Research on Online Learning Curriculum in the Context of Big Data

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Abstract. With the development of information technology, it is possible to extract and apply big data, and it is also the first time that the samples and the whole of scientific research are combined and become the same concept. This study takes big data as the starting point, and deeply discusses the key and difficult problems of Freshmen in the process of online audio-visual. The conclusion is conducive to the smooth progress of online audio-visual curriculum reform, and also has certain guiding significance for students' learning and teachers' guidance.

Keywords: Online Learning Curriculum, Big Data; Information Technology

1. Introduction

The traditional audio-visual teaching is mainly based on testing. Teachers play the role of testing source in the teaching process. They don't pay enough attention to the initiative of students in audio-visual teaching. Students can only accept and participate passively. There is a lack of interaction between teachers and students, the classroom atmosphere is dull, and students' enthusiasm in teaching is not fully exerted [1]. In this context, the development of network technology provides rich teaching resources for English audio-visual teaching, and also can effectively help students to shape a personalized learning environment and provide a new environment and way for English teaching. Under the background of network information, English resources have the characteristics of openness, its content and form are widely diverse, and can provide a relaxed learning environment for students English audio-visual resources in the network information environment often include voice, text and image, which can effectively meet the requirements of students' interactivity, richness and real-time. At the same time, it also has a great impact on the traditional audio-visual teaching resources, has an important impact on the English teaching methods and methods, and has made great changes in the English audio-visual teaching methods[2].

Experts and scholars in the field of education generally believe that the rich real-time content of English online audio-visual course can meet the learning requirements of students, make students full of interest in English audio-visual teaching, and in the context of online information, English
audio-visual teaching is no longer limited by the traditional teaching time and place, students can flexibly learn according to their own needs in daily life. This kind of learning method can meet the individual needs of students, and also meet the individual learning concept. It is an emerging teaching innovation method[3].

2. Research Basis
In the era of big data, with the popularization of software and hardware devices in information technology and the improvement of application frequency, people have formed massive data on the basis of using these hardware devices and software. The new processing technology makes the amount of data that people can process greatly increase, and then affect decision-making through the analysis of massive data, which marks the arrival of the era of big data. In the era of big data, according to the times, how to effectively use these massive data has become a key proposition[4]. This new technology of big data that can collect and analyze massive data will help people better understand and understand the world.

Today, with the rapid development of Internet technology such as cloud computing, a large number of data generated by students clicking on websites in online audio-visual courses can be easily obtained, and the monthly computer also has the ability to process these data at high speed or even in real time. A series of questions belonging to the industrial era are no longer difficult to solve, and the technology in the era of big data may even achieve all the specific target data. The collection and processing of "sample" and "overall" is to realize the equivalence between "sample" and "overall". Compared with the limited data in a small range, the application of big data in research not only means higher accuracy, but also helps to reveal the details that could not be found before, so that researchers can obtain and use comprehensive and complete data in more fields and deeper levels, so as to change the deduction to the return. Accept this thinking path.

3. Research Content and Process
The purpose of this study is to explore the difficulties and key questions students encounter in the learning process, and to provide solid big data for College English teachers' classroom teaching decisions and students' English learning Support and basis, specifically, the following two key issues are to be studied:

(1) Which units of 2014's freshmen take longer and progress slower after completing the new vision online audio visual 1 course?

(2) What topics did the students take longer and make slower progress after completing the new vision online audio visual 1 course?

In December 2014, the research group sorted out and counted the online learning time and progress of Non-English Majors in class 1, 2014 (56 parallel classes taught by 28 teachers). In order to make this study better comparative and analysis, this study collects and counts the data of two parallel classes taught by each teacher in 100 statistical units (28 teachers in total 2800), and then makes statistical analysis of the data from network statistics using spss20.0. As the research object of this project is freshmen, who come from all over the country, have the same English scores, and the gender ratio is basically the same, so this research has the basis of preliminary research, and the research can continue.[5]

4. Results and Discussion
After the completion of the network data statistics, this study used spss20.0, first of all, compared units5 (about 3706h) and Unit6 (about 3903h), which spent more time, with other units (unit2:3301h, unit8:3100h, unit9:3007h, unit10:2709h), which used less time. Among them, independent sample t-test was carried out for Unit5 and Unit2, which were different from those taught by 28 teachers. See Table 1.
Table 1. Time Comparison t-Verification Results of Unit 2 and 5

| Independent Samples Test | Levene’s Test for Equality of Variances | t-test for Equality of Means | 95% Confidence Interval of the Difference |
|---------------------------|----------------------------------------|-----------------------------|------------------------------------------|
|                           | F  | Sig. | t  | df | Mean Difference | Std. Error Difference | Lower | Upper |
| Equal Variances Assumed   | 1.812 | 0.184 | 3.049 | 54 | 0.004 | 4.036 | 1.324 | 1.382 | 6.690 |
| Variances not Assumed     | 3.049 | 46.914 | 0.004 | 4.036 | 0.241 | 1.372 | 6.699 |

This shows that in the online learning process of English audio-visual Oral 1, students spend more time in learning unit 5 and unit 6 than in other units, which further shows that students' learning progress in learning these two units is slow and difficult.

In addition, this study uses spss20.0 to analyze the time spent on four questions of 10 units required by online audio-visual, and conducts independent sample t-test on LIS tening in and further LIS tensing (hereinafter referred to as Li and FL). In order to ensure the rationality of comparison, the time spent on Li’s multiple choice questions is removed during the test, The results are shown in Table 2:

Table 2. t-Verification Results of L1 and FL Problem Solving Time Data

| Independent Samples Test | Levene’s Test for Equality of Variances | t-test for Equality of Means | 95% Confidence Interval of the Difference |
|---------------------------|----------------------------------------|-----------------------------|------------------------------------------|
|                           | F  | Sig. | t  | df | Mean Difference | Std. Error Difference | Lower | Upper |
| Equal Variances Assumed   | 7.537 | 0.013 | 4.139 | 18 | 0.001 | 383.800 | 92.730 | 188.982 | 578.618 |
| Variances not Assumed     | 4.139 | 12.514 | 0.001 | 383.800 | 92.730 | 182.675 | 584.925 |

This shows that in the online learning process of English audio-visual Oral 1, students spend more time in learning Li than other questions, which further shows that students' learning progress in Li is slow and has greater difficulty.

5. Summary

Based on the above research results, the research group has come to the following conclusions: in the rigid learning process of English listening, speaking and listening 1, students have a slow progress and spend a long time on the fifth and sixth units that are not familiar with cultural themes, and teachers should pay more attention to these two units when conducting tutoring and answering questions; in the process of listening comprehension of the four types of questions, students have a poor grasp of the Li types of subjective questions. Slow, teachers need to do a good job in the guidance of this question.

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