

# Online law Teaching Mechanism Management in Colleges and Universities in the Context of COVID-19

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## Abstracts

During the COVID-19, online teaching became the main way of teaching in universities. The transformation of teaching methods implies the transformation of teaching mechanisms. A well-developed teaching mechanism as a basic condition helps to improve learning outcomes. This study adopts quantitative research methods, and explores the relationship between the four influencing factors of learning support, teaching environment, learning perception and behavioral interaction and the online teaching effect of law in colleges and universities through questionnaire survey. Through the linear regression analysis of the relationship between variables and the test of the hypothesis, the final conclusion is drawn: the four influencing factors all have a positive significant impact on the effect of online teaching of law in colleges and universities, and the four influencing factors also have a positive significant impact. Based on the research conclusions, this study finally puts forward some suggestions for improving the online teaching mechanism of law in colleges and universities.

**Keywords:** Online law teaching; Teaching mechanism management; COVID-19

## Introduction

In 2020, the outbreak of COVID-19 began across China. According to data, all undergraduate universities in China have implemented online teaching during the epidemic, with 1.08 million teachers teaching about 1.1 million courses online and 22.59 million college students taking part in online learning. (Zhu Yuchen, 2021 : 6) The online teaching mode during the COVID-19 has also changed and promoted the transformation of law teaching in colleges and universities in multiple dimensions. For law educators, they should think about how to deal with the challenges brought by online teaching during the epidemic period and carry out timely reform and innovation. (Huang Yao, 2021 : 60)

Through literature analysis, the author makes an in-depth study on the online teaching of law in colleges and universities, and summarizes four factors that affect the effect of online teaching of law in colleges and universities: (a) Learning support (LS) . Including teacher support, platform support and technical support three impact indicators. (b) Teaching environment (TE) . It includes two influencing indicators: teacher's instructional design and student's learning involvement. (c) Learning perception (LP) . Including learning ability and knowledge mastery two influence indicators. (d) Behavioral interaction (BI) . Including teacher-student interaction and learning style interaction two influence indicators. According to literature research, learning support plays a key role in the perception of learning and the behavioral interaction between teachers and students in the teaching process. (Wang Ziting,

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2019 : 219-224) Burgoo shows that learning perception has a significant positive impact on students' learning involvement. (Burgoo J, 2012 : 249-255). Research shows that teachers' effective teaching has a significant impact on students' learning perception. (Artino A R, 2012 : 76-85) Studies also show that good professional teaching skills of teachers can significantly affect students' learning involvement. (Zhao Keyun, 2018 : 78-86) Research by Fryer shows that good communication and interaction between teachers and students can significantly affect students' learning involvement and perception in online environments. (Fryer L K, 201 : 2-207).

Teachers and students are the specific implementation subjects and direct objects of teaching mechanism management, and their teaching enthusiasm and participation initiative have a profound impact on the quality of teaching effects. (He Kekang, 2012 : 8-12) Through research on the relationship between influencing factors and effects, the author understands the current situation of law teaching in colleges and universities under the background of COVID-19 from the perspective of cognition and feedback of teachers and students, and puts forward reasonable suggestions for improving the teaching mechanism of law in universities.

## Research Objectives

1. To summarize the influencing factors of college law online teaching effect.
2. To discuss the relationship between four influencing factors and the effect of online teaching of law in colleges and universities.
3. To explore the relationship among the four influencing factors of learning support, teaching environment, learning perception and behavioral interaction.
4. To summarize the ways to improve the effect of online law teaching in colleges and universities during the COVID-19.
5. To summarize the suggestions of improving the online teaching mechanism of law in colleges and universities.

## Research Methodology

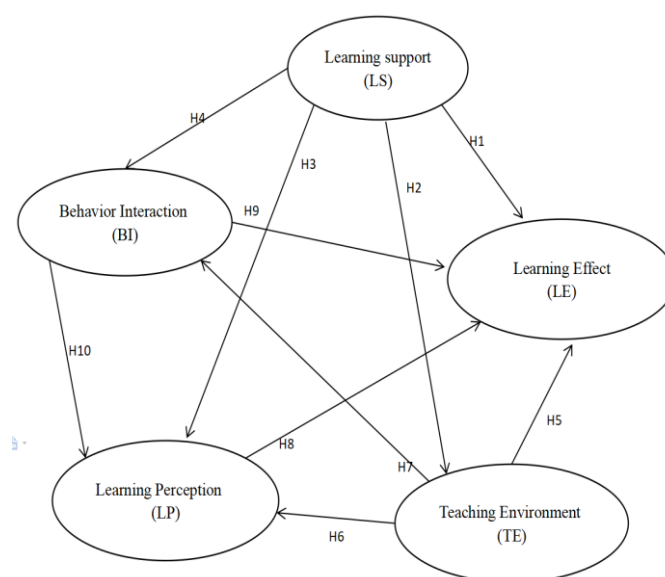
The author takes 7 cities in Shanxi Province of China as the research scope, including Taiyuan, Jinzhong, Datong, Luliang, Yuncheng, Linfen and Changzhi. The author randomly selected 518 teachers and students of law majors from 10 colleges and universities with law majors in these 7 cities as research samples, including: Shanxi University, Taiyuan University of Technology, Shanxi University of Finance and Economics, Datong University, Taiyuan Normal University, North University of China, Taiyuan University of Science and Technology, Luliang College, Changzhi College, Yuncheng College. In order to ensure the generality of the conclusions, the students in this study included three stages of law students: bachelor's degree, master's degree and doctor's degree. In order to ensure the authenticity and validity of the conclusion, all the students in this study selected students in school, and all the teachers selected on-the-job law teachers.

6. This study uses questionnaire method to conduct quantitative research. (Li Kedong, 2012 : 15-70) In addition to demographic statistics, the rest of the questionnaire were scored by Likert five-point scale, which mainly involved the application of online teaching in college law education, the evaluation of the effect of online teaching in college law education and the advantages and disadvantages of online teaching in college law education. After the questionnaire was designed, IOC was used to detect the correlation between the questionnaire items and the target, and the substandard items were eliminated and the formal questionnaire

was generated. Reliability and validity tests were conducted for the formal questionnaire before data analysis. Cronbach's alpha was used for reliability test, and Bartlett spherical test was performed for validity test by measuring the KMO value of questionnaire data.

## Research Conceptual Framework

The author takes the effect of online teaching of law in colleges and universities (LE) as the dependent variable, and the four influencing factors of learning support (LS), teaching environment (TE), learning perception (LP) and behavioral interaction (BI) as the four independent variables to study the relationship between the independent variable and the dependent variable.



**Figure 1** Conceptual Framework from original research

## Research Results

**Table 1** Reliability test results of variable factors

Factor	Number	Alpha	Coefficient significance
LS	4	0.866	>0.8 High reliability
TE	10	0.955	>0.9 High reliability
LP	5	0.908	>0.9 High reliability
BI	4	0.903	>0.9 High reliability
Total	23	0.938	>0.9 High reliability

**Table 2** Analysis results of KMO and Bartlett spherical test

KMO and Bartlett's test	
KMO Sampling Suitability Quantity	.947
	10142.092
Bartlett spherical test	276
	.000

In Table1, the Alpha coefficient of the overall scale of this study was 0.938, and the Cronbach's alpha of other measurement scales with different variables also exceeded 0.7, all of which showed good reliability, indicating that this questionnaire was a high reliability scale and the data reflected was relatively reliable.

Table 2 shows the analysis results of KMO and Bartlett spherical test test. The KMO value of the scale is 0.947, and the significance of Bartlett spherical test test results reaches the significant level of 0.05, indicating that there are common factors among variables, and variables are suitable for factor analysis.

#### **Expected Finding and Discussion**

After obtaining the survey data from the formal questionnaire, the author uses descriptive statistics to analyze the current situation of online teaching of law in colleges and universities, and uses a multiple linear regression model to analyze the impact of four independent variables on learning effects: learning support, teaching environment, learning perception, and behavioral interaction.

#### **Descriptive analysis results**

The basic situation of the learning effect is shown in Table 3. It can be seen that among the four dimensions that affect the learning effect of online law teaching, the average value of the teaching environment dimension is the highest (Mean=4.25). According to the scoring standard, 5 points are very important, indicating that regardless of Whether it is the students' learning input or the teacher's teaching design, both have a significant impact on the learning effect of online law teaching. The average value of the learning support dimension is the lowest (3.69). According to the scoring standard, 3 is average, indicating that the current online law teaching hardware facilities in colleges and universities still need to be improved.

**Table 3** Current situation analysis of learning effect

	Number	Minimum	Maximum	Average	Standard Deviation
LS	518	1.00	5.00	3.6959	.91211
TE	518	1.00	5.00	4.2504	.76094
LP	518	1.00	5.00	4.0278	.86129
BI	518	1.00	5.00	3.7476	.95238

### Hypothesis testing

Before establishing a linear regression model for the influencing factors, it is necessary to test the hypothetical path proposed in this study to clarify the impact-effect relationship between each factor. After correlation analysis, the hypothesis test results are shown in Table 4.

**Table 4** Hypothesis test results

Assumption	Path	Beta	p	Test Result
H1	LS→LE	0.757	0.00	support
H2	LS→TE	0.554	0.00	support
H3	LS→LP	0.655	0.00	support
H4	LS→BI	0.225	0.00	support
H5	TE→LE	0.923	0.00	support
H6	TE→LP	0.716	0.00	support
H7	TE→BI	0.426	0.00	support
H8	LP→LE	0.879	0.00	support
H9	BI→LE	0.521	0.00	support
H10	BI→LP	0.375	0.00	support

From the above analysis, the final result of hypothesis testing can be obtained:

Hypothesis 1 states that learning support has a significant positive impact on learning effect. The results show that learning support has a significant positive impact on learning effect ( $\beta=0.757$ ,  $p<0.01$ ), and improving learning support conditions can improve the learning effect of online teaching of law in colleges and universities.

Hypothesis 2 states that learning support has a significant positive impact on the teaching environment. The results show that learning support has a significant positive impact on the teaching environment ( $\beta=0.554$ ,  $p<0.01$ ), the more adequate the learning support conditions, the better the teaching environment and the corresponding improvement in learning effect.

Hypothesis 3 states that learning support has a significant positive impact on learning perception. The results showed that learning support had a significant positive effect on learning perception ( $\beta=0.655$ ,  $p<0.01$ ), improving the learning support conditions can improve the degree of learning perception in the process of online law teaching, so as to improve the learning effect.

Hypothesis 4 states that learning support has a significant positive impact on behavioral interaction. The results show that learning support has a significant positive effect on behavioral interaction ( $\beta = 0.225$ ,  $p < 0.01$ ), and improving learning support conditions can improve behavioral interaction in the online teaching of law, including improving the interaction between teachers and students and improving The communication and interaction between students and learning resources can improve the learning effect.

Hypothesis 5 states that teaching environment has a significant positive impact on the learning effect. The results show that the teaching environment has a direct and significant impact on the learning effect ( $\beta = 0.923$ ,  $p < 0.01$ ). It can be seen that the  $\beta$  value of the influence of the teaching environment on the learning effect is the highest among the four influencing factors, indicating that improving the teaching environment has the most significant effect on improving the learning effect of online law teaching in colleges and universities.

Hypothesis 6 states that teaching environment has a significant positive impact on learning perception. The results show that the teaching environment has a significant positive impact on learning perception ( $\beta = 0.716$ ,  $p < 0.01$ ). In the process of online teaching of law in colleges and universities, students increase their learning investment and teachers improve their teaching design will improve the learning perception in the learning process , thereby enhancing the learning effect.

Hypothesis 7 states that teaching environment has a significant positive impact on behavioral interaction. The results show that the teaching environment has a significant positive impact on behavioral interaction ( $\beta = 0.426$ ,  $p < 0.01$ ). In the process of online teaching of law in colleges and universities, the improvement of the teaching environment can enhance the interaction between teachers and students in the teaching process and the interaction between students and teaching resources. Interaction will improve the learning effect.

Hypothesis 8 states that learning perception has a significant positive impact on learning effect. The results show that learning perception has a direct and significant impact on learning effect ( $\beta = 0.879$ ,  $p < 0.01$ ), and the degree of influence of learning perception factors on learning effect is second only to teaching environment factors. If learning perception is improved by 1 unit, learning effect will increase. The increase of 0.879 units shows that improving learning perception has a significant effect on improving the learning effect of online law teaching in colleges and universities.

Hypothesis 9 states that behavioral interaction has a significant positive impact on learning effect. The results show that behavioral interaction has a direct and significant impact on learning effect ( $\beta = 0.521$ ,  $p < 0.01$ ), and enhancing behavioral interaction in the learning process can improve the learning effect of online teaching of law in colleges and universities.

Hypothesis 10 states that behavioral interaction has a significant positive effect on learning perception. The results show that behavioral interaction has a significant positive impact on learning perception ( $\beta = 0.375$ ,  $p < 0.01$ ). In the process of online teaching of law in colleges and universities, the increase of behavioral interaction can improve the learning perception in the learning process, thereby improving the learning effect.

### Linear regression analysis of online teaching and learning effects of law in colleges and universities

In this study, the multicollinearity test was first carried out, and the index used was the variance inflation factor VIF. If  $VIF > 10$ , it indicated that the multicollinearity was strong. In this study, the VIF values of the four influencing factors are all less than 10, indicating that there is no strong multicollinearity among the factors, so it can be considered that this study meets the requirements of the multiple linear regression model. According to the software calculation results,  $R^2 = 0.995$ , indicating that the fitting degree of this linear regression model is very good. The four influencing factors can explain 99.5% of the change in the effect of online teaching and learning of law in colleges and universities. The calculation results of this time can be very real. It reliably reflects the influence of the four influencing factors on the online teaching and learning effect of law in colleges and universities. In this linear regression model, the p-values of the four influencing factors are all 0, less than 0.05, which means that all four factors will have a significant impact on the learning effect. The specific content is shown in Table 5.

**Table 5** Linear regression analysis of influencing factors

Model	Unstandardized coefficients		standardized coefficient	salience	Collinearity Statistics
	B	standard error	Beta		
(Constant)	0.257	0.013		0	
LS	0.171	0.003	0.245	0	1.806
TE	0.431	0.004	0.515	0	2.246
LP	0.222	0.004	0.3	0	2.597
BI	0.09	0.002	0.135	0	1.243
Dependent variable: learning effect					
$R^2 = 0.995$					
$P = 0$					

Finally, the following regression equation is obtained between the variables:

$$\text{Learning effect} = 0.257 + 0.171 * \text{learning support} + 0.431 * \text{teaching environment} + 0.222 * \text{learning perception} + 0.09 * \text{behavioral interaction}$$

### Research Contributions as new knowledge

In the course of the research, the author found that there are significant differences in the teaching environment, learning perception and final learning effect among different occupations. After analyzing the correlation between occupation and teaching environment, learning perception and final learning effect, the author concludes that there are significant positive correlations among different occupational and teaching environment factors, learning perception factors and final learning effect (Table 6).

**Table 6** Correlation analysis of different Profession

		Profession	TE	LP	Total
Profession	Spearman coefficient	1.000	.218**	.153**	.168**
	salience(two-tailed)	.	.000	.000	.000

\*\*Correlation is significant at the 0.01 level (two-tailed).

Corresponding to the significant differences in the teaching environment, learning perception and final learning effect of different occupations, the author analyzed the current situation of teachers and students in the teaching environment, learning perception and learning effect respectively(Table 7).

**Table 7** Analysis of the Current Situation of Different Occupations in TE, LP, LE

	Teacher	Student
TE	3.9056	4.3401
LP	3.7794	4.0925
LE	3.7611	4.0851

Through data analysis, it is known that different professional groups have different recognition of the current online teaching effect of law in colleges and universities. The student group has a high degree of recognition of the online learning effect, but the recognition of the teacher group has not reached a satisfactory level. The reason is that the author believes that teachers have higher expectations for the effect of online teaching and are willing to make more efforts to improve the final learning effect. This discovery provides a new perspective for improving the online teaching mechanism of law in colleges and universities, that is, targeted improvement according to the needs of different groups.

### Conclusion and Recommendations

The management of the online law teaching mechanism in colleges and universities should pay more attention to the research on how to carry out reforms under the background of the new crown pneumonia epidemic to meet the needs of changing situations, timely adjust the teaching methods, teaching content and teaching objectives, and realize a comprehensive and three-dimensional online education model.(Margaret Thornton, 2014 : 19-35)

(a) Improve the construction of the course platform and strengthen the technical support for online learning.

This point is aimed at the network technology center and educational affairs management department at the school level. There are many types of platforms used, relatively scattered course information, and the lack of online teaching technology and level are the objective factors that affect the effect of online learning of law in colleges and universities. To improve the construction of course platforms, it is necessary not only to standardize the use of online teaching platforms and alleviate the unfairness of educational resources brought about by regions and colleges, but also to open up student course platforms and learning channels, strengthen the thinking and design of teacher-student interaction paths, and improve students online learning experience.



(b) Returning to the teaching-oriented concept and strengthening teachers' information technology capabilities

This is for teachers. Teachers move traditional classrooms online, and habitually adhere to traditional teaching concepts and teaching design, which is the dominant factor affecting the effect of online teaching of law in colleges and universities. In the process of online teaching, teachers should redesign teaching objectives based on curriculum, provide differentiated learning support and assistance, and guide teacher-student and student-student interactions. Teachers should take the initiative to improve their own information technology literacy, improve the proficiency in the use of network teaching equipment, encourage students to actively learn and participate in depth, strengthen teacher-student interaction and communication, and make full use of the convenience and timeliness of the network to monitor students' learning in a timely manner. Evaluation and feedback, so as to effectively stimulate students' interest in learning and improve the effect of online teaching.

(c) Change traditional learning methods and focus on developing good study habits

This is for college students. A considerable number of college students have poor self-control in online learning and have not yet developed good study habits. This is a decisive factor affecting the effect of online learning of law in colleges and universities. College students should improve their discrimination ability, choose high-quality course resources as learning materials, change passive listening to active learning, actively participate in classroom interaction, and develop good study habits. Colleges and universities should set up relevant courses to cultivate students' independent learning ability, set learning goals, teach independent learning methods, and strengthen students' self-discipline and self-motivation.

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