

A Study on Online Foreign Language Learning Satisfaction of Chinese College Students in Post-epidemic Period

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ABSTRACT

Online learning has become an important mode of foreign language learning in the post-epidemic period. Online learning satisfaction is a direct embodiment of the quality and effect of online learning of college students, and it is also an important indicator to evaluate the effectiveness of online learning of college students. In this paper, a questionnaire survey was conducted on the online foreign language learning of 420 college students in Hubei Province by random sampling. It is found that college students' satisfaction with online foreign language learning was generally high, and there is no significant difference between males and females in terms of satisfaction. Sophomores' online satisfaction is significantly higher than junior students, and there is no significant difference among other grades. Satisfaction is weakly correlated with students' performance.

Keywords: post-epidemic period; college students in normal universities; online foreign language learning; satisfaction; MOOC; relationship

INTRODUCTION

COVID-19 is a serious public health emergency since the founding of China. As an important part in the prevention and control of the epidemic, colleges and universities across the country delayed the opening of the spring semester of 2020, which effectively prevented crowd aggregation and cross regional mobility. It played an important role in epidemic prevention and control. In order to minimize the impact of the epidemic on the teaching work of colleges and universities, on February 28, 2020, the Ministry of Education issued a notice requiring further improve online education and teaching(Chen, 2020).

With the strong promotion of the policy, The establishment of MOOC, Super Star Learning and Treenity platforms has made online learning on college campuses in full swing. Students can choose different courses according to their needs and preferences. This makes a large number of courses appear on different platforms.

But online learning has both advantages and disadvantages. For example, Chen Huihui (2017) stated that online learning has given full play to the advances of a wide range of network disclosure and rapid information update, realized the sharing of learning resources, and met the learning needs of learners anytime and anywhere Xu et al., (2020) believes that online learning can't well stimulate students' interest in learning.

Since online learning has become an important mode of foreign language learning in the post-epidemic

period, the continuous optimization of online learning platforms and courses has become an extremely important step in order to improve the user experience of college students. All of these can be reflected by satisfaction. Satisfaction is a well-established concept in management, which is a measure of the gap between the subject's expectations and the psychology of the actual situation afterwards. It measures the degree of satisfaction in how far expectations are realized, and has since been introduced into the field of education. Online learning satisfaction of college students is not only a direct reflection of the quality and effect of online learning of college students, but also an important index for evaluating the effectiveness of online learning of college students. Therefore, it is of great theoretical and practical significance to study the satisfaction of online learning among college students.

English is the most widely used language in the world, which means that English education is very important. However, there are few studies on online foreign language learning satisfaction. Based on this situation, this paper investigates the satisfaction of college Students' online foreign language online learning.

LITERATURE REVIEW

● Research on Satisfaction

Satisfaction is a well-established concept in management science and refers to customer satisfaction. The concept was first introduced by Cardozo in 1965. It refers to the state of feeling of pleasure or disappointment that a customer develops when the perceived effect of a product is compared to its expected value. That is, a measure of the gap between the subject's expectations and the psychology of the actual situation afterwards, measuring the extent to which expectations are fulfilled. Kotler (1995) considers satisfaction as the degree to which a person feels, derived from his perception of the functional characteristics or results of a product and its comparison with product expectations. Hoseason (2003) believes that customer satisfaction is an emotional state of satisfaction or disappointment, which is a psychological state generated by the comparison between customers' expectation of products or services and their actual experience effects. Customers are satisfied when the actual perceived effect of a product or service is greater than expected, and conversely, they are disappointed. This definition is the basis of subsequent research on customer satisfaction. In addition, Oliver (1997) considers customer satisfaction as the consumer's feeling or a reaction to the extent to which the product or service meets the needs in the consumption process. From these expressions, it can be seen that customer satisfaction emphasizes the feelings of customers, while satisfaction emphasizes the degree of satisfaction. And the satisfaction of different customers with the same product may vary.

Through reading and sorting out domestic and foreign literature, the author found that the application of "customer satisfaction" theory is mainly concentrated in hotel management, aviation consumption, logistics enterprises and other fields. However, in recent years, more and more researchers have applied the concept of "satisfaction" to the field of education, and then conduct research.

Experts and scholars in the field of education regard teaching as a kind of service and extend the concept of satisfaction to the field of education, which leads to the definition of learning satisfaction. As for "learning satisfaction", different Chinese and foreign scholars have different understandings. Tough (1982) once proposed that learning satisfaction refers to a feeling or attitude that learners' willingness and needs can be satisfied in learning activities or processes. Wei Huafei et al.,(2005) believe that learner satisfaction refers to a psychological feeling of happiness, pleasure or disappointment generated by students in the process of comparing their achievements with their expectations after receiving educational services.

This study will introduce "customer satisfaction" into the field of MOOC online learning. On the MOOC platform, the author regards all online foreign language courses provided by the platform as products of customer satisfaction, and all learners as customers. Then, the author compares the feelings of learners after

learning these courses on the MOOC platform with their expectations before learning. The comparison between the two can reflect a kind of value and quality evaluation of online foreign language learning.

• Measurement of Satisfaction

Satisfaction is a psychological state, not a behavior. Therefore, it is not easy to measure and evaluate it. Since satisfaction was first referred to as customer satisfaction and was later extended to the field of education, most of the quantitative studies conducted are based on the customer satisfaction index model, and then make appropriate innovations and adjustments according to the actual research needs.

The first Customer Satisfaction index model in the world was Sweden's SCSB (Sweden Customer Satisfaction Barometer) created in 1989. In addition, other countries and regions have also established several theoretical models of Satisfaction. For example, the American Customer Satisfaction Index model (ACSI) in 1994, the Chinese customer Satisfaction Index Model (CCSI) in 1995, and the European Customer Satisfaction Index Model (ECSI) in 1999. Among all kinds of different models, the most influential and widely recognized model is the ACSI model proposed by Professor Fornell et al., (1994) of The University of Michigan Business School, which is built on the basis of SCSB model and has greatly promoted the development of global customer satisfaction index model. It is a theoretical model of customer satisfaction with the most complete system, the best application effect and the most extensive application at present, and once became the mainstream satisfaction measurement method.

For example, when studying the factors influencing college students' online learning satisfaction, Ren (2021) used the ACSI model as a blueprint to construct a model of learner satisfaction in online learning. Considering that students' learning behavior is somewhat different from customers' consumption behavior, the author removed the dimension of customer complaint and replaced customer loyalty with willingness to continue learning, i.e., learners will continue to learn online when they are satisfied with online learning as a whole. Finally, the research is carried out from the following five aspects: learners' expectation, perceived quality, perceived value, learners' satisfaction and willingness to continue learning. A total of 30 valid questionnaires were collected, and the effective return rate was about 96.8%.

Among the literature the author has consulted, Song Qinqin's (2019) questionnaire is meticulous and accurate in classifying satisfaction, and has a high degree of reliability and validity. Song (2019) drew on ACSI in conducting a survey about satisfaction with MOOCs for public art education in colleges and universities, and modified it according to specific needs as well as reality. It introduced three variables, namely perceived image, perceived interaction, and perceived entertainment, based on the hierarchy of needs theory, user experience theory, expectation confirmation theory, and perceived entertainment theory. It also analyzed the effects of learners' expectation, perceived image, perceived interaction, perceived value, perceived entertainment, and perceived quality on learners' satisfaction, and the influence of learners' satisfaction on willingness to continue learning and learners' complaints. A total of 54 questionnaires were collected. After screening, removing 3 invalid questionnaires, 51 questionnaires remained, with a return rate of 94%.

• Domestic and Foreign Research on Influencing Factors of Satisfaction

There are many factors that influence online learning satisfaction, and scholars around the world are constantly striving to explore these factors.

Western scholars carried out relevant research earlier and have more experience. For example, the study of Ismuratova et al., (2017) found that teacher attitude, flexibility, course quality, multiple assessment and learners' computer anxiety are all key factors affecting learners' learning satisfaction. Guo and Bellan (2016) investigated online learners' views on interaction, satisfaction and self-expression, and found that

online self-efficacy was positively correlated with these three interactions, but the degree of influence was different. Tawfik et al., (2017) explored the nature of student-student interaction by using interaction analysis model and social network analysis, and found that student-student interaction is an important factor affecting learners' satisfaction, but it has a low level and is heavily dependent on a few active actors. By using the content analysis and social network analysis, Sattar (2018) found that tutoring skills courses and social presence have a significant impact on online learning satisfaction, which can improve teachers' online participation skills and enhance interaction.

Since the outbreak of COVID-19, online learning has profoundly changed the original education ecology in China, and has correspondingly stimulated the research enthusiasm of researchers for online learner satisfaction. For example, Li (2019) surveyed six Nanchang universities, including Nanchang Hangkong University and Jiangxi Normal University, and concluded that perceived quality, perceived value, and willingness to continue to use can all affect college students' satisfaction with the MOOC platform.

Based on the current situation of online teaching during the prevention and control of COVID-19, Liu and Cui (2020) generated 8 variables and 27 observation projects from the three aspects of teaching quality, self-study quality and environmental quality, and carried out empirical research based on some college students in Shaanxi Province. It is concluded that teachers' teaching skills, students' ability to use the Internet to carry out independent learning and online learning platform consultation services are important aspects that affect students' online learning satisfaction.

To sum up, after reading a lot of literature on online learning satisfaction, I have a better understanding of the factors that influence online learning satisfaction. It can be found from the existing literature that most scholars' studies on online learning satisfaction mainly focus on overall online courses or public art education courses in colleges and universities. There are few separate research surveys on the satisfaction of online learning in foreign languages. However, foreign language learning is becoming more and more important, so research in this area is very necessary. The satisfaction of college students' online learning is not only a direct reflection of the quality and effect of college students' online learning, but also an important index to evaluate the effect of college students' online learning. Therefore, it is of great theoretical and practical significance to study college students' satisfaction with online foreign language learning.

RESEARCH DESIGN

To sum up, due to the epidemic, online learning has gradually become one of the important ways of learning for contemporary college students under the promotion of policies. Therefore, studying the factors influencing college students' satisfaction with online English learning can help improve the quality of online foreign language learning. In this paper, a questionnaire is used to conduct the study, and then to answer the six questions proposed by the author. The following is a description of the basic information about the participants, instrument, etc.

• Research participants

In this survey, 420 Chinese college students were surveyed by random sampling method in five Chinese universities.

• Research Instruments

Based on the above analysis, for the design of the questionnaire, the author referred to Song's (2019) questionnaire on MOOC teaching of public art education in colleges and universities, and made certain

modifications to the content of the questionnaire.

The composition of the questionnaire of this study is consistent with that of the reference questionnaire, but the author deleted the part of learners' complaints according to the specific situation. The questionnaire consists of two parts. The first part is the basic information of the survey respondents, including gender, grade, professional category, family background, and CET-4 score. In the second part, the author delete learner complaints and leave eight parts: learner expectations, perceived image, perceived interaction, perceived value, perceived entertainment, perceived quality, learner satisfaction, and willingness to continue learning.

Finally the author deals with the data analysis, and come up with research results on college students' online English learning satisfaction related issues. The first dimension of the questionnaire design is based on the American Customer Satisfaction Model (ACSI), and the second dimension is to divide the elements of English teaching and design the specific questions of the questionnaire. For each question, there are five levels of division. The main part of the questionnaire adopts the Rickett five-level scoring method, and for each question in the questionnaire, five options of "strongly disagree", "disagree", "not necessarily", "agree" and "strongly agree" are set for the research subjects to choose, and stipulate that "strongly disagree" is recorded as 1 point, "disagree" is recorded as 2 points, "not necessarily" is recorded as 3 points, "agree" is recorded as 4 points, and "strongly agree" is recorded as 5 points.

• Research Procedure

After completing the design of the questionnaire, the author distributed online questionnaires through social software such as WeChat groups and QQ. At the same time, the author also distributed questionnaires offline to collect data. In the end, a total of 420 questionnaires were obtained, of which 108 were invalid (randomly selected options, not filling in CET-4 scores), and 312 valid questionnaires were finally obtained. The effective recovery rate is 74.3%. Finally, all the obtained data were entered into the computer and the questionnaires were calculated by SPSS 23.0.

• Reliability

The Cronbach's alpha value of this questionnaire is .959 (> .70), which indicates that the overall reliability consistency of the questionnaire is good. The reliability of learner expectation is .879; the perceived image reliability is .811; the perceived interaction reliability is .812; the perceived value reliability is .827; the perceived entertainment reliability is 0.870; the perceived quality reliability is 0.870; the learner satisfaction reliability is 0.904; and the willingness to continue learning reliability is 0.876. Deleting any of the indicators in the table would result in a decrease in the respective Cronbach's alpha coefficient, which indicates good reliability.

RESEARCH RESULTS AND ANALYSIS

• The General Situation of University Students' Online Foreign Language Learning Satisfaction

Table I. Mean and Deviation of Satisfaction

	Mean	Std. Deviation
learner expectations	4.0112	.80784
perceived image	3.6186	.72549
perceived interaction	3.5625	.73395

perceived value	3.5951	.73755
perceived entertainment	3.5665	.76195
perceived quality	3.6245	.61804
learner satisfaction	3.7175	.63314
willingness to continue learning	3.7655	.71428

As we can see from TABLE I, all eight aspects of satisfaction are between 2.34 and 5, which are in the moderate to high level. In high level, the order from high to low is learner expectations (4.0112), willingness to continue learning (3.7655), learner satisfaction (3.7175). In moderate level, descending order is perceived quality (3.6245), perceived image (3.6186), perceived value (3.6245), perceived entertainment, perceived interaction (3.5625).

The research shows that college students are generally satisfied with online foreign language learning in all aspects. This study indicates that our country attaches great importance to online teaching in recent years, and has made certain achievements.

As mentioned above, among the eight aspects, the satisfaction of some aspects belongs to high level, while others belong to moderate level. In high level, the order from high to low is: learner expectations, learner satisfaction. From this we can find that online foreign language learning courses do better in these three aspects.

In moderate level, the descending order is perceived quality, perceived image, perceived value, perceived entertainment, perceived interaction. Although these five aspects of online foreign language courses do not belong to low level, compared with the satisfaction of the three aspects of the high level, it reflects that online foreign language courses still have some shortcomings in these five aspects which need to be improved to make this course better, and students will have higher satisfaction.

In the moderate level, the score of perceived interaction is the lowest. Different from the traditional offline learning, online learning can't communicate directly with teachers face to face, nor discuss with classmates in time, which makes online courses less interactive. Therefore, online courses should pay attention to the interaction with students. The teacher or teaching assistant should not only actively initiate or participate in the discussion of the course, but also answer the questions raised by the students in time. In addition, the platform also needs to improve the learner forum, so that students can get feedback and help from other learners in time. In this way, students will be more engaged in the course and will be more willing to learn.

• Differences in Students' Online Foreign Language Learning Satisfaction between Male and Female Students

Table II. Comparison of Male and Female students' satisfaction

Gender	Number	M	SD	df	t	Sig. (2-tailed)
Male	35	3.5551	.79068	39.262	- 1.320	.194
Female	277	3.7380	.60903			

From TABLE II we can see that the mean scores of male and females are 3.5551 and 3.7380. In terms of mean, the satisfaction of females is higher than that of males.

And we can see that the online foreign language learning satisfaction $t(39.262) = -1.320, p=.194 > 0.05$. This means that although there is a difference between male and female students' satisfaction in terms of mean, in general, there is no significant difference in the satisfaction of online foreign language learning between males and females.

• Differences in Students' Online Foreign Language Learning Satisfaction between Different Grades

TABLE III Descriptive Analysis of Satisfaction between Different Grades

	N	Mean	Std. Deviation	Std. Error
Sophomore	89	3.8684	0.67634	0.07169
Junior	169	3.6391	0.6186	0.04758
Senior	54	3.7143	0.56737	0.07721
Total	312	3.7175	0.63314	0.03584

In this part, descriptive analysis is used to compare the differences between different grades. The data and comparisons are as followed.

From table III, we can see that the mean of satisfaction of all respondents is 3.7175. The mean of sophomore's satisfaction is 3.8684, that of junior's is 3.6391, and that of senior's is 3.7143.

TABLE IV ANOVA analysis of ESF between Different Groups

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	3.067	2	1.533	3.896	.021
Within Groups	121.604	309	.394		
Total	124.670	311			

The analysis of variance in Table IV shows that the mean difference of students' satisfaction with online foreign language learning in different grades reaches a significant level, $F=3.896, P=0.021 (<0.05)$.

TABLE V Multiple Comparisons

(I) score group	(J) score group	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Lower Bound
Sophomore	Junior	.22933*	.08216	.015	.0358	.4228
	Senior	.15409	.10821	.330	-.1008	.4089
Junior	Sophomore	-.22933*	.08216	.015	-.4228	-.0358
	Senior	-.07523	.09806	.723	-.3062	.1557
Senior	Sophomore	-.15409	.10821	.330	-.4089	.1008
	Junior	.07523	.09806	.723	-.1557	.3062

*. The mean difference is significant at the 0.05 level.

As shown in Table V, the results of the one-way ANOVA show that there are differences in satisfaction with online foreign language learning among different grades.

There is no significant difference in satisfaction between sophomores and juniors ($P=0.015 < 0.05$), no

significant difference between sophomores and seniors ($P=0.330>0.05$), and no significant difference between juniors and seniors ($P=0.723>0.05$).

It can be seen from this that junior students' satisfaction with online foreign language learning is only at the moderate level, while sophomores and seniors' satisfaction with online foreign language learning also fluctuates to some extent. Sophomores' satisfaction is the highest, and seniors' satisfaction is close to the mean of the three.

After more investigating, we can find that most sophomores choose online foreign language learning because of the requirements of school teachers. Also students are more curious about online learning, because it is a new way of learning for them. In the junior year, it is a busier year for students. Students have less time left for online foreign courses and feel more familiar with this way. Courses without much innovation will easily lose their interest. Students in their senior year are busy with internships, dissertations, etc. and have fewer classes, so they will have more time to complete online courses than junior students. However, among all the respondents, most of the online foreign language courses they took were due to school requirements, which forced them to study online.

This conclusion is inconsistent to some researchers. In the research of Chen (2017), she proves that there is no significant correlation between grade level and online course learning satisfaction.

However, in this survey, it can be found that college students are passive about online learning. It is only the task they must complete to obtain credits, but not as a means of lifelong learning. In other words, online foreign language courses are not enough to cultivate students' learning ability in their core literacy.

Learning ability refers to the basic ability that people have in order to acquire knowledge. Teachers need to make a conscious effort to cultivate students' such ability. This puts forward higher requirements for teachers of online foreign language teaching. Teachers should constantly update their cognition of core literacy, constantly improve their teaching skills, set an example, implement the concept of lifelong learning, and maintain students' interest in the curriculum through continuous innovation.

• The Relationship between Students' Online Foreign Language Learning Satisfaction and Their Performances

The relationship between students' satisfaction with online foreign language learning and their performance is presented through correlation analysis.

Table VI. Correlation between Satisfaction and CET4		
	CET	
Satisfaction	Pearson Correlation	.163**
	Sig. (2-tailed)	.004
	N	312
**. Correlation is significant at the 0.01 level (2-tailed).		

From the table VI, we can find that $r=0.163^{**}$, $p=0.004$. This means that students' satisfaction with online foreign language learning is weakly correlated with their performance. it can be found that the satisfaction of college students in online foreign language learning is weakly correlated with their performance.

As we all know, CET4 is an objective and accurate measurement of college students' English ability, which serves to improve the teaching quality of College English courses in China. However, according to the questionnaire collected by the author, it can be seen that there is little correlation between students'

satisfaction with online courses and their CET-4 scores.

This raises a question: can CET-4 become a way to test students' learning achievements nowadays? With the continuous change of the way of language learning, the way of online foreign language learning has gradually become one of the main learning methods of college students. CET4 also needs to find a way to better test students' English ability in such changes, so as to improve the quality of online foreign language courses.

CONCLUSION AND SUGGESTIONS

In this study, we can draw a lot of teaching enlightenment, as shown below.

First of all, for the online foreign language curriculum itself, teachers should design the curriculum from the eight aspects mentioned above. After conducting the satisfaction survey, teachers should improve the course according to the problems reflected by the satisfaction, such as the improvement in the aspects of perceived interaction and perceived entertainment.

Secondly, teachers should constantly improve their teaching skills and innovate their ideas. Only through continuous innovation can teachers better transmit their knowledge to students.

However, there are still some limitations in this paper: the sample size of this study is not very large, thus the conclusion may be different from that of other researchers.

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