



# Research on MOOC Teaching of College Second Foreign Language Courses Based on SPSS Software

Zhengyan Deng<sup>(✉)</sup>

Chinese and Western Language and Culture Research Center, Foreign Language School, Wuhan Business University, 816 Dongfeng Avenue, Wuhan, China  
2443667157@qq.com

**Abstract.** This article starts from the MOOC, expounds the origin and development of MOOC, analyzes the current situation of college second foreign language classroom teaching and the advantages of MOOC applied to college second foreign language curriculum, and proposes the teaching of college second foreign language curriculum under the background of MOOC Reform measures in order to provide reference for the reform of second foreign language courses in universities under the background of MOOCs. This paper uses SPSS data analysis software to study the teaching effect of MOOC-assisted second language French course. The results show that the MOOC platform enriches the stomach teaching resources, creates a more diversified language learning environment, and greatly improves the teaching efficiency and teaching quality.

**Keywords:** MOOC · Second foreign language · Curriculum reform · SPSS data analysis software

## 1 Introduction

MOOC, namely massive open online course, abbreviated as MOOC, is a large-scale open online course [3]. MOOCs can be traced back to 1962, when Douglas Engelbart, an American inventor and knowledge innovator, proposed a research project entitled “Enhancing Human Intelligence: A Conceptual Framework from Stanford Research Institute”. In this research project, Douglas Engelbart The possibility of applying the computer as a collaborative tool for enhancing intelligence is highlighted. The term MOOC was first coined in 2008 by the Director of Network Communication and Innovation at the University of Prince Edward Island in Canada and a senior researcher at the National Institute of Humanities and Educational Technology Applications. Since 2008, a large number of educators have successively created large-scale online open courses. More than a dozen world-renowned universities have participated in the construction of the MOOC platform, and MOOC platforms such as Udacity, Coursera and EDX have emerged immediately.

MOOC has also received a lot of attention in China. Since 2014, domestic education scholars have invested in the construction of domestic MOOC platforms, and some domestic MOOC platforms have emerged one after another.

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At present, the number of MOOCs and the number of students studying MOOCs in my country have taken the lead in the world. At the China MOOC Conference held on April 9, 2019, the participants jointly issued the “China MOOC Action Declaration”, proposing that “Teaching is the country’s plan and the party’s plan. To develop a fairer and higher-quality education, China’s MOOC The class is very promising” [6].

## **2 Analysis of the Current Situation of Second Foreign Language Classroom Teaching in Colleges**

### **2.1 Single Teaching Method**

Most of the second foreign language classroom teaching in colleges is the traditional teaching classroom, that is, the teacher teaches, and the students learn passively. Teachers use multimedia courseware on the podium to teach, and students take notes below. Especially now, the second foreign language courses in many colleges and universities are taught in large classes, and the interaction between teachers and students in the classroom is very limited [5]. Over time, students’ enthusiasm and interest in learning a second foreign language will gradually fade away. Some students gradually lost their enthusiasm for learning a second foreign language because they could not keep up with the progress of the teacher’s class, and even gave up halfway.

### **2.2 Single Teaching Content**

Because of the limitation of less teaching hours, the second foreign language classrooms in colleges mainly teach the content of teaching materials. However, the content of second foreign language textbooks in colleges is outdated, and there are few textbooks available for the public to choose from, which cannot meet the individual needs of today’s students. In particular, students who have a good command of a second foreign language or students who need to take the postgraduate entrance examination often “cannot eat enough” in class and feel that the content of the textbook cannot meet their actual needs.

### **2.3 Single Evaluation**

The second foreign language course in the university is mainly to test the students’ mastery through the final exam. The evaluation method is mostly 30% of the usual grades plus 70% of the final exam grades. The usual grades are mainly composed of classroom attendance and regular homework. This kind of evaluation method is one-sided and single, and cannot objectively and comprehensively examine the students’ second foreign language mastery, which is not conducive to the development of students’ individuality.

## **3 Advantages of Applying MOOC to University Second Foreign Language Courses**

### **3.1 Breaking the Time and Space Limitations of Traditional Teaching**

From the Chinese expression of MOOC “mass open online course”, three characteristics of MOOC can be drawn, namely, large scale, strong openness and convenience [7]. The

courses on the MOOC platform can be viewed and studied online by thousands of students. This learning mode is not limited by time and place, as long as there is an internet connection. Students can conduct online learning anytime and anywhere on the MOOC platform with the help of electronic devices such as mobile phones, computers and tablets [4]. From this point of view, it greatly makes up for the shortcomings of traditional classrooms. Traditional classroom teaching must be conducted at the same time period and students in the same classroom, and the number of students is limited due to the size of the classroom.

### **3.2 Providing High-Quality Teaching Resources**

The MOOC platform brings together a wealth of high-quality teaching resources at home and abroad. In a sense, this achieves the fairness of the distribution of educational resources to a certain extent. Students in ordinary colleges and universities can also obtain free high-quality teaching resources from well-known colleges and universities at home and abroad on the MOOC platform [1]. Both teachers and students can choose high-quality MOOC resources to study and obtain teaching resources through electronic devices such as mobile phones, computers and tablet computers under the Internet. High-quality MOOC teaching resources can greatly enrich the second foreign language and cultural knowledge that students learn in the classroom [2]. On the MOOC platform of Chinese universities, taking French as an example, you can search for rich teaching resources such as French pronunciation training camp, basic French, French speaking French, introduction to French language and culture, introduction to French, French society and culture, etc. Taking Japanese language courses for foreigners as an example, there are zero-based Japanese training camps, college Japanese, college Japanese improvement articles, practical Japanese, Japanese culture interpretation and other online courses.

### **3.3 Personalized Teaching to Stimulate Learning Initiative**

The second foreign language courses on the MOOC platform are very rich, and teachers can search for relevant teaching resources suitable for their own teaching content to enrich their classroom teaching content. Students can also choose online foreign language course resources suitable for them for targeted and repeated learning according to the language they are learning, the second foreign language level and their own needs. At the same time, the MOOC platform can provide learners with live courses, auxiliary learning materials, weekly fixed questions and other services. Students learn independently on the MOOC platform, which can greatly stimulate their initiative and enthusiasm for learning.

### **3.4 Creating a Relaxed Atmosphere for Communication Between Teachers and Students**

Some students are afraid of face-to-face communication with teachers due to their own personalities or high learning pressure. This phenomenon will affect the learning efficiency and learning effect of these students to a certain extent. The MOOC platform can

reduce the psychological pressure of such students and create a relaxed communication atmosphere between teachers and students. Teachers and students can communicate and communicate through the Internet, and improve the learning efficiency and learning effect of these students.

## **4 Teaching Reform Measures of Second Foreign Language Courses in Universities Under the Background of MOOC**

### **4.1 Building a University Second Foreign Language Curriculum System that Fits Students' Own Majors**

The second foreign language courses in colleges include French as a second foreign language, Japanese as a second foreign language, and German as a second foreign language. Students who take second foreign language courses in universities are often students with their own majors or English majors. Therefore, college second foreign language teachers should formulate a college second foreign language curriculum system that is in line with students' majors, pay attention to the cultivation of students' abilities, and improve teaching quality. Teachers combine students' majors and their actual needs to create MOOC teaching resources that suit students' needs. For example, when formulating a second foreign language course for hotel management students, teachers should take into account the students' own majors and formulate a second foreign language course system suitable for hotel management majors. In terms of teaching content, we should design more vocabulary related to hotel management situations and the content of hotel and restaurant situational communication terms.

### **4.2 Constructing a Scientific Teaching Model**

Although the traditional teaching mode does have certain drawbacks, the MOOC second foreign language teaching mode cannot completely replace the traditional teaching mode. The two should be complementary and indispensable [8]. The two teaching modes of traditional teaching and MOOC teaching should be organically combined, with the traditional teaching mode as the main, and the MOOC second foreign language teaching mode as an auxiliary. In classroom teaching, teachers take students as the main body, teach the relevant language knowledge of the second foreign language, do a good job in the interaction between teachers and students in the classroom, timely understand the learning situation of students, and timely answer the questions raised by students. After class, teachers expand and extend the content learned in class through the MOOC platform, so as to meet the learning needs of students at different levels, so as to cultivate students' autonomous learning ability and improve students' initiative and enthusiasm for learning. For example, when the texts learned in the French class of 2 foreigners involve the knowledge point of French holiday culture, teachers can guide students to search for relevant teaching resources on the MOOC platform and learn French holiday culture independently.

### **4.3 Constructing the Characteristic Teaching Platform of Second Foreign Language**

Although there are rich and diverse MOOC courses on the online platform, some course resources may not be completely consistent with their own teaching content in teaching, so it is very beneficial to build a second foreign language teaching platform. We can use a third-party platform to build a special teaching platform for the second foreign language course, which is convenient for teachers to upload teaching resources. Students can upload homework and ask questions to teachers through this platform. With this platform, teachers and students can communicate online, and teachers can follow up on students' learning status at any time, so that the MOOC platform and the featured teaching platform complement each other.

### **4.4 Improving the Course Evaluation System**

We should further improve the university second foreign language course evaluation system and use a diversified evaluation system. In traditional teaching, teachers have the final say on students' academic performance. This kind of evaluation seems to be a bit one-sided at the moment. In the context of MOOC, a diversified evaluation system is introduced in the evaluation of second foreign language courses in universities, and various evaluation methods such as student self-evaluation, student group mutual evaluation and teacher evaluation are adopted. The duration and number of students watching MOOC, and the quality of assignments submitted on the MOOC platform should be included in the student assessment. Students' final grades can be assessed by students' self-assessment (10%) + mutual assessment by student groups (10%) + teacher's assessment (20%) (Including attendance, homework, classroom performance, and MOOC platform performance) + Final written test score (60%) composition. Establishing a diverse evaluation system can more objectively and comprehensively evaluate students' second foreign language mastery, and at the same time, it can also allow students to have a comprehensive and clear understanding of their own learning situation, and help students to continuously improve their learning ability and learning efficiency.

### **4.5 Strengthening the Professional Quality of Teachers**

MOOC is an emerging Internet teaching mode. Colleges and universities should strengthen the professional quality training of second foreign language teachers. Through training, strengthen the computer application technology, MOOC teaching skills, and MOOC production software skills of second foreign language teachers. Teachers themselves can also use the MOOC production and communication platform on the Internet to continuously improve their ability to use new media software. At the same time, teachers should also strengthen their sense of teaching responsibility, conscientiously complete the teaching tasks at each stage, do a good job in the analysis of students' feedback information, sort out the problems commonly reported by students, and provide timely answers to students through classroom or MOOC teaching platforms.

## 5 Research on Teaching Effect of MOOC Education Model Based on SPSS

### 5.1 Research Objects and Statistical Methods

In order to test the MOOC teaching mode to improve students' academic performance, the research group took the 2019 s Foreign Language Class A and Second Foreign Language Class B as the research objects, and launched a period based on the "Second Foreign Language" course. Two natural classes are experimental classes, one class is taught in an mode with the help of the MOOC, and the other class is a control class, which is taught by traditional teaching methods. The same teaching content, different teaching modes, students' final exam results are quite different (Tables 1 and 2).

It can be seen from the results that the highest score in class A is 89, the lowest score is 53, and the average is 76.29; in class B, the highest score is 95, the lowest score is 62.5, and the average is 84. Comparatively speaking, the average score of class B is 7.71 points higher than that of class A, the standard deviation of class A is smaller than that of class B, it can be seen that the students of class A have more average scores, and the scores of class B are relatively unstable.

### 5.2 Difference Analysis

It can be seen from Table 3 that the variance analysis is used to study the difference of the class for a total of grade. It can be seen from Table 3 that the samples from different classes all show significant ( $p < 0.05$ ), which means that samples from different classes have differences in grades. The specific analysis shows that the class has a 0.05 level of significance for the grades ( $F = 7.076$ ,  $p = 0.011$ ), and the specific comparison difference shows that the average value of class A (76.29) will be significantly lower than the average value of class B (84) (Table 4).

If the analysis of variance shows a significant difference ( $p < 0.05$ ), the average value can be used to compare the specific difference, and the effect size can also be used

**Table 1.** Descriptive Statistical Analysis of the Grades of Two Classes (1)

Class	Number	Maximum	Minimum	Average
A	24	89	53	76.29
B	24	95	62.5	84

**Table 2.** Descriptive Statistical Analysis of the Grades of Two Classes (2)

Class	Number	Standard deviation
A	24	11.080
B	24	8.875

**Table 3.** ANOVA results

ANOVA results				
	Class (mean $\pm$ SD)		F	P
	Class A(n = 24)	Class B(n = 24)		
Score	76.29 $\pm$ 11.08	84 $\pm$ 8.87	7.076	0.011
p < 0.05 p < 0.01				

**Table 4.** Effect Size Metrics

Effect Size Metrics				
Analysis item	SSB	SST	Partial $\eta^2$	Cohen's f
Score	713.021	5347.979	0.133	0.392

to study the magnitude of the difference; First: The partial Eta square is used to represent the effect size (the magnitude of the difference) in the analysis of variance. The larger the value, the greater the difference; Second: when the partial Eta square is used to represent the effect size in the analysis of variance, the critical points for distinguishing small, medium and large effect sizes are: 0.01, 0.06 and 0.14 respectively; Third: The formula for calculating the partial Eta square value is  $SSB/SST$ ; Fourth: Analysis of variance can also use Cohen's f to represent the effect size, and its calculation formula is  $\sqrt{\text{partial Eta square}/(1 - \text{partial Eta square})}$ , when Cohen's f represents the size of the effect size, the difference between small, medium and large effect sizes The critical points are: 0.10, 0.25 and 0.40.

## 6 Conclusions

MOOC, an emerging teaching mode, has attracted more and more attention in university classrooms. More and more college teachers apply MOOC to their own classrooms and second classroom teaching. With the deepening of cooperation between China and other countries in the world, the market demand for talents who can master a second foreign language continues to grow. Teachers who undertake second foreign language teaching should have an international perspective, broaden their teaching ideas and horizons, make good use of MOOC to create teaching highlights, improve students' second foreign language learning efficiency, and cultivate high-quality talents needed by society.

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