



## Exploring the model of combining technology and law and regulation courses in public security legal education

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**SUMMARY:** *In order to realize the objective of instilling a high level of the rule of law consciousness in the field of the legal education of public security, one approach that incorporates technology and law into regulation course is explored in this paper; and a four-in-one model of public security law education is proposed: teaching, learning, practicing, and fighting. As a part of this study, the questionnaire method and multiple linear regression analysis have been adopted to investigate the existing conditions, differences, and the influences on the awareness of the rule of law among college students. The results reveal that the general rule of law awareness among college students is higher, and the average score is 3.89. Besides, the only-child children are more aware of the rule of law than the children having siblings. Key college and university students have stronger awareness of rule of law than other students in regular institutions. In addition, students of literature and history have a higher sense of rule of law than students of fields such as science, technology and art. College students who are Communist Youth League members demonstrate better rule of law awareness than non-members. Moreover, the family background, the school environment, legal qualities and character traits have significant impacts on developing rule of law awareness. They explain the development of the rule of law by 42.8, 0.5, 6.2 and 1.1 percents respectively. It indicates that to a certain degree, these factors help to create the spirit of the rule of law among college students providing them with practical information and a rational model of building the dynamic model of rule of law education in the field of public security.*

**KEYWORDS:** *public security legal education; teaching mode; rule of law spirit; multiple linear regression analysis*

## 1 Introduction

As an important course of ideological and political education for public security, legal education directly affects the cultivation of public security's legal awareness as well as ideological and moral qualities [1]. However, after investigation and research, it is found that there are still a lot of problems in public security legal education in China at present [2-4]. First of all, one-sidedly focus on improving the professional quality of public security personnel, and pay little attention to legal education. In the public security study work, especially pay attention to cultivate their professional skills and qualities, legal awareness is relatively weak, so that in the process of education lack of relevant legal education general knowledge courses [5]. This will make a lot of public security personnel for the legal provisions do not understand, such public security police are very likely because they do not know the law and violate the provisions of the law, not only damage the image of the public servants, and directly affect the authority of

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<https://doi.org/10.65102/is2026401>

the law. Secondly, the essence of public security legal education is ignored [6]. Public security legal education is a legal education based on the special requirements of the public security profession, so it should fully reflect the characteristics of the public security practice service. It is different from the legal education of other law schools in that public security legal education pays more attention to the combination with the public security profession rather than just general education [7, 8]. The characteristics of public security is not a combination of a few law courses plus a few public security courses, but to reflect the service for public security practice in legal education and to solve the problem of the need of public security practice for law.

Then, the cultivation of legal thinking and concept is neglected [9]. Many people think that the civilian police only need to memorize the legal provisions, and legal education is reflected in the interpretation of several important laws. However, the measure of the level of law enforcement is largely the law enforcement process embodied in the awareness of legal procedures and legal rights concept, and the formation of these legal thinking and concepts is not just memorize a few laws and regulations can not be achieved, the need for legal education to form the legal thinking, legal concepts and legal awareness [10-13]. Finally, the current public security legal education follows the traditional discipline-based education [14]. The current public security legal education textbook content system basically follows the code style, in order to guide the arrangement of the teaching content system and the organization and implementation of the teaching process, which is in line with the traditional discipline-based legal education requirements [15, 16]. But now whether it is undergraduate education or higher vocational education, more emphasis on legal education theory and practicality. Therefore, in the face of many problems and deficiencies in the current public security legal education, it is necessary to take effective measures to improve, in order to be able to effectively improve the legal quality of public security police officers, and do a good job of the current reform of public security legal education is very important.

In this paper, the author explores the development of the spirit of the rule of law in the context of the legal education of the public security, suggesting a complete approach of teaching, learning, practising and fighting that incorporates both law and technology courses. Using this framework, the Rule of Law Spirit Questionnaire of College Students has been developed to measure the general level of knowledge about the rule of law among the students, looking at the differences according to various factors, including being an only child or having siblings, studying at key or platform colleges, specializing in different fields, and political beliefs. The paper integrates the use of questionnaires, correlation analysis and multiple linear regression models to examine the effect of seven variables, which are knowledge conception, legal competence, learning motivation, personality traits, family background, school environment and social influences on the establishment of the spirit of the rule of law in college students.

## **2 A four-pronged teaching model that combines technology with legal and regulatory programs**

In order to better cultivate students' spirit of the rule of law and realize the goal of public security legal education, this paper designs a four-in-one teaching model of “teaching, learning, practicing and fighting” that combines technology and laws and regulations courses. The specific contents of the model are as follows:

(1) To job requirements as the main line, set the course teaching content - scientific “teaching”.

1) Integration of theoretical course teaching content

According to a criminal case statistics table: intentional homicide, intentional injury, rape, robbery, robbery, fraud, theft and other seven types of criminal cases accounted for a county public security bureau throughout the year all the criminal cases filed about 80%, therefore, public security legal education should be set for these crimes as the focus of the teaching to achieve the content of the teaching and the work of the job is consistent with the integration of theory and practice.

2) Systematically set up practical training course system

The teaching content should be designed in such a way that teachers consider promoting the awareness among the students about the rule of law. In addition to theoretical classes, practical training activities need to be incorporated into the course to develop overall skills of students. The teaching materials ought to be in line with the reality-based operations of the police and other security bodies especially when dealing with criminal cases. This is an approach to ensure that the wider objectives of teaching are met which include developing the legal knowledge of the students, their awareness, emotional involvement, willpower and general understanding of the rule of law.

(2) Students as the main body of teaching, designing the teaching process, reforming teaching methods - active “learning”.

This teaching mode requires students to continuously learn to improve the basic knowledge of the law, and the use of legal knowledge to solve a variety of practical problems encountered in the judicial practice of public security, so as to stimulate the students' desire for knowledge through the exploration of the facts of the case, and to enhance the initiative of students to learn, so as to realize the effective combination of theory and practice.

(3) To enhance students' practical experience as the goal, carry out teaching simulation - effective “practice”.

According to the needs of practical teaching content of laws and regulations courses, in the process of practical training, through a large number of scenarios, role-playing simulation of the case, to improve students' understanding of the basic theoretical knowledge, as well as the application of the case and the ability to characterize.

(4) Taking the cultivation of public security talents as the goal, carrying out the dual-teacher teaching in cooperation with schools and bureaus - the real “war”.

1) Public security colleges and universities criminal law teachers should regularly participate in police practice exercises, understand and master the public security law enforcement process of criminal law enforcement of new requirements and new skills, to achieve the purpose of teaching close to the actual combat. Moreover, the emphasis on the professional development of criminal law instructors is important in the work of public security institutions. That can be done through constant organization of the chances of teachers to participate in advanced training, seminars and other forms of exchanges to enhance their practical teaching abilities.

2) Teachers should cooperate with the front-line practical departments to carry out various forms of practical teaching, through the top internship, social practice and other ways to arrange for students to participate directly in the first line of duty, law enforcement, training, case handling and other practical processes, so that students are directly involved in the acceptance of public security cases, criminal cases filed, investigated, and transferred to the review of the prosecution of the practical activities, through the work of the job of the actual combat to strengthen the understanding of the theoretical knowledge of the criminal law, and to strengthen the practical experience of the students. Through the practical work of the post, students can strengthen their understanding of the theoretical knowledge of criminal law, and strengthen the exercise and accumulation of practical experience.

### 3 Empirical research on the cultivation of the spirit of the rule of law among university students in the new era

To properly realize the suggested four-in-one teaching approach to promote the rule of law spirit within the framework of public security legal education, the chapter offers the empirical review of the features of college student rule of law consciousness in the new era and its formation factors.

#### 3.1 Research methodology

In this study, literature method, interview method, survey and statistics method and multiple linear regression method were used as the basic research methods.

##### 3.1.1 Identification of the dimensions of the rule of law for university students

On the basis of the theory of the rule of law spirit, 20 college students participated in the in-depth interviews and the obtained results were analyzed. This paper builds the dimensional structure of the rule of law spirit of college students by integrating the theoretical framework of the rule of law spirit with the findings of the interview, as shown in Table 1. The structure identifies five key dimensions of students rule of law spirit which include; knowledge, awareness, emotion, will and behavior. These five dimensions are again subdivided into 2-4 sub-dimensions, which give a total of 14 smaller dimensions. Also, all of these subjects underscore and reflect the particular nature of the rule of law spirit which can be summarized as freedom and equality, fairness and justice, the supremacy of law, restraint of government, and human rights security, which all sum up to the essence of the rule of law spirit.

*Table 1: Dimensional structure of college students' spirit of the rule of law*

Dimension	Structure
Knowledge of the rule of law	The essence and value of the rule of law, common sense of the rule of law, and knowledge of specific departments
Awareness of the rule of law	Awareness of rules, awareness of rights protection, and awareness of rule creation
Sentiment of the rule of law	Trust in the rule of law and recognition of the rule of law
Will of the rule of law	Make decisions and implement them
Behavior of the rule of law	Public life, campus life, romantic life, personal life

##### 3.1.2 Preparation of questionnaires

The College Student Spirit Rule of Law Questionnaire, which will be used in this paper, has three sections. The initial section acts as an introduction to outline the goal of the survey, how to answer it, and important considerations. The response is rated on a five-point Likert scale, with the respondents indicating their level of agreement with every statement by checking a given number ranging between 1-5. A score of one means that there is little agreement, whereas five means high agreement. The second part collects personal demographic data (gender, grade, major, kind of institution, family background). The third part makes up the main part of the questionnaire, testing five main aspects of rule of law spirit of students: knowledge, awareness, emotion, commitment and behavior. To these dimensions, 14 sub-factors have been added, each sub-factor consisting of two to four questions presented in a random non-systematic order.

###### (1) Preliminary Test of the Questionnaire

The initial test was applied to a group of 80 college students randomly chosen using the

Rule of Law Spirit Questionnaire to College Students. The data were analyzed based on reliability and validity to determine the content reliability of the questionnaire. The total Cronbach 2 alpha coefficient was found to be 0.927 which is considered to be very high. Also, the strong correlations (0.40) between five dimensions and the overall college student rule of law spirit were established which confirms the structural validity of the questionnaire. With respect to content validity, factor analysis showed that the individual factor scores of every question were greater than 0.40, which means that the items are good at measuring the appropriate dimensions. Therefore, the questionnaire is highly applicable to the assessment of the features of the rule of law spirit among college students.

#### (2) Content of the questionnaire

Based on the reliability and validity analysis, it can be stated that the Rule of Law Spirit Questionnaire for College Students has 50 items. The items are divided into five factors including rule of law knowledge (12 questions), rule of law awareness (10 questions), rule of law emotion (8 questions), rule of law will (6 questions) and rule of law behavior (14 questions) with 5 reverse-scored items. All the questions are rated according to the Likert five-point scale, and the higher score means that the manifestation of the rule of law is more pronounced among college students, and reverse-scored items are evaluated similarly.

#### (3) Formal administration of the questionnaire

##### 1) The basic situation of the research object

This study takes college students majoring in public security criminal investigation and public security management as the object of testing, and a total of 1,280 questionnaires were issued, 1,220 were retrieved, and 1,208 were valid, and 592 of the surveyed subjects were male and 616 were female. Among them, 284, 256, 240 and 428 were freshmen, sophomores, juniors and seniors respectively.

##### 2) Procedures of administering the measurement

Measurement form: a combination of paper-based questionnaire answering and electronic questionnaire answering was used.

Measurement tool: The determined “Rule of Law Spirit Survey Questionnaire for College Students” was used.

Measurement time: the official administration time is November 2024, and the questionnaires will be collected in January 2025 successively.

##### 3) Retest reliability and validity of the questionnaire

Reliability can be expressed as the consistency of test results. According to the present research, the internal consistency of the questionnaire was evaluated using Cronbach’s alpha coefficient. The results of the reliability test are shown in Table 2. As a general rule, the higher the reliability coefficient, the more consistent the measurement is. A reliability score of 0.5-0.7 is regarded as acceptable, and 0.7-0.8 is considered good reliability, whereas a score of 0.8-0.9 is considered excellent reliability.

The analysis of data from 1208 measurements revealed that the overall Cronbach’s  $\alpha$  coefficient for the scale was 0.827, which signifies very good overall reliability. Additionally, the Cronbach’s  $\alpha$  coefficients for each of the five dimensions exceeded 0.8, demonstrating that the reliability of the questionnaire's individual dimensions also meets the required standards.

Table 2: Structural validity of the questionnaire

Category	Cronbach's $\alpha$
Knowledge of the rule of law	0.846
Awareness of the rule of law	0.814
Sentiment of the rule of law	0.892
Will of the rule of law	0.905
Behavior of the rule of law	0.803
The overall spirit of the rule of law	0.827

The analysis of the questionnaire content validity was done through principal component factor analysis. The findings showed that the factor loadings values on every question were greater than 0.04, which means that the total content validity of the questionnaire is sufficient to meet the necessary requirements.

In order to evaluate the structural validity, the correlation analysis was used to determine the correlation between the five dimensions of the questionnaire and the spirit of the rule of law among college students. The findings presented in Table 3 indicate that the correlation coefficients were statistically significant at the 0.01 level (\*\*\*) means  $P < 0.01$ ). Such a result indicates that the five dimensions are highly correlated with the rule of law spirit of the students which confirms that the questionnaire has good structural validity.

Table 3: Reliability analysis of the questionnaire

	Knowledge of the rule of law	Awareness of the rule of law	Sentiment of the rule of law	Will of the rule of law	Behavior of the rule of law	The spirit of the rule of law
Knowledge of the rule of law	1					
Awareness of the rule of law	0.638**	1				
Sentiment of the rule of law	0.641**	0.596**	1			
Will of the rule of law	0.637**	0.541**	0.728**	1		
Behavior of the rule of law	0.602**	0.654**	0.741**	0.790**	1	
The spirit of the rule of law	0.839**	0.813**	0.875**	0.841**	0.904**	1

#### (4) Compilation of the "Questionnaire on Influencing Factors of Cultivating College Students' Spirit of the Rule of Law"

This study starts with theoretical analysis and employs the Delphi survey research method. Through multiple steps such as initially designing the questionnaire, conducting questionnaire prediction experiments, and testing the reliability and validity of the questionnaire, A "Questionnaire on the Influencing Factors of Cultivating College Students' Legal Spirit" with 56 questions was finally determined. For each option, we set five options: A, B, C, D, and E. They respectively represent "completely inconsistent", "not very consistent", "basically consistent", "relatively consistent" and "very consistent", and assign 1 point, 2 points, 3 points, 4 points and 5 points to the five items from A to E respectively. The higher the score, the more representative the question is. Due to the fact that college students inevitably encounter accidental situations during the process of answering questions, it leads to the drawback of not obvious statistical significance. To avoid this situation to the greatest extent, when designing

questions for each third-level dimension in this study, at least three options were included, and the order of each dimension was shuffled to eliminate the randomness of college students' answers to the questions.

### 3.1.3 Multiple linear regression methods

Multiple linear regression analysis is a forecasting technique that builds a prediction model by analyzing the correlation between two or more explanatory variables and the dependent variable when a linear relationship exists between them.

#### (1) Multiple linear regression model construction

Let  $y$  represent the dependent variable, and  $x_1, x_2, \dots, x_k$  be the independent variables. If a linear relationship exists between the independent variables and the dependent variable, the multiple linear regression model can be expressed as:

$$y = b_0 + b_1x_1 + b_2x_2 + \dots + b_kx_k + e \tag{1}$$

where  $b_0$  is the constant term,  $b_1, b_2, \dots, b_k$  are the regression coefficients, and  $b_1$  represents the effect of each unit increase in  $x_2, x_3, \dots, x_k$  on  $y$  when  $x_2, x_3, \dots, x_k$  are fixed.  $b_1$  is the bias regression coefficient on  $y$  when  $x_1$  is fixed, and similarly,  $b_2$  reflects the effect of each unit increase in  $x_2$  on  $y$  when  $x_1, x_3, \dots, x_k$  remain constant. The term  $e$  represents the error.

The parameters of a multiple linear regression model are estimated using the least squares method, which minimizes the sum of the squared errors,  $(\sum e^2)$ . For example, for a binary linear regression model, the standard equations used to solve for the regression parameters are:

$$\begin{cases} \sum y = nb_0 + b_1 \sum x_1 + b_2 \sum x_2 \\ \sum x_1y = b_0 \sum x_1 + b_1 \sum x_1^2 + b_2 \sum x_1x_2 \\ \sum x_2y = b_0 \sum x_2 + b_1 \sum x_1x_2 + b_2 \sum x_2^2 \end{cases} \tag{2}$$

These equations are solved to find the values of  $b_0, b_1, b_2$ .

Alternatively, a matrix method can be applied, expressed as:

$$b = (x'x)^{-1} \cdot (x'y) \tag{3}$$

To wit:

$$\begin{bmatrix} b_0 \\ b_1 \\ b_2 \end{bmatrix} = \begin{bmatrix} n & \sum x_1 & \sum x_2 \\ \sum x_1 & \sum x_1^2 & \sum x_1x_2 \\ \sum x_2 & \sum x_1x_2 & \sum x_2^2 \end{bmatrix}^{-1} \cdot \begin{bmatrix} \sum y \\ \sum x_1y \\ \sum x_2y \end{bmatrix} \tag{4}$$

#### (2) Multiple linear regression model testing

After determining the least squares estimates of the parameters, it is important to test and assess the multiple linear regression model to find out whether it is appropriate. In particular, this assessment is based on the following considerations.

##### 1) Determination of the degree of model fit

Coefficient of multiple determination,  $R^2$ , in the context of multiple linear regression is

derived using the Pearson correlation coefficient between two variables. It is the fraction of all the squares of the total deviation that are explained by the regression and indicates the extent to which the independent variables change can explain the changes in the dependent variable. The larger the  $R^2$ , the more robust the regression model, because it is a better fit to the data points. As an example, if  $R^2 = 0.8$ , it means that the independent variables can account for 80% of the variance in the dependent variable.

The formula to calculate  $R^2$  is as follows:

$$R^2 = \frac{\sum (\hat{y} - \bar{y})^2}{\sum (y - \bar{y})^2} = 1 - \frac{\sum (y - \hat{y})^2}{\sum (y - \bar{y})^2} \quad (5)$$

Among them:

$$\sum (y - \hat{y})^2 = \sum y^2 - (b_0 \sum y + b_1 \sum x_1 y + b_2 \sum x_2 y + \dots + b_k \sum x_k y) \quad (6)$$

$$\sum (y - \bar{y})^2 = \sum y^2 - \frac{1}{n} (\sum y)^2 \quad (7)$$

## 2) Significance test of regression equation

The significance test of the regression equation evaluates the importance of the entire equation, including all independent variables and the dependent variable, to check how closely they follow a linear relationship. The  $F$ -test is typically used, with the formula for the  $F$ -statistic given as:

$$F = \frac{\sum (\hat{y} - \bar{y})^2 / k}{\sum (y - \hat{y})^2 / n - k - 1} = \frac{R^2 / k}{(1 - R^2) / n - k - 1} \quad (8)$$

Using the given significance level  $\alpha$  and the degrees of freedom  $(k, n - k - 1)$ , the critical value  $F_\alpha$  can be found from the distribution table of  $F$ . If  $F > F_\alpha$ , the regression equation is considered significant. If  $F < F_\alpha$ , the regression equation is not significant, indicating that the model does not fit well.

## 3) Estimation of standard error

The estimated standard error refers to the discrepancy between the actual value of the dependent variable  $y$  and the predicted value from the regression equation  $\hat{y}$ . A smaller estimated standard error indicates a better fit of the regression equation. The formula is as follows:

$$S_y = \sqrt{\frac{\sum (y - \hat{y})^2}{n - k - 1}} \quad (9)$$

$$v_k = \frac{S_y}{\bar{y}} \quad (10)$$

where  $k$  denotes the number of independent variables in the multiple linear regression equation.

#### 4) Diagnosing multicollinearity

Multicollinearity occurs when linear regression model predictors are not highly independent of each other i.e. there are strong linear relationships between the explanatory variables. To see if this problem exists, the model is typically tested with variance inflation factor (VIF) and tolerance (T). As both these measures are reciprocal, both indicate the same diagnostic information to regression analysis. Multicollinearity is typically viewed as high in a multiple linear regression model when VIF is over 10 or T is under 0.1. The model is typically thought to have a significantly high multicollinearity problem when VIF is over 5 or T is under 0.2.

### 3.2 Analysis of differences in the cultivation of the rule of law among university students

The section will take up the inferential statistics approach to study how differently the notion of law is cultivated amongst university students, and thereby offer an empirical basis to the creation of more specific follow-up measures.

#### 3.2.1 Basic status of the rule of law among university students

On the basis of the statistical data obtained through the questionnaire surveys the overall situation of the rule of law spirit among the college students is represented in Table 4 where M means the average score of each dimension. The results indicate that the average level of rule of law spirit of college students is fairly good (M=3.89). Out of five dimensions, the highest score is recorded in the will to comply with the rule of law (M=4.24) which indicates that college students are more resilient and persistent in sustaining the functioning of the socialist rule of law and are even better at self-regulation in case they are faced with the troubles. The next highest score is in the rule of law emotions (M=4.02), and it is an indication that college students have a particular level of understanding, acceptance, and confidence in the socialist rule of law, and they have a relatively positive subjective attitude towards its practical consequences, which leads to a sound feeling of respect towards the rule of law. The third dimension is the rule of law behavior (M=4.01), which means that the college students are performing well in the execution of the socialist rule of law into practice. The fourth dimension is the rule of law knowledge (M=3.89), which indicates that college students have a relatively high level of understanding of the principles, theories, values, essence, and demands connected with the socialist rule of law. The last dimension, rule of law awareness, has the least score (M=3.41), implying that despite the fact that college students can make use of legal standards to protect their rightful rights and interests and control their language, conduct, and lifestyle in their personal lives as well as in society, the score of this dimension is somewhat lower than that of the others.

*Table 4: The score of college students' spirit of the rule of law*

Project	N	Min	Max	Overall mean	M	SD
Knowledge of the rule of law	1208	22	60	46.68	3.89	0.53
Awareness of the rule of law	1208	15	48	34.1	3.41	0.48
Sentiment of the rule of law	1208	11	40	32.16	4.02	0.66
Will of the rule of law	1208	9	30	25.44	4.24	0.71
Behavior of the rule of law	1208	26	70	56.14	4.01	0.62
The average value of the spirit of the rule of law	1208	107	240	194.52	3.89	0.56

#### 3.2.2 Comparison of differences in the rule of law among university students

The given section also discusses other aspects of the development of the rule of law among university students based on group differences in the following areas.

## (1) Only child vs. non-only child

Table 5 reports both the scores of the rule of law spirit on only children and non-only children. The comparison shows that there is no statistically significant difference between the two groups both in the total score of rule of law spirit as well as in the dimensions of rule of law emotion, rule of law will, rule of law awareness, and rule of law behavior ( $P>0.05$ ). Nevertheless, in the sphere of rule of law knowledge, the scores of the only-child college students are significantly higher than the ones of the non-only-child college students and the difference between the two groups is statistically significant ( $P=0.021<0.05$ ).

*Table 5: The comparison results between the only-child and non-only-child*

Project	N	Only-child (N=353)	Non-only-child (N=855)	T	P
Knowledge of the rule of law	M	3.94	3.87	2.207	0.021
	SD	0.56	0.57		
Awareness of the rule of law	M	3.42	3.41	0.525	0.734
	SD	0.43	0.41		
Sentiment of the rule of law	M	4.03	4.01	1.854	0.281
	SD	0.63	0.60		
Will of the rule of law	M	4.27	4.23	1.406	0.159
	SD	0.65	0.61		
Behavior of the rule of law	M	4.03	4.00	1.427	0.184
	SD	0.61	0.59		
The average value of the spirit of the rule of law	M	3.92	3.88	1.739	0.097
	SD	0.54	0.51		

## (2) Key Institutions and General Institutions

Table 6 shows the spirit of the rule of law scores of students of various types of institutions. The findings show that the overall score of the rule of law of students of key institutions and those of general institutions are not significantly different as well as their score of dimension of rule of law knowledge, rule of law emotion, rule of law will, and rule of law behavior ( $P>0.05$ ). Only in the dimension of rule of law awareness, a statistically significant difference is observed between students of key institutions and those of general institutions ( $P=0.032<0.05$ ), whereby students of key institutions have higher scores.

*Table 6: The comparison results between key universities and ordinary universities*

Project	N	Key universities (N=76)	Ordinary colleges and universities (N=1132)	T	P
Knowledge of the rule of law	M	3.94	3.89	1.574	0.093
	SD	0.43	0.58		
Awareness of the rule of law	M	3.52	3.40	2.165	0.032
	SD	0.41	0.52		
Sentiment of the rule of law	M	4.01	4.02	-0.248	0.786
	SD	0.56	0.68		
Will of the rule of law	M	4.21	4.24	-1.032	0.421
	SD	0.73	0.75		
Behavior of the rule of law	M	4.00	4.01	-0.219	0.795
	SD	0.63	0.63		
The average value of the spirit of the rule of law	M	3.91	3.89	0.373	0.645
	SD	0.54	0.62		

## (3) Different professional categories

The results of the college students rule of law spirit scores of various professional categories are depicted in Table 7 and the results of the pairwise comparison are depicted in Table 8. The four categories of literature and history, science and technology, sports, and arts are abbreviated as LAH, SE, SC and AC respectively as shown in the table. One asterisk means that  $p < 0.05$ , two asterisks mean that  $p < 0.01$ , three asterisks mean that  $p < 0.001$ , and the same notation is used in what follows.

This can be observed as there are statistically significant differences ( $p < 0.05$ ) between students of various professional categories according to the total score of rule of law spirit, as well as the score of its different dimensions. Post hoc test indicates that in terms of the total score of rule of law spirit and the dimension of rule of law behavior, students majoring in literature/history scored significantly higher than those in science/technology and arts ( $P < 0.01$ ). Literature and history students have a greater score in the rule of law knowledge dimension than sports and art students, and science and engineering students also have a greater score than sports and art students ( $P < 0.001$ ). The literature and history students score higher on the dimension of the rule of law emotion than the science and engineering students ( $P < 0.05$ ), but no statistically significant difference exists between the other major categories ( $P > 0.05$ ). With respect to the rule of law will, students majoring in literature and history have a higher score than students majoring in science and engineering and arts and physical education majors have a higher score than science and engineering major students ( $P < 0.01$ ). Concerning rule of law awareness, students majoring in literature and history have a higher score than students majoring in science and engineering, sports, and arts and the students majoring in science and engineering have a higher score than students majoring in arts ( $P < 0.01$ ).

*Table 7: The score situations of different professional categories*

Project	N	Liberal arts and history (N=451)	Science and engineering (N=488)	Sports category (N=112)	Art category (N=157)	T	P
Knowledge of the rule of law	M	3.92	3.93	3.77	3.79	7.754	0.000
	SD	0.57	0.65	0.53	0.59		
Awareness of the rule of law	M	3.48	3.4	3.36	3.29	5.623	0.000
	SD	0.53	0.58	0.51	0.62		
Sentiment of the rule of law	M	4.06	3.98	4.05	4.01	4.852	0.017
	SD	0.58	0.75	0.54	0.54		
Will of the rule of law	M	4.30	4.18	4.32	4.21	5.905	0.000
	SD	0.73	0.78	0.70	0.76		
Behavior of the rule of law	M	4.10	3.94	4.02	3.97	10.618	0.000
	SD	0.59	0.64	0.56	0.62		
The average value of the spirit of the rule of law	M	3.94	3.87	3.86	3.83	4.263	0.002
	SD	0.52	0.59	0.47	0.53		

Table 8: The pairwise comparison results of scores for different professional categories

Project	N	The sum of squared deviations	df	F	Post-event comparison LSD
Knowledge of the rule of law	Between groups	8.748	3	7.736***	LAH>SC, LAH>AC, SE>SC, SE>AC
	Within the group	615.932	1204		
	Sum	625.504	1207		
Awareness of the rule of law	Between groups	2.941	3	3.587*	LAH>SE
	Within the group	435.813	1204		
	Sum	439.406	1207		
Sentiment of the rule of law	Between groups	8.534	3	5.658**	LAH>SE, LAH>AC, SC>SE
	Within the group	756.728	1204		
	Sum	769.804	1207		
Will of the rule of law	Between groups	8.562	3	5.694**	LAH>SE, LAH>SC, LAH>AC, SE>AC
	Within the group	757.315	1204		
	Sum	770.428	1207		
Behavior of the rule of law	Between groups	13.751	3	10.943***	LAH>SE, LAH>AC
	Within the group	628.410	1204		
	Sum	641.357	1207		
The average value of the spirit of the rule of law	Between groups	2.941	3	4.462**	LAH>SE, LAH>AC
	Within the group	446.914	1204		
	Sum	451.295	1207		

## (4) Different political profiles

The scores of college students rule of law spirit are shown in Table 9 depending on their political affiliations, i.e., PM, LM, and NP denote members of the CPC, the Communist Youth League, and the population at large, respectively. The results of the analysis indicate that there are no significant differences between students of different political backgrounds in the total score of the rule of law, nor the dimensions of the rule of law knowledge, emotions, and behavior ( $P>0.05$ ). Nevertheless, a statistically significant gap is noted in the rule of law awareness dimension,  $P$  value less than 0.05.

Table 9: The scores of college students with different political statuses

Project	N	PM (N=45)	LM (N=1080)	NP (N=83)	T	P
Knowledge of the rule of law	M	4.02	3.89	3.85	2.173	0.102
	SD	0.56	0.60	0.56		
Awareness of the rule of law	M	3.57	3.41	3.30	4.092	0.011
	SD	0.61	0.64	0.69		
Sentiment of the rule of law	M	4.09	4.02	4.03	0.996	0.414
	SD	0.65	0.62	0.64		
Will of the rule of law	M	4.41	4.23	4.22	2.508	0.078
	SD	0.75	0.77	0.81		
Behavior of the rule of law	M	4.12	4.01	3.99	1.594	0.185
	SD	0.59	0.61	0.65		
The average value of the spirit of the rule of law	M	4.01	3.89	3.85	2.315	0.087
	SD	0.52	0.56	0.55		

The results of the two-by-two comparison of the rule of law awareness of college students with different political profiles are shown in Table 10. The post hoc test found that college students whose political profile is CPC members have higher scores of rule of law awareness than those whose political profile is Communist Youth League members and the masses. And college students whose political profile is a member of the Communist Youth League have a higher score of rule of law awareness than the masses, and the difference between the groups is statistically significant ( $P < 0.05$ ).

Table 10: The pairwise comparison results of the awareness of the rule of law

Project	N	The sum of squared deviations	df	F	Post-event comparison LSD
Awareness of the rule of law	Between groups	3.976	2	4.196*	PM>LM, PM>NP, LM>NP
	Within the group	654.239	1205		
	Sum	659.845	1207		

### 3.3 Analysis of factors influencing the cultivation of the rule of law among university students

The data considered in this paper are based on the Questionnaire on Influential Forces in the Nurturing of the Spirit of the Rule of Law in College Students. Using both qualitative and quantitative approaches, it assesses the total and the categorical effect of the seven suggested factors on the rule of law spirit of students.

#### 3.3.1 Hypothetical models

As a result of theoretical analysis, open-ended and closed-ended surveys and factor analysis, it can be stated that there are four subjective variables (knowledge concepts, legal awareness, learning motivation, and personality traits) and three objective variables (school environment, family background, and social context), which contribute to the formation of the rule of law spirit in college students. A resulting model representing the factors leading to the development of the rule of law spirit would then be illustrated in Figure 1. The model will also be tested using correlation analysis and stepwise regression analysis.

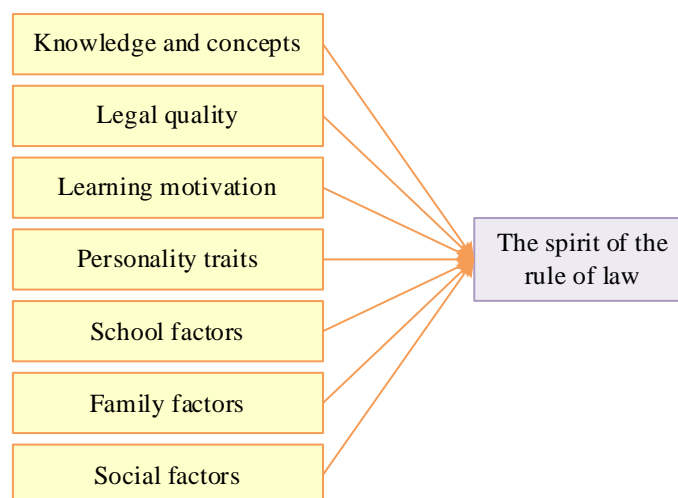


Figure 1: Hypothetical model of influencing factors

### 3.3.2 Correlation analysis of factors influencing the cultivation of the spirit of the rule of law

The statistical and correlation analyses were carried out in this study using the findings of 1208 questionnaires that evaluated the eight dimensions namely; knowledge concept, legal quality, learning motivation, personality traits, school factors, family factors, social factors and the rule of law spirit among college students.

Table 11 shows the relationship between the spirit of the rule of law and the factors which influence it. It can be seen that each correlation coefficient between the spirit of the rule of law and other factors including knowledge concept, legal quality, study motivation, personality traits, family factors, school factors, and social factors is greater than 0.5, which means that there is a high positive correlation ( $P < 0.01$ ).

*Table 11: Results of correlation analysis*

Dimension	Knowledge and concepts	Legal quality	Learning motivation	Personality traits	School factors	Family factors	Social factors	The spirit of the rule of law
Knowledge and concepts	1							
Legal quality	0.726**	1						
Learning motivation	0.774**	0.691**	1					
Personality traits	0.785**	0.757**	0.679**	1				
School factors	0.801**	0.749**	0.714**	0.773**	1			
Family factors	0.629**	0.668**	0.562**	0.734**	0.695**	1		
Social factors	0.766**	0.713**	0.731**	0.695**	0.829**	0.602**	1	
The spirit of the rule of law	0.584**	0.656**	0.558**	0.606**	0.637**	0.538**	0.639**	1
M	3.91	4.35	3.84	4.33	4.05	4.38	3.66	3.89
SD	0.69	0.69	0.71	0.70	0.79	0.70	0.75	0.56

### 3.3.3 Regression analysis of the rule of law and its influencing factors

In this study, the stepwise regression analysis was conducted to examine the impact of seven predictors: knowledge concept, legal quality, learning motivation, personality traits, family factors, school factors, and social factors, on the dependent variable, the spirit of the rule of law.

The covariance analysis was performed first, revealing a minimum tolerance value of 0.189 and a maximum VIF of 5.28, both indicating no significant covariance problem.

The stepwise regression analysis results of the rule of law spirit and its influencing factors are displayed in Table 12. As shown, legal quality, personality traits, school factors, and family factors all significantly predict the rule of law spirit among college students, with their respective explanatory contributions of 42.8%, 0.5%, 6.2%, and 1.1%. Factors such as knowledge concepts, learning motivation, and social factors were excluded due to their lack of significance.

Table 12: The results of stepwise regression analysis of influencing factors

Dimension	B	Standard error	$\beta$	t	F	$\Delta R^2$
Constant	2.006	0.047		41.62***	352.46***	
Legal quality	0.185	0.016	0.325	10.95***		0.428
Personality traits	0.072	0.016	0.114	4.37**		0.005
School factors	0.131	0.016	0.243	7.68***		0.062
Family factors	0.078	0.017	0.142	4.29**		0.011

The regression analysis of the influence of legal quality, school factors, family factors, and personality traits on college students' rule of law is shown in Figure 2.

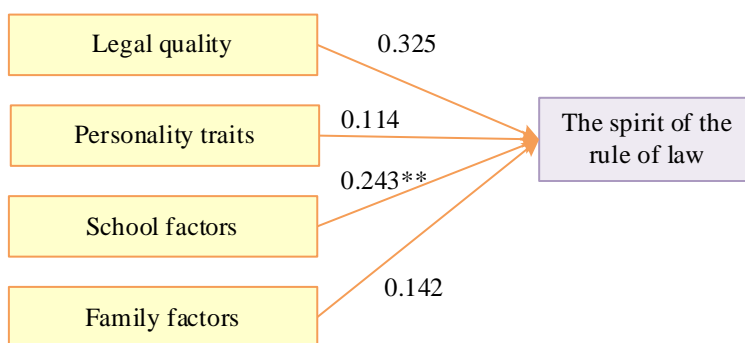


Figure 2: Regression prediction model

### 3.3.4 General analysis of factors influencing the cultivation of the rule of law

Table 11 shows that the influencing factors of rule of law cultivation among college students have an average score of 4.07 as a measure of normal distribution. It indicates that the key environmental factors mentioned in the questionnaire play a major role in the formation of rules of law among students. The result makes it possible to conduct more research on cultivation strategies. Also, there is a significant possibility to continue exploring the influencing factors of the rule of law cultivation among Chinese college students, a mission that will necessitate long-term commitment.

As can be seen from Table 12, the influential factors of the cultivation of the rule of law spirit of college students are characterized by differences in the play of their power. From the layer-by-layer analysis of the influential role of specific topics, objective indicators and corresponding dimensions, we find that the four influential factors with stronger sensitivity are: legal quality, school factors, family factors, and personality traits.

## 4 Conclusion

This paper designs a four-in-one public security legal education model of “teaching, learning, practicing and fighting” that combines technology and laws and regulations courses, and analyzes the differences in the teaching goal of public security legal education, “cultivation of the rule of law”, and the factors influencing it.

The average spirit of the rule of law in 1208 college students who were surveyed is quite high, averaging 3.89. On the sub-dimensions, students have a very high sense of commitment toward the rule of law will and emotion, with average scores of 4.24 and 4.02 respectively. Nevertheless, the score on the rule of law consciousness is significantly low, at 3.41, which indicates a domain where greater attention should be paid to the development of the rule of law

spirit. Also, in many aspects, there are significant differences such as the fact that the students are only children or not, whether they are enrolled in key or platform institutions, their academic disciplines, and their political affiliations ( $P < 0.05$ ). Moreover, different factors play a role in the promotion of the rule of law spirit, and legal quality, school factors, family background and personal characteristics are the most prominent contributors of all.

As per the findings, this paper finds that developing the spirit of the rule of law among college students, particularly those who specialize in the field of public security law, is a multifaceted and organized challenge. It will take people, families, schools and society in general to work together to develop positive educational synergy to achieve this. The main recommendations are:

(1) Individual Level: It is important to develop the inner motivation and awareness of the college students to self-develop their spirit of rule of law through dealing with their subjective awareness, internal needs, and learning motivations.

(2) Family Level: It is important to strengthen the role of the family in the farming process. This can be done through better family education ideas, creating a conducive family setting and encouraging collaboration between the home and the school.

(3) School Level: Strengthening the school's role in cultivating the rule of law is key. This involves fostering collaboration between ideological and professional courses, the political work team, and professional instructors, while also integrating both explicit and implicit rule of law education into lifelong learning.

(4) Social Level: Optimizing the broader social environment for rule of law cultivation involves leveraging the influence of key individuals, promoting socialist rule of law culture, and purifying the media to support these efforts.

## Funding

This work was supported by 2024 Annual College-level Teaching Research Project "Research on the Scientific Evaluation Criteria for Police Law Enforcement Quality".

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