiaoxia_peng@outlook.com)

Received 22 February 2022; Accepted 8 April 2022; Published 30 April 2022

Academic Editor: Punit Gupta

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With the rapid advancement of informatization on a global scale, human society has entered a new era of information explosion and continuous data updating. In this situation, big data have become the future development trend of the world. In the context of big data, we must not only understand the world but also learn how to obtain information, and traditional teaching models can no longer meet the needs of teaching. Therefore, it is necessary to combine modern information technology, multimedia technology, and other means to assist the development of classroom teaching. At the same time, the holistic language teaching method plays an important role in improving students' comprehensive ability, comprehension, expression, and thinking innovation ability. Therefore, this article attempts to combine the teaching background of big data and multimedia and use their advantages in teaching to find effective teaching methods to promote students' vocabulary acquisition. This article uses questionnaire surveys and data analysis methods to understand the difficulties encountered by college students in English vocabulary learning and their views on the application of holistic language teaching methods in English vocabulary teaching. According to the survey results, due to factors such as large English vocabulary and complicated spelling rules, most interviewees think English vocabulary learning is more difficult. In addition, most of the interviewees believe that the application of the whole language teaching method in college English vocabulary teaching is very necessary and will get better teaching results, thereby improving the efficiency of college students in learning English vocabulary.

## 1. Introduction

Under the background of big data, people have gradually realized that information is an important resource. Therefore, it has become an inevitable trend to innovate and improve traditional teaching methods. In the context of the era of big data, multimedia teaching methods have also been applied to course teaching. At the same time, the whole language teaching method also reflects its unique advantages in teaching work and has made certain progress. Therefore, this article attempts to combine the teaching background of big data and multimedia and use their advantages in teaching to find effective teaching methods to promote students' vocabulary acquisition.

From the current point of view, many scholars have conducted related research on the whole language teaching method and English teaching, and the research results are quite rich. For example, Chang Xiaoli pointed out that there

are still many problems in the actual teaching of college English, which requires integrating the overall language teaching method into college English teaching to improve the quality and level of college English teaching [1]. Rao Yingzhi believes that the holistic reading teaching method is a language teaching model based on the research results of multiple disciplines. Applying this method to the teaching of college English cultural background knowledge has certain feasibility and advantages [2]. Wu Yue proposed that using English audio picture books for learning is the most effective way to acquire English. At the same time, it is more feasible to apply the overall language teaching theory to English audio picture books into primary school English teaching [3]. Wang Xingli conducted research on the overall language teaching method to cultivate high school students' oral ability [4]. Liu Haiqing applied the holistic language teaching method to the teaching of oral English, and the results show that this method can improve students' learning

efficiency [5]. Peng Zhen made a detailed discussion on the relationship between the holistic language teaching method and business English learning [6].

Therefore, this article sets out from a new perspective, combined with big data and multimedia environment, to carry out related research on the application of the whole language teaching method in the teaching of English vocabulary.

This article mainly discusses these aspects. First, the related concepts of big data and the background of the times are explained. Then, the whole language teaching method and its related content are introduced in detail. In addition, the application of the whole language teaching method in college English vocabulary teaching under the multimedia environment is discussed. Finally, a questionnaire survey was carried out around the theme, and the corresponding survey results and analysis conclusions were drawn.

## 2. Related Theoretical Overview and Research

*2.1. Big Data.* With the continuous development of information technology, the Internet has become an important part of human life and work in today's society. At the same time, the advent of the big data era has brought massive, complex, and diverse data information, and there is no lack of meaningful and reference-worthy content in this large amount of information.

Big data is a massive data collection with huge scale, super information capability, huge storage capacity, and extremely high value density. It uses a huge amount of digitized and unstructured knowledge to reflect the essential characteristics and internal laws of things in the massive amount of information. It does not simply collect, store, and process information data, but through in-depth analysis and mining of a large amount of nonquantitative data, and then draw valuable and useful conclusions.

There are many ways to classify big data, which can be divided into the following categories. One is structured information. The second is text and picture information. The third is audio and video information. When dealing with massive amounts of complex, high-growth, and diversified nontext information, the massive content must first be identified and then converted into useful and valuable things, and the relationship characteristics between them are described and finally transform these data into useable patterns.

From the perspective of related technologies, big data technology has been rapidly developed in developed countries and regions in the world, but due to its own problems, it cannot fully meet the needs of enterprises for information management and analysis.

In the context of big data, traditional industries have been impacted, corporate production and operation models have been broken, and corporate development is also facing transformation. But at the same time, "Internet +", the new economic situation and technological changes have also brought development opportunities for Chinese companies. In such an environment, how to make good use of existing resource advantages to drive development with innovation

has become one of the most urgent tasks. At the same time, it should be noted that there is a certain connection between traditional industries and the era of big data, and it promotes the rapid upgrading of traditional industries [7].

Big data are widely and profoundly applied in all fields of society, and the arrival of the era of big data is an inevitable trend. But, at the same time, it is also facing many real dilemmas. The first is the issue of information security. Due to the insufficient development of network technology and computer information technology, a large number of hacker attacks and Trojan horse viruses have caused damage to personal privacy. On the Internet, some criminals have used big data platforms to conduct illegal transactions or steal user passwords for profit.

In the era of big data, due to the huge amount of information and the increasingly wide range of data sources, it becomes very difficult for people to store and analyze massive amounts of data. The first is to obtain large-scale, complex, large, and valuable unstructured or semistructured databases on a large scale. These nonquantifiable data include pictures and text videos. Since it is not possible to collect enough information, other technologies are needed for analysis, prediction, and evaluation. In the era of big data, traditional thinking models can no longer adapt to the current development [8, 9]. The correlation between big data and people's lives is shown in Figure 1.

Big data, overall language teaching, and English vocabulary teaching seem to be completely irrelevant. One is a rational tool, while the other is perceptual thinking. But, with the current wave of big data sweeping the world, the connection between the two cannot help but become closer. Due to the difference in the angle of emphasis and the way in which the computer and the human brain perceive things, the results obtained by the two for the same thing will be quite different. The different results of computer analysis of things and human brain analysis of things can often complement each other to enhance strengths and avoid weaknesses. There are many convergences between the analytical role of big data in language and the subject of language teaching. Therefore, we need to use computer tools to analyze textual data related to it, relatively integrate literary interpretation with historical thinking, and therefore find more valuable relevant research methods to create related teaching theories for the future, which provide more broad thinking.

*2.2. Holistic Language Teaching Method.* With the introduction of the holistic language teaching method, various countries and regions have begun to use this method in classroom work. The overall language teaching method is gradually having a greater impact on second language teaching. In many aspects, it coincides with foreign second language teaching methods and meets the actual requirements of teaching.

Goldman is the main advocate of the whole language teaching method, and he has his own interpretation of the method. He believes that the teaching method is to use real reading materials as the content, give full play to the students' hands-on and brain skills, emphasize the students'

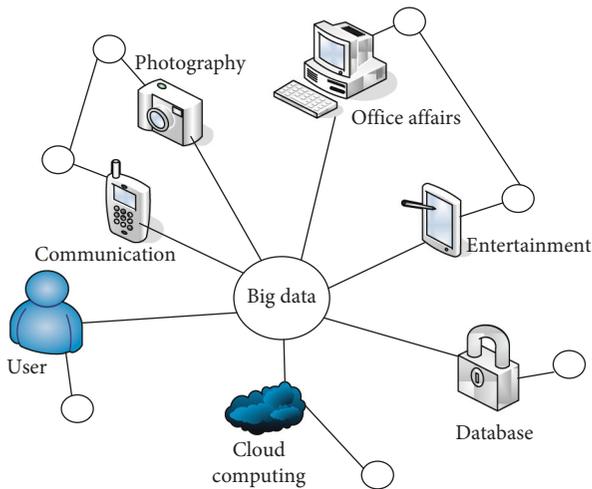


FIGURE 1: The connection between big data and People's lives.

subjectivity and interaction, and fully develop students' language ability [10, 11].

The whole language teaching method is based on a certain theoretical basis and has an important theoretical support and guiding role for the overall practice of language teaching [12, 13]. The principle of overall language teaching is shown in Figure 2.

The whole language teaching method has a unique advantage different from other teaching methods. Among them, the most basic and most important feature is to pay attention to the integrity of the language, which is mainly manifested in the following aspects.

**2.2.1. Integrity of Language.** The whole language teaching method pays attention to all points and aspects of language learning in the teaching process, such as a whole in phonetics, vocabulary, and syntax, exercises the function of the language in the overall scope, and emphasizes that the role of the language as a whole is greater than the role of the whole. The language that is too mechanically fragmented is more one-sided and is not conducive to language acquisition. Therefore, general language training not only focuses on understanding the overall coherent content of English reading materials and rigorous logical thinking but also focuses on improving the general language skills of listening, speaking, and reading and writing.

**2.2.2. The Integrity of the Language Environment.** The language learning effect of the learner in the real environment of the target language is very important. In the classroom, teachers pay attention to the construction of the language environment, such as language representation. The organization of students' preclass English, classroom introduction, basic reading introduction, class group activities, and discussion uses the target language to guide students and creates a good English atmosphere for students, and students naturally adapt to use English logical reasoning to think about problems, organize language, and output language into the atmosphere of learning English.

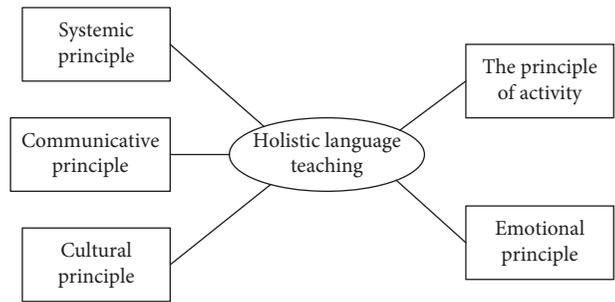


FIGURE 2: Principles of holistic language teaching.

**2.2.3. The Integrity of the Learning Subject.** The student's main body status, initiative display, and positioning of learning needs are respected. Learners are performers who actively accumulate knowledge. The teacher respects the students' performance in the classroom and gives them some time to reflect and practice, but they will not be bothered by the students' speech defects. The teacher helps the students to internalize their knowledge—the confidence in learning—so that while the students are learning in class and experience the fun of knowledge, you can give full play to your own subjective initiative.

**2.2.4. The Integrity of Teaching Methods.** In different teaching methods, teachers have to adapt to different levels. The overall method of language teaching requires teachers to have certain teacher qualities and also requires teachers to explore and examine their own diversified roles.

**2.2.5. The Integrity of the Teaching Process.** The whole process of the whole language teaching method is the effective application of the theoretical knowledge of the whole language teaching method. Once teachers have determined their own roles, students' roles and needs, and teaching goals, they can use different teaching methods flexibly according to the characteristics of realistic teaching [14, 15]. The difference between the whole language teaching method and other traditional teaching methods is shown in Table 1.

The theory of holistic language pedagogy first emphasizes the whole. In language teaching, although we often divide language into four parts, listening, speaking, reading, and writing, in essence, language is an inseparable whole that includes these four parts. Relatively speaking, the traditional language teaching method only pays attention to the individual teaching of language ability and does not pay attention to the overall unified teaching.

**2.3. The Application of the Whole Language Teaching Method in College English Vocabulary Teaching under the Multimedia Environment.** Compared with traditional teaching, multimedia has interactive functions, and multimedia teaching methods provide a rich environment for language learning. The multimedia environment makes English vocabulary teaching more lively and interesting [16].

TABLE 1: The difference between language teaching methods and other traditional teaching methods.

Project	Traditional teaching methods	Holistic language teaching
Teaching steps.	1. From part to whole	1. From whole to part
Classroom subject	2. Teacher-centered	2. Student-centered
Teaching focus	3. Spoken language acquisition precedes literacy	3. Spoken and written language are acquired at the same time
Teaching method	4. Teaching method is single	4. Teaching method is colorful

Therefore, it is necessary to use multimedia teaching and holistic language teaching methods to integrate them into college English vocabulary teaching. Combining the core principles of holistic, student and authentic teaching advocated by the holistic language teaching method will help students fully learn English in English vocabulary classes and generate interest in English, so that students can master some basic English knowledge and develop general language skills [17].

The combination of the holistic language teaching method and college English vocabulary teaching promotes the use of high-quality teaching characteristics, such as completeness, authenticity, and subjectivity, and can achieve significant educational effects [18]. First of all, it is helpful to motivate teachers to adopt different teaching methods according to the specific teaching situation and can make full use of their strengths and avoid weaknesses, and creatively exert the advantages of comprehensive language training [19]. Second, under the guidance of the overall language teaching method, students will be able to give full play to the role of subjectivity, promote the pleasure of reading, and increase interest in the process of collaborative learning and active exploration of reading materials [20].

### 3. Questionnaire and Research

*3.1. Questionnaire Design Process.* The subjects of the questionnaire survey are students from a certain university in city A. Through the distribution of online questionnaires or paper questionnaires, the collection and quantitative analysis of the information filled in by users are carried out to draw conclusions from the questionnaire as shown in Table 2.

- (1) In the preliminary preparation of the questionnaire, the number of questions should be as concise as possible to avoid the fatigue of the interviewees.
- (2) The questionnaire is released. Questionnaires were distributed through online questionnaires, on-site questionnaires, and inviting friends to help ask friends and students around them to fill in the questionnaires. A total of 245 questionnaires were distributed, and 205 valid questionnaires were returned. The questionnaire recovery rate was 83.67%. The questionnaire distribution method and the results of the collection are shown in Table 2.
- (3) Questionnaire analysis. The collected questionnaire information is organized to get the required information data. The results of the questionnaire are analyzed. The analysis results include an analysis of

the difficulties in English vocabulary learning and the respondents' opinions on the application of the overall language teaching method to college English vocabulary teaching. Some of the results obtained from the questionnaire are as follows.

*3.2. Questionnaire Survey Content.* The first part is to select 205 students from this university and divide the interviewees into four groups to investigate the difficulties they encountered in English vocabulary learning. The difficulties include large vocabulary, spelling rules, word meaning and usage, word collocation, and other aspects.

The second part is to organize the data collected in the questionnaire and investigate the respondents' views on the application of the overall language teaching method to college English vocabulary teaching.

*3.3. Calculation Method of Reliability in Questionnaire Survey.* In the questionnaire survey, whether it is an online questionnaire or an on-site questionnaire, there may be more or less errors. The specific calculation method is shown in the following formulas:

$$\lambda = \alpha + \beta + \gamma, \quad (1)$$

$$\phi_{\alpha}^2 = \phi_{\beta}^2 + \phi_{\gamma}^2, \quad (2)$$

where  $\lambda$  is the data obtained by directly conducting the questionnaire survey,  $\alpha$  is the real statistical data,  $\beta$  is the error data in the questionnaire survey system, and  $\gamma$  is the random error data.  $\phi_{\alpha}^2$  is the variance of the measured data,  $\phi_{\beta}^2$  is the variance of the true statistical data, and  $\phi_{\gamma}^2$  is the variance of the random error data.

### 4. Analysis and Discussion

*4.1. Analysis of Difficulties in English Vocabulary Learning.* In this survey, the interviewees were divided into four groups to investigate the difficulties they encountered in English vocabulary learning. The difficulties included large vocabulary, spelling rules, word meaning and usage, and word collocation. The survey results are shown in Table 3.

It can be seen from Figure 3 that among the second group of respondents, 17, 10, 14, and 9 people think that large vocabulary, spelling rules, word meaning and usage, and word collocation are difficult to learn English vocabulary, respectively. It can be seen that due to factors such as large English vocabulary and complicated spelling rules, most interviewees think English vocabulary learning is more

TABLE 2: Questionnaire distribution method and collection results.

Questionnaire distribution method	Number of questionnaires issued	Number of questionnaires returned	Recovery rate (%)
Internet questionnaire	67	52	77.61
On-site questionnaire	116	101	87.07
E-mail	62	52	83.87

TABLE 3: Analysis of difficulties in English vocabulary learning.

Difficulties	Group 1	Group 2	Group 3	Group 4
Large vocabulary	16	17	12	12
Spelling rules	11	13	17	8
Word meaning and usage	13	11	10	16
Word collocation	11	10	12	16

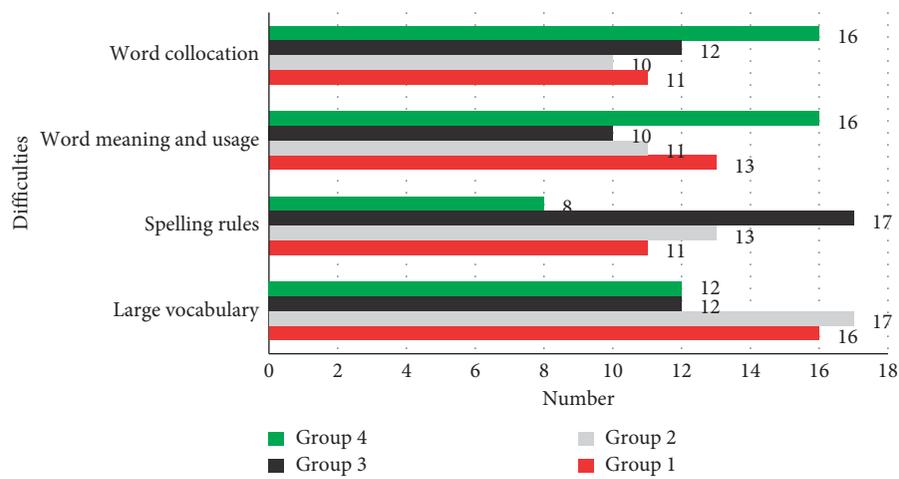


FIGURE 3: Analysis of difficulties in English vocabulary learning.

difficult. Therefore, teachers can start from these aspects to promote English vocabulary teaching the development of work. Students lack freshness and interest in English vocabulary to a certain extent. However, students lack self-control and cannot focus on the teacher’s knowledge teaching for a long time. Many students seem to be listening to lectures, but in reality, they are in a state of emptiness, intentionally paying attention to a very short time, and are easily disturbed by external factors. Students’ interest level in English learning is not enough, and there is a general situation of learning difficulties at present.

4.2. *Analysis of Respondents’ Perceptions.* In this survey, the interviewees’ opinions on the application of the whole language teaching method to college English vocabulary teaching were investigated. The survey results are shown in Table 4.

It can be seen from Figure 4 that 77 of the interviewees think it is necessary to apply the whole language teaching method to college English vocabulary teaching. 70 people think that the teaching effect of this method is better, but only 13 people think that it is not necessary. It can be seen that most of the interviewees believe that the application of the whole language teaching method to college English

TABLE 4: Attitudes towards applying the method to college English vocabulary teaching.

Respondents	Very necessary	Very effective	General	Unnecessary
Group 1	18	16	10	7
Group 2	16	21	9	5
Group 3	23	16	10	3
Group 4	20	19	9	3

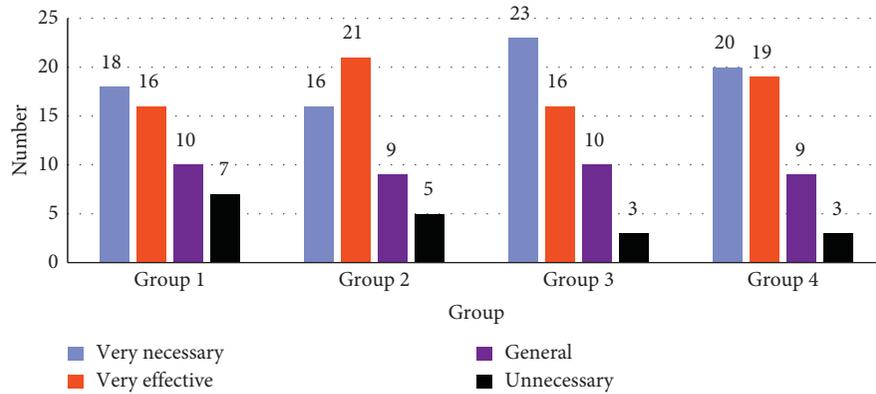


FIGURE 4: Attitudes towards applying the method to college English vocabulary teaching.

vocabulary teaching is very necessary, and it will get better teaching results, thereby improving the efficiency of college students' learning English vocabulary.

## 5. Conclusion

With the rapid development of big data on a global scale, people have had a profound impact on the world's cognition and thinking patterns, especially in terms of language expression, and more need to understand and use new methods, which is also true for vocabulary teaching in this way. A total of 240 questionnaires were distributed, and 200 valid questionnaires were recovered. The questionnaire recovery rate was 83.3%. Through the investigation, the students' English vocabulary learning was analyzed in detail. With the development of big data and multimedia technology, people have begun to attach importance to overall language teaching and constantly explore new methods in the teaching process. Therefore, this article combines big data and multimedia environment to carry out related research on the application of the whole language teaching method in the teaching of English vocabulary. This article finally came to the conclusion that combined with big data and multimedia teaching methods, it is very necessary to apply the overall language teaching method to college English vocabulary teaching, which will produce better teaching results, thereby improving college students' learning English vocabulary efficient.

## Data Availability

The datasets used and/or analyzed during the current study are available from the corresponding author on reasonable request.

## Conflicts of Interest

The authors declare that they have no conflicts of interest.

## References

- [1] X. Chang, "On the enlightenment of the whole language teaching method to my country's college English teaching," *Speed Reading (Late)*, vol. 5, p. 76, 2016.
- [2] Y. Rao, "The application of holistic reading method in the teaching of college English cultural background knowledge—taking unit 1 of "new vision university English IV" as an example," *Educational Modernization*, vol. 2, pp. 151-152, 2017.
- [3] Y. Wu and J. Zheng, "The teaching exploration of "audio picture book" in primary school English from the perspective of holistic language teaching theory," *Education Teaching Forum*, vol. 42, pp. 175-176, 2016.
- [4] J. Zhang, "Exploring the influence of big data on English teaching," *Journal of Jiamusi Education College*, vol. 1, no. 4, pp. 403-404, 2018.
- [5] K. Pu, "Let English teaching and big data go together: composition teaching and correction network," *Charming China*, vol. 41, p. 143, 2016.
- [6] T. Dai, "The micro-communication of English teaching in the era of big data," *Journal of Shandong Agricultural Administrators College*, vol. 34, no. 12, pp. 5-6, 2017.
- [7] B. Yang, "Talking about the strategies of English teaching in the era of Internet + big data," *Reading and Writing*, vol. 14, no. 21, pp. 93-98, 2017.
- [8] Y. Zhang, "Research on college English phonetics teaching based on big data," *Crazy English (Teacher Edition)*, vol. 2, pp. 107-108, 2018.
- [9] Y. Shi, "Methodological thinking around "le"—also on second language teaching methods," *Studies of Chinese as a Second Language*, vol. 1, pp. 109-129, 2017.

- [10] Y. Ouyang, "On the use of multimedia in English teaching," *Educational Sciences: Full Text Edition*, vol. 7, Article ID 00033, 2016.
- [11] L. Yu, "An empirical study of project-based learning in college English multimedia teaching," *Journal of Qinzhou University*, vol. 32, no. 11, pp. 50–53, 2017.
- [12] X. Wang, "College English vocabulary teaching," *China New Telecommunications*, vol. 16, p. 137, 2017.
- [13] Y. Niu and T. Zhang, "Application of "multimodal metaphor" in college English vocabulary teaching," *Education Teaching Forum*, vol. 30, pp. 154–156, 2017.
- [14] T. Yang and M. Fang, "Analysis of the main problems in college English vocabulary teaching and their causes," *Consumer Guide*, vol. 11, p. 353, 2016.
- [15] W. Guo, "Research on the introduction of situational context in college English vocabulary teaching," *Journal of Shanxi Energy University*, vol. 30, no. 1, pp. 116-117, 2017.
- [16] X. Song, "Exploration of college English news listening teaching strategies under the integrated language teaching model," *Comparative Research on Cultural Innovation*, vol. 4, no. 13, pp. 90-91, 2020.
- [17] Y. Ke, "Discussion on the cooperative learning of primary school English group based on holistic language teaching," *Reading and Writing*, vol. 14, no. 31, pp. 255-256, 2017.
- [18] X. Wang, "Talking about how to apply the holistic language teaching method to cultivate high school students' oral ability," *Caizhi*, vol. 19, pp. 77-78, 2020.
- [19] H. Liu, "Research on the reform strategy of college oral English teaching based on the theory of holistic language teaching method," *Journal of Kaifeng Institute of Education*, vol. 37, no. 9, pp. 92-93, 2020.
- [20] Z. Peng, "The application of holistic language teaching method in business English teaching," *Vocation*, vol. 6, pp. 123–125, 2020.