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To cite this article: Yuanyuan Tao 2021 *J. Phys.: Conf. Ser.* **1852** 032045

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Reflection on Teaching Research of English Applied Linguistics Based on Big Data

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Abstract. The traditional English teaching is mainly dominated by the teacher and instilled in teaching. The students trained by this teaching mode have a low ability to acquire knowledge, and they often become dumb when they communicate with each other. With the continuous development of society, big data has been applied to all aspects of our life, constantly changing our existing education mode. Based on this, this paper establishes the teaching platform of English applied linguistics, and combines the teaching of English Applied Linguistics with big data in combination with the current teaching situation of English applied linguistics. In this paper, the students of grade 2020 are used as the control group, and the network teaching platform based on big data is used for teaching. The control group is the students of grade 2019, and the traditional teaching mode is used for teaching. More than 90% of the students' oral ability can be improved by more than 90% of the students' oral English in 2020.

Keywords: Big data, English applied linguistics, Teaching reflection, Network teaching platform

1. Introduction

Big data is the product of Internet technology, including cloud computing, distributed process, storage and perception technology, etc. ^[1-3]. It obtains and collects a large amount of information found in the process of production and life, and then researchers classify the information obtained by big data, and predict the development of data ^[4]. Compared with the information obtained by traditional methods, big data has large amount of data, unstructured distribution, powerful access ability and intelligent analysis ability, and is the data that ordinary users can directly access ^[5]. Everyone can access the data, not only professionals.

In traditional classroom teaching, the organization of teachers' decision-making and teaching behavior is based on the relationship between short-term results, small scenes, and small events and causes ^[6]. Teachers' accumulated experience through teaching can be identified and further explored through teaching behavior, but teaching experience is not suitable for young teachers. At the same time, because teachers cannot obtain more specific and continuous information, they cannot describe the quality changes in the process of learning or teaching activities ^[7]. They often find the impact and direction of change from the micro level, and their ability to analyze data at the macro level is



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relatively limited^[8]. In the big data environment, College English teaching will no longer be based on ideas and experience, but on facts and evidence^[9]. The application of information technology is suitable for English learners to design individual and group learning plans, analyze their learning behaviors and attitudes, guide and control the learning process, identify weak links, predict learning needs, and enhance learning assessment methods^[10].

This paper investigates and studies the existing teaching methods of English applied linguistics. It is found that the current teaching mode is not combined with big data. English is an applied subject, but the students trained by the traditional education mode are particularly weak in the application of language. Therefore, this paper introduces big data into English teaching. In the research, this paper introduces the big data teaching mode according to the actual situation of the existing innovation and entrepreneurship system in Colleges and universities in China. The combination of the two can cultivate students' English application ability. In the contrast experiment analysis, it can be found that the introduction of big data teaching mode can improve students' English language application.

2. The Present Teaching Situation of English Applied Linguistics

English applied linguistics, as a practical skill in the application of English language ability, plays an important role in promoting one's future career development. Although more attention has been paid to English education in classroom knowledge and English Learning under the general environment, and it has achieved considerable improvement compared with the past, the application of English linguistics is slightly insufficient. To sum up, English linguistics is not satisfactory, mainly due to the following factors.

2.1. The Teaching Objectives are not clear and Systematic

First, from the perspective of English linguistics teaching curriculum, there is less English class time in Colleges and universities. The teaching of English applied linguistics is attached to the teaching process of English intensive reading, and there is no special curriculum arrangement. In the teaching of intensive reading, there are many aspects that need to be taken into account, including listening, speaking, reading, writing, translation and so on. The time for practicing and learning English applied linguistics is even more limited. Second, the system is insufficient. Due to the shortage of curriculum time, teachers have to spend their English teaching time on reading and writing, which can improve most students' English proficiency. The use of English can only do a model, template explanation. This situation leads to students' only a little knowledge of English writing, staying at the very primary stage, which is not conducive to students' learning of English application.

2.2. The Content of Teaching Materials used in Teaching Courses is Single.

Taking the English Teaching in our school as an example, the New Horizon English course is adopted as the textbook for English class. In the course, the reading and writing part and the listening and speaking part are compiled separately. The content of listening and speaking is usually designed to match the content of reading and writing. It can only be supplemented and expanded by teachers in English teaching.

3. Experimental Ideas and Design

3.1. Experimental Ideas

With the emergence of the Internet, network information platform has become an important auxiliary means of modern education. The emergence of teaching platform provides an opportunity to change the teaching mode, which is conducive to the establishment of a platform with teaching mode as the core and information technology as the tool, so as to continuously improve the application of English linguistics by college students. Therefore, in order to improve the application ability of college students in English linguistics, this paper introduces the big data teaching platform into the teaching of colleges and universities, adjusts the English teaching mode according to the teaching effect, and

constantly improves the students' English application ability.

3.2. Experimental Design

In the design, this paper adopts two forms: questionnaire survey and field interview. 531 college students and 100 professional English teachers were selected as the experimental data. The purpose of this study is to explore the current situation of College English applied language teaching mode in China. Through the analysis of the questionnaire survey and interview results, this paper adopts the experimental method of the experimental group. The students of grade 2020 in our school carry out the teaching mode of English Applied Linguistics on the teaching platform of big data, while the control group is the students of grade 2019, carrying out the traditional teaching mode of English applied linguistics. According to the learning effect of the two groups were analyzed.

In this experiment, the mean square error formula in the survey data is as follows:

$$RMSE = \sqrt{\frac{\sum_{(u,i) \in T} (r_{ui} - r'_{ui})^2}{|T|}} \quad (1)$$

4. Discussion

4.1. Analysis of Students' Willingness to Attend Class

After a semester of teaching, we investigated and analyzed the willingness of the two groups of students in class. The results are shown in Table 1.

Table 1. Two groups of students' willingness to attend class

Investigation factors	The experimental group(%)	The control group(%)
Communicate actively in class	75.4	41.6
Communicate after class	70.3	31.1
Preview before class	65.2	28.1
Final exam	82.7	68.9

According to the data in Table 1, in the four aspects of active communication in class, communication after class, preview before class and final score, the data of students in the experimental group are much higher than those in the control group. In the teaching mode of big data teaching platform, students can communicate more. English itself is a highly practical subject, which requires students to practice listening, speaking, reading and writing. The English teaching mode carried out by the experimental group can improve the students' ability more than the traditional English linguistics teaching mode.

4.2. The Application of Big Data Analysis in English Education

In the era of big data, colleges and universities should combine the current development of science and technology and introduce the network teaching platform of big data into the teaching mode of English applied linguistics. The network teaching platform developed by big data can improve students' autonomous learning ability and search ability of teaching content. In addition, students can learn videos on the online teaching platform anytime and anywhere, breaking through the learning requirements in time and space. This paper analyzes the popularity of big data in English applied linguistics teaching mode. The experimental results are as follows.

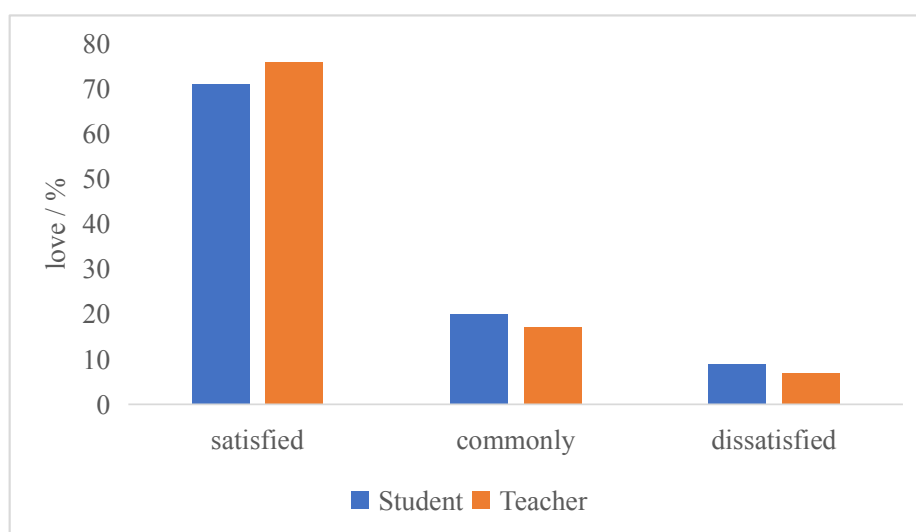


Figure 1. A survey of students' and teachers' liking for big data based English teaching model

According to the data in Figure 1, it can be seen that both students and teachers have a high preference for the teaching mode of English Applied Linguistics based on big data. For teachers, the development of network teaching platform can reduce a lot of their time and experience; teachers need to record videos in class, then upload them to the network teaching platform, and publish classroom assignments in the teaching platform. In checking the data of classroom homework, the teacher does not need to check everyone's homework once. According to the word cloud module in the teaching platform, students' homework can be displayed, which greatly saves the time for teachers to check homework. For students, students can continue to consolidate their knowledge points, 90 minutes of a class, students can grasp the limited knowledge points, then students can log in to the network teaching platform to watch teaching video, relearn the knowledge points not mastered. Therefore, both teachers and students prefer the teaching mode of English Applied Linguistics based on big data.

This article then investigates and analyzes the spoken English of 2020 students. The results of the survey are as follows:

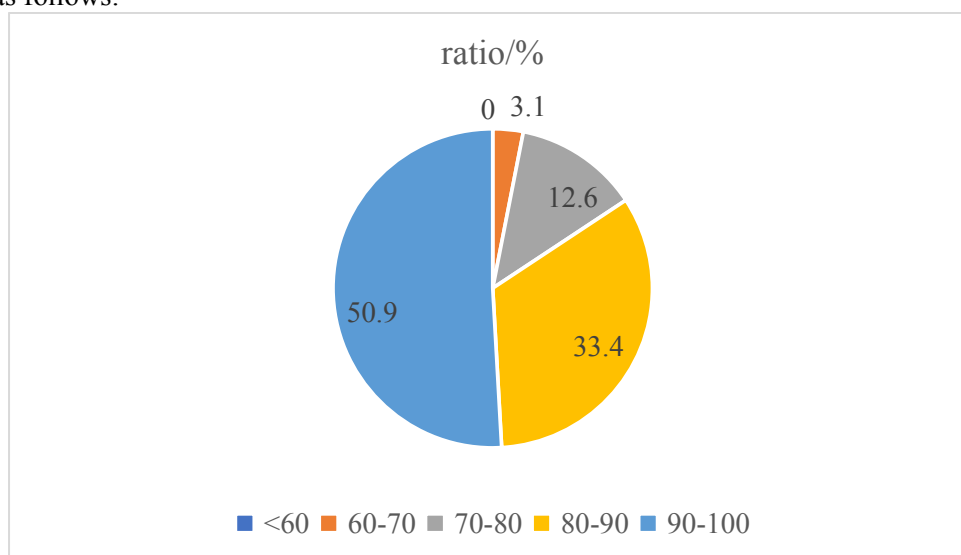


Figure 2. Fan chart of 2020 students' oral English scores

According to the data in Figure 2, 50.9% of the students of grade 2020 scored above 90 in their oral English scores. The students are more confident in the application of English as linguistics. They have obviously improved their oral English and their scores have been improved significantly. From this, we can see that under the teaching mode of the network teaching platform carried out by big data, the

students' performance has been improved significantly.

4.3. Reflection on the Educational Model of English Applied Linguistics Based on Big Data

At the beginning of the 21st century, the introduction and popularization of computer network has promoted the subject teaching of various teaching modes in College English teaching. But in the introduction of computer network in English teaching, students' input is still very low, learning ability and self-efficacy level is also very low. Low input has a direct impact on students' interest and motivation to continue learning. English listening, speaking, reading and writing skills have not changed. In the field of College English education, it can provide an excellent combination of information technology development and implementation solutions. The core of information technology is information-based support, which enables teachers and learners to collect information, analyze data and apply data analysis results in English classroom. In this process, College English teachers need to understand the classification, counting, analysis and interpretation of big data, and then pass the results to the English classroom in order to improve students' English learning level. The teaching mode of Applied Linguistics based on big data should be analyzed from the selection of teaching resources and English learning evaluation.

(1) The choice of teaching resources

Big data technology can promote the depth and breadth of students' English learning resources. English teachers can find the most popular learning resources in listening, speaking, reading and writing, and can automatically push learning resources according to students' individual or group learning preferences and needs. Big data technology is a long-term tracking of English learning materials used by English students or teachers, as well as long-term tracking of various development algorithms. It can calculate students' individual learning needs and preferences, and automatically design learning resources for various English students or teachers. These learning resources can stimulate their English learning ability of listening, speaking, reading and writing. With the support of big data, the vigorous promotion of learning resources can save a lot of time to find suitable learning resources. The same English learning group can also increase peer communication and improve students' English learning initiative. The selection of English teaching resources based on big data is based on the characteristics of students and the allocation of learning resources. While saving time and improving learning efficiency, big data can also simplify English teaching resources and greatly improve students' English learning initiative.

(2) Assessment of English learning

Teaching evaluation can be divided into general teaching evaluation and formal process evaluation, as well as performance evaluation and process evaluation. General teaching evaluation is a summary of the knowledge that students have learned to some extent, so as to understand the progress and position of students in the group. Especially in College English practice, formal process assessment refers to the final test results of students. Performance evaluation is mainly about students' achievement, class participation, homework completion and classroom examination. Both assessment methods can make English teachers and students understand the learning situation at different levels, so they cannot be partially or ignored. The introduction of modern information technology will increase the importance of formal assessment and improve the quality of formal assessment in English education. English teachers will be able to obtain students' behavior information by completing each preparation stage, classroom and after class activities, so they can report detailed and accurate assessments for each student. Students will be able to reflect on their learning, summarize their learning experiences and lessons, and with the help of College English teachers, plan or adjust their English learning according to the information in the learning process.

5. Conclusion

The background of big data provides rich knowledge and materials for teaching activities, especially in the teaching of Applied Linguistics in Colleges and universities. The Internet provides a lot of learning channels for students in the process of learning, giving students a broader learning space. This paper

mainly analyzes the current teaching mode of English applied linguistics, and finds that the students trained by the current teaching mode are weak in application. Therefore, this paper introduces the big data network teaching platform into the teaching of English applied linguistics, and the experimental results show that both teachers and students have a high degree of love for the network platform mode carried out by big data. The students trained by the network teaching platform have greatly improved their English application ability. 50.9% of the students' oral English scores are above 90. The emergence of big data and the improvement of students' English application provide a good channel for future English teaching, which can enrich the teaching content and improve the teaching effect.

Acknowledgments

Scientific Research Program Funded by Shaanxi Provincial Education Department (Program No. 18JK1013).

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