

Analysis of the Related Factors Influencing English Majors' Cheating in Exams based on SPSS

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Abstract: Examinations are the main means of testing students' academic performance and evaluating the quality of school education and teaching. The purpose of the exam is to test the students' mastery of the knowledge learned at the current stage. The most important thing is to fairly and truthfully reflect the true level of students. Cheating among college students is no different from directly challenging the authority of exams and ignoring school discipline and behavioral norms, which is a manifestation of a lack of integrity and morality. In recent years, there have been varying degrees of cheating among college students in exams, which has had a very negative impact. This article uses questionnaire stars to conduct a sampling survey, and based on the provided data, uses SPSS software to conduct descriptive data analysis, correlation research, and regression analysis, in order to explore the relevant reasons that affect the occurrence of exam fraud among first to fourth year English major students in a certain university. Based on the analysis results, the author has put forward several suggestions to various parties to prevent students from cheating.

Keywords: SPSS; College Students; Cheating in Exams; Correlation Analysis; Regression Analysis.

1. Research Purpose

Contemporary college students undertake the historical mission of building Socialism with Chinese characteristics and realizing the great rejuvenation of the Chinese nation. Contemporary college students can only become people who serve and contribute to society in the future by studying hard and studying diligently. This is the fundamental direction and established requirement for college students' "success". In college, the so-called "success" is generally measured by various standards related to exam scores. Therefore, some college students cheat in exams in disregard of integrity for the so-called "success", and this phenomenon is becoming increasingly severe. It must be admitted that the situation of student cheating in exams and its contributing factors are complex. The cheating methods of students are also becoming increasingly advanced, with the emergence of high-tech cheating methods such as mobile phone cheating and online cheating. Even in universities, there have been issues of paper fraud and academic fraud, as well as professional groups such as proxy classes, exams, and writing in student groups and online settings. These issues undoubtedly do not reflect the serious lack of integrity among individual college students. The author conducts an investigation and research on the cheating situation in exams among college students' integrity issues. Based on the collected data, the author attempts to analyze the relevant influencing factors of college students' cheating behavior in exams, and puts forward some suggestions on how to prevent students from cheating behavior.

2. Related Design

2.1. Research Methods

Through the form of questionnaire stars, we collected a series of data from first to fourth grade English majors in a certain university to gain a deeper understanding of the causes of their cheating in exams. We divide these data into several main components: the gender and grade of the learners, the

time spent studying each day and their own learning abilities, the level of love for the English major, the participation rate in courses related to honesty and trustworthiness during school, the level of perception of cheating by others, and whether they have had their own cheating experience. We have given appropriate weights to these main variables and used SPSS software for further analysis to identify the root causes of these phenomena.

We assign the independent variables of students' grades from first year to fourth year as 1, 2, 3, and 4. The learning duration of the independent variable is divided into five scales: 1="almost no", 2="one to two hours", 3="three to four hours", 4="five to six hours", and 5="seven hours or more". We can evaluate students' learning abilities based on their weak, weak, average, strong, and strong abilities, represented by 1, 2, 3, 4, and 5, respectively. Regarding whether students have participated in integrity education classes, three options were set: "no", "occasionally", and "frequently", and assigned values of 1, 2, and 3 respectively; Regarding the topic of whether one is interested in the English major, five options were set: "completely not", "not very", "average", "interested", and "very strong", and assigned values of 1, 2, 3, 4, and 5 in sequence; When asking students about their perception of cheating phenomena around them, five options were set, namely "none", "very few", "average", "quite many", and "very common", represented by 1, 2, 3, 4, and 5 respectively.

In the design of the dependent variable, ask students if they have ever had any thoughts or behaviors of cheating, and set three options: "none", "no thoughts but no actions", and "all" to indicate the degree of cheating in the exam by the students themselves, and assign values of 1, 2, and 3 respectively.

Develop a survey questionnaire in anonymous form, with each question selected as a single choice. Distribute the questionnaire for investigation.

2.2. Research Object

The scope of this survey is for students majoring in English from the first to fourth grades of a certain university, and a total of 103 questionnaires were collected.

3. Data Analysis

3.1. Descriptive Analysis

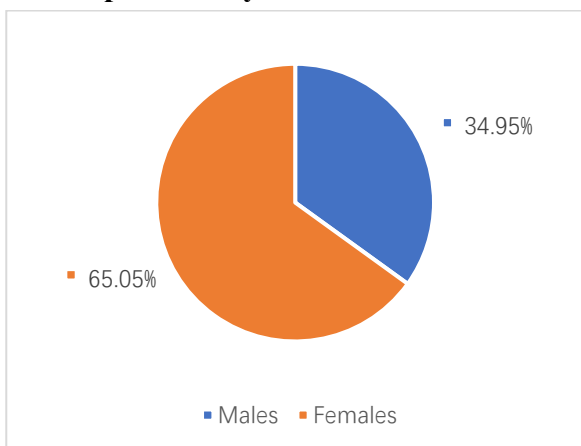


Figure 1. Gender Distribution Map

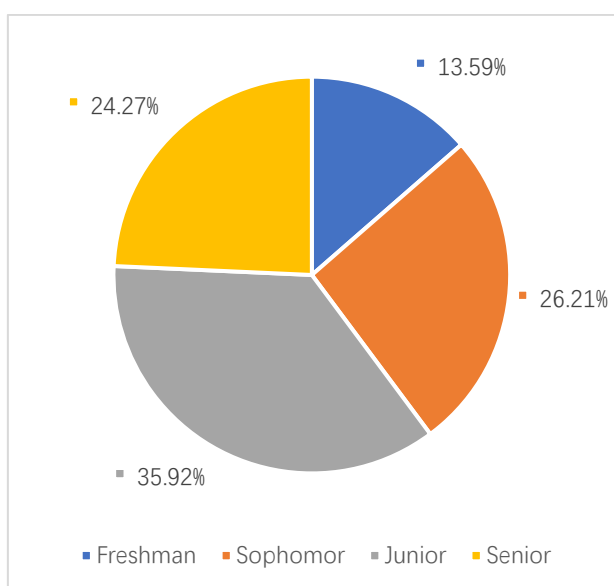


Figure 2. Grade Distribution Map

Using SPSS software for descriptive statistical analysis of the data, a total of 103 data were collected from first to fourth year university students. The gender distribution is shown in Figure 1, and the grade distribution is shown in Figure 2.

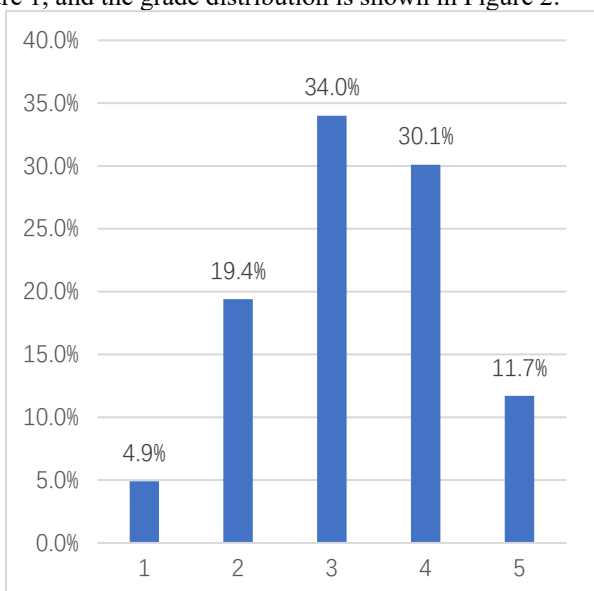


Figure 3. Histogram of Learning Duration

Among all the respondents, 4.9% of students hardly study every day, 19.4% study for one to two hours every day, 34.0% study for three to four hours every day, 30.1% study for five to six hours every day, and 11.7% study for up to seven hours or more every day. From the bar chart in Figure 3, it can be seen that the majority of students study for between three to six hours per day.

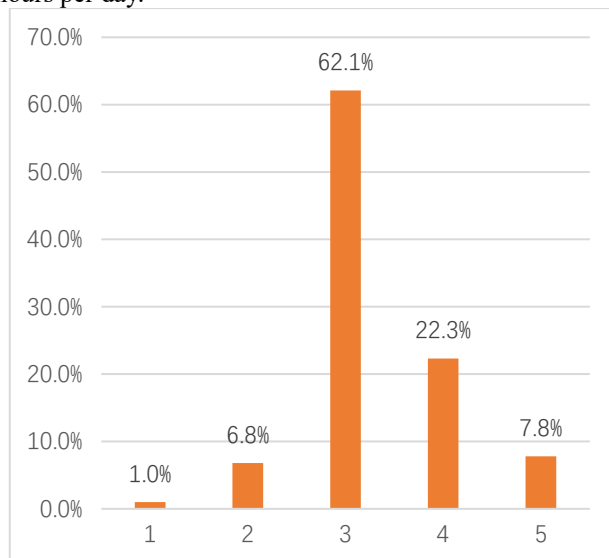


Figure 4. Histogram of Learning Ability

Among all the respondents, 1.0% believed that their learning ability was weak, 6.8% believed that their learning ability was weak, 62.1% of students believed that their learning ability was average, 22.3% believed that their learning ability was strong, and the remaining 7.8% of students believed that their learning ability was strong. As shown in Figure 4, most students feel that their learning ability is average, while only a very small number of students believe that their learning ability is strong or weak.

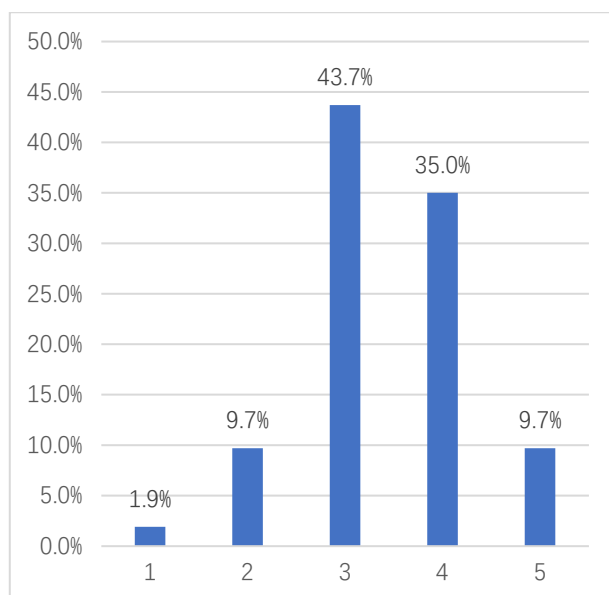


Figure 5. Bar Chart of Interest in English Major

In 103 questionnaires, 1.9% of the students were completely uninterested in this major, 9.7% of the students were not very interested, 43.7% held a general attitude, 35.0% of the students were interested in this major, and 9.7% of the students showed a very strong interest in the English major.

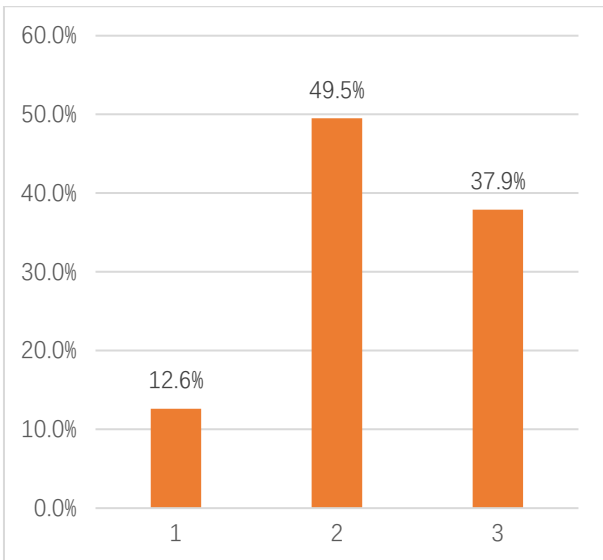


Figure 6. Bar Chart of the Attendance of Integrity Education Courses

12.6% of people have never taken any relevant integrity education courses at all, 49.5% of students have occasionally taken such courses, and 37.9% of people report regularly taking such courses. As shown in Figure 6, most students have occasionally taken integrity education classes, and many students often take integrity education classes. Only a very small number of students have never taken integrity education classes at all.

When asked about their perception of cheating behavior in exams around them, 16.5% of people believe that there is no cheating situation around them, 30.1% of people believe that there is very little cheating in exams around them, 36.9% of classmates hold a general attitude, 10.7% of students say that there are more cheating situations in exams around them, and 5.8% of people say that this phenomenon is very common.

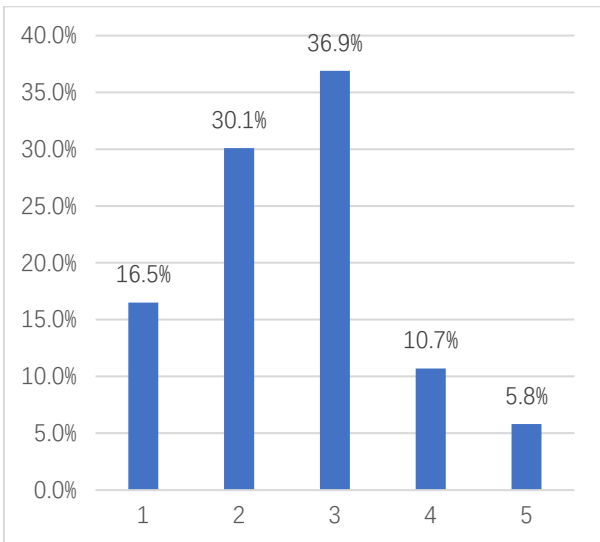


Figure 7. Bar Chart of Cheating Situation Around

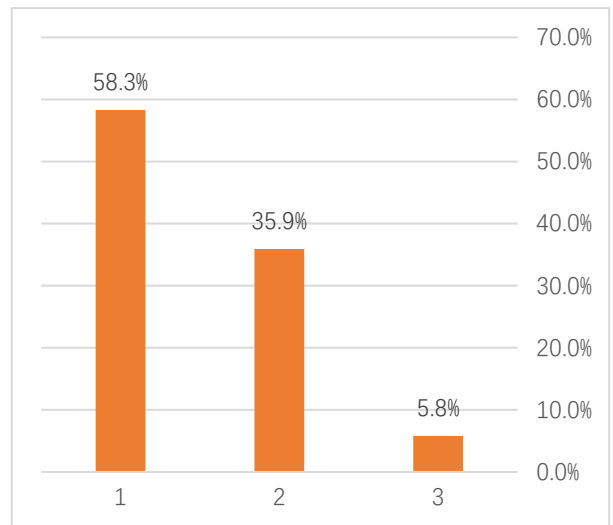


Figure 8. Bar Chart of Cheating Thoughts or Behaviors

Among the surveyed subjects, 58.3% of students had no thoughts or behaviors of cheating, 35.9% had thoughts or behaviors of cheating, but did not engage in corresponding behaviors, and 5.8% had both thoughts and behaviors of cheating.

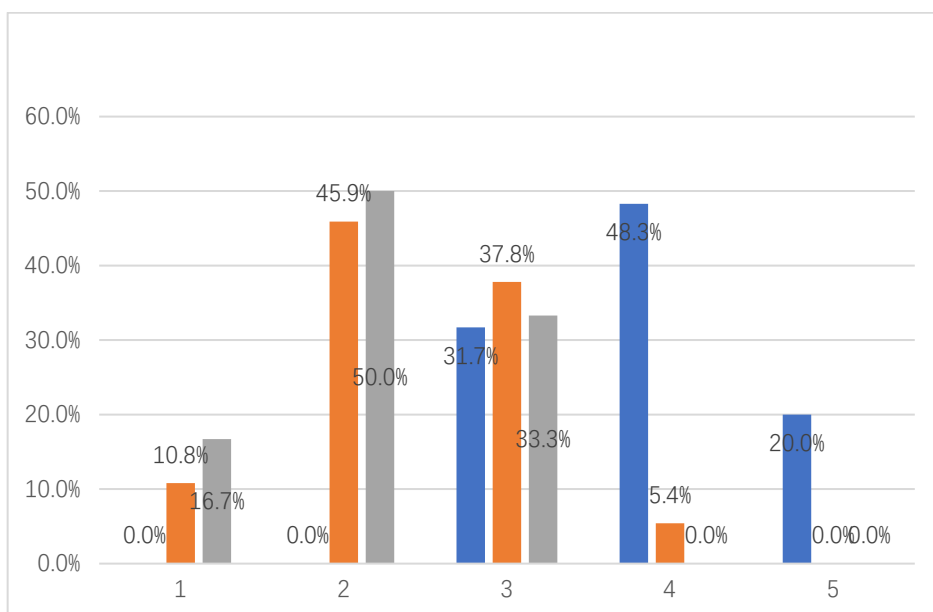


Figure 9. Cross Bar Chart of Learning Duration and Self Cheating Situation

From Figure 9, we can clearly see that students with longer learning hours are more likely to have no cheating thoughts

or behaviors. Students who study for one to two hours a day have the highest level of cheating thoughts or behaviors.

Based on practical considerations, students who cheat in exams are often not the type with the shortest or longest learning time. Because students with extremely short learning time are already in a state of complete failure, while students with long learning time are mostly hardworking and hardworking, and they do not need to cheat to obtain high

scores. And students in the middle are divided into two factions. One faction is that even if they don't study hard, they will still adopt a temporary cramming method at the end of the term, and be honest in taking the exam. The other faction is that they are in a broken can and fall attitude, or have a lucky mentality, hoping to cheat during the exam.

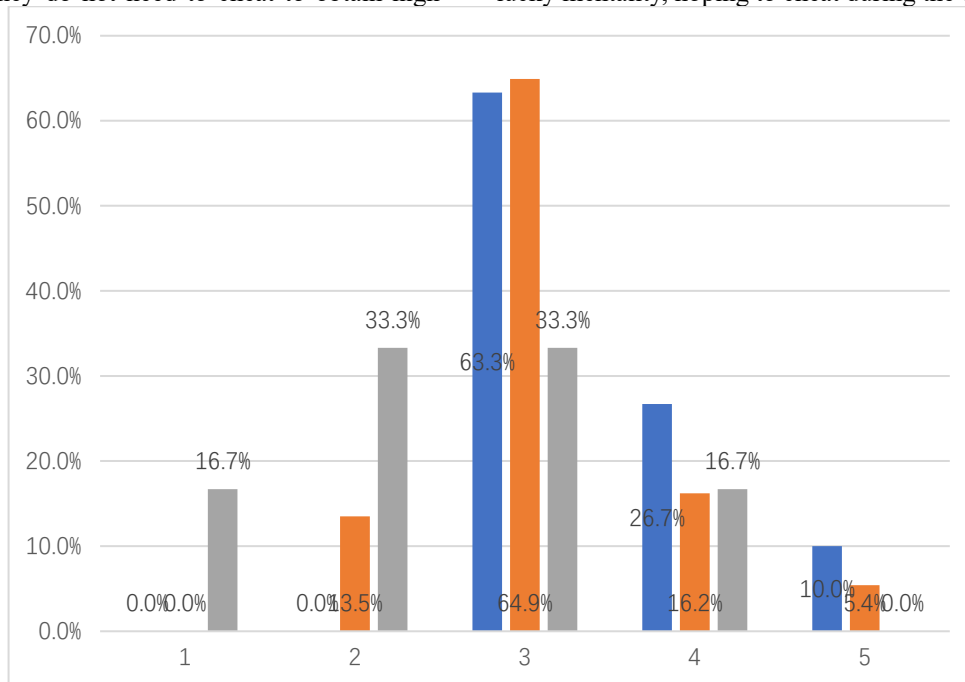


Figure 10. Cross Bar Chart of Learning Ability and Self Cheating Situation

From Figure 10, we can clearly see that the whole shows a Normal distribution. Students who believe that their learning ability is average are most likely to have thoughts or behaviors of cheating, reaching a peak. As analyzed in Figure 9, students with weak or strong learning abilities rarely cheat. The more students with intermediate learning abilities, the more they are in a state of wanting to lie flat but not lying flat. At this point, they are highly likely to have thoughts and behaviors of cheating.

The cross bar charts in Figures 9 and 10 are based on the author's subjective analysis and were first analyzed using a

cross table. They can only describe the relationship between variables and cannot derive causal relationships. Therefore, when interpreting the results, be careful not to draw Causal inference too arbitrarily; Cross table analysis should be used reasonably to better understand and describe the relationship between Categorical variable, so as to reveal the patterns and trends in the data. Further research is needed through subsequent correlation analysis to determine whether there is a causal relationship or correlation between them.

3.2. Correlation Analysis

Table 1. Correlation analysis between interest in English major and one's own thoughts and situations of cheating

Correlation			
		Interested in English Major	Cheating Thoughts or Behaviors
Interested in English Major	Pearson Correlation	1	-.130
	Sig. (2-tailed)		.192
	Number of Cases	103	103
Cheating Thoughts or Behaviors	Pearson Correlation	-.130	1
	Sig. (2-tailed)	.192	
	Number of Cases	103	103

Table 2. Correlation analysis between daily study duration and whether one has thoughts and situations of cheating

Correlation			
		Daily Learning Duration	Cheating Thoughts or Behaviors
Daily Learning Duration	Pearson Correlation	1	-.688**
	Sig. (2-tailed)		.000
	Number of Cases	103	103
Cheating Thoughts or Behaviors	Pearson Correlation	-.688**	1
	Sig. (2-tailed)	.000	
	Number of Cases	103	103

** . At the 0.01 level (2-tailed), the correlation is significant.

By using SPSS, we can delve deeper into the relationship between different independent variables and the dependent

variables they affect, and conduct effective data analysis. As shown in Table 1, the correlation coefficient r between interest in the English major and one's own thoughts and behaviors of cheating is -0.130 , with an absolute value less than 0.3 , indicating a very weak relationship between the two; The p -value is 0.192 , which is greater than 0.05 , indicating that this is a high probability event. Therefore, there is no correlation between interest in English major and cheating.

Through the correlation analysis between learning duration and one's own cheating situation, as shown in Table 2, we found that the p -value is equal to 0.000 and less than 0.01 , indicating that the likelihood of this situation occurring is very low. In addition, the r value is -0.688 , and its absolute value is between 0.5 and 0.8 . Therefore, there is a negative correlation between the two, and the longer the learning time, the less likely it is to engage in cheating behavior.

Table 3. Correlation analysis between attending integrity education classes and whether one has thoughts and situations of cheating

		Correlation	
		Attending Integrity Education Courses	Cheating Thoughts or Behaviors
Attending Integrity Education Courses	Pearson Correlation	1	-.178
	Sig.(2-tailed)		.072
	Number of Cases	103	103
Cheating Thoughts or Behaviors	Pearson Correlation	-.178	1
	Sig.(2-tailed)	.072	
	Number of Cases	103	103

As shown in Table 3, the p -value is 0.072 , which is greater than 0.05 ; The correlation coefficient value r is -0.178 , and its absolute value is less than 0.3 . Therefore, it indicates that this is a high probability event, which means that their connection is likely to be unstable. Whether or not students participate in honest and trustworthy education courses will not affect their

cheating in exams.

A correlation analysis was conducted between the surrounding exam situation and whether cheating occurred, and the results showed that there was no correlation between the two. The specific data is shown in Table 4.

Table 4. Correlation analysis between the surrounding exam situation and whether one has thoughts and situations of cheating

		Correlation	
		Surrounding Exam Situation	Cheating Thoughts or Behaviors
Surrounding Exam Situation	Pearson Correlation	1	.150
	Sig.(2-tailed)		.129
	Number of Cases	103	103
Cheating Thoughts or Behaviors	Pearson Correlation	.150	1
	Sig.(2-tailed)	.129	
	Number of Cases	103	103

Table 5. Correlation analysis between learning ability and whether one has thoughts and situations of cheating

		Correlation	
		Learning Ability	Cheating Thoughts or Behaviors
Learning Ability	Pearson Correlation	1	-.329**
	Sig.(2-tailed)		.001
	Number of Cases	103	103
Cheating Thoughts or Behaviors	Pearson Correlation	-.329**	1
	Sig.(2-tailed)	.001	
	Number of Cases	103	103

** . At the 0.01 level (2-tailed), the correlation is significant.

According to the data in Table 5, the p -value is less than 0.01 , indicating that this is a very small probability event, while the absolute value of r -value of -0.329 is at 0 Between 3 and 0.5 , it suggests a weak negative correlation between learning ability and cheating. Therefore, with the improvement of learning ability, the situation of cheating in exams will also decrease.

After data analysis, we found that students' learning time and abilities are closely related to whether they cheat or not.

However, this does not necessarily mean that students with short learning times or poor abilities will cheat in exams. In order to evaluate this situation more accurately, we conducted regression analysis on learning duration, ability, and cheating behavior to enhance the credibility of our conclusions. The author takes learning duration and learning ability as independent variables, and the dependent variable is always the presence or absence of cheating behavior. Using SPSS software, the operation is as follows.

Table 6. Regression equation fitting range

Model Summary b										
Model	R	R-squared	Adjusted R-squared	Errors in Standard Estimation	Change Statistics					Durbin-Watson
					R-squared variation	F variation	Degree of Freedom 1	Degree of Freedom 2	Significance F change	
1	.688a	.474	.468	.443	.474	90.835	1	101	.000	2.357

a. Predictive variable: (constant), daily learning duration
b. Dependent variable: cheating thoughts or behaviors

As shown in Table 6, the correlation coefficient between the two is 0.688, and the square of r is 0.474, indicating a strong positive correlation between the two. That is to say, the

model fits well with the data relationship between students' learning time and whether they cheat or not.

Table 7. Regression equation analysis of variance

ANOVAa						
Model	Sum of Squares	Degree of Freedom	Mean Square	F	Significance	
1	Regression	17.846	1	17.846	90.835	.000b
	Residual	19.843	101	.196		
	Total	37.689	102			
a. Dependent variable: cheating thoughts or behaviors						
b. Predictive variable: (constant), daily learning duration						

Table 7 shows the analysis of variance results of the regression equation, where the F-value is as high as 90.835, while the P-value is much lower than 0.01. This threshold is widely used to evaluate significance, so we can reject the null

hypothesis, which means that all regression coefficients are zero. So, we can conclude that the regression equation has significant statistical significance.

Table 8. Degree of fitting of regression equation

Model Summary b										
Model	R	R-squared	Adjusted R-squared	Errors in Standard Estimation	Change Statistics					Durbin-Watson
					R-squared variation	F variation	Degree of Freedom 1	Degree of Freedom 2	Significance F change	
1	.329a	.108	.099	.577	.108	12.237	1	101	.001	2.332
a. Predictive variable: (constant), learning ability										
b. Dependent variable: cheating thoughts or behaviors										

As shown in Table 8, the correlation coefficient between the two is 0.329, and the square of r is 0.108, indicating a strong positive correlation between the two. This model

accurately fits the relationship between students' learning ability and whether they engage in cheating behavior.

Table 9. Regression equation analysis of variance

ANOVAa						
Model	Sum of Squares	Degree of Freedom	Mean Square	F	Significance	
1	Regression	4.073	1	4.073	12.237	.001b
	Residual	33.616	101	.333		
	Total	37.689	102			
a. Dependent variable: cheating thoughts or behaviors						
b. Predictive variable: (constant), learning ability						

Table 9 shows the analysis of variance results of the regression equation, with an F-value of 12.237 and a P-value below 0.01. This threshold is widely used to evaluate significance, so we can reject the null hypothesis that all regression coefficients are equal to zero. This regression equation has significant statistical significance as it accurately reflects the relationship between students' learning time and cheating behavior.

cheating in exams.

(2) Teachers should teach by example and continuously improve students' learning abilities; Carefully prepare for lessons, accurately grasp important knowledge points, and guide students to systematically organize course content before exams; There must be no favoritism and strict supervision of the exam to avoid promoting the wrongdoing of cheaters.

(3) Parents should lead by example and be honest and trustworthy in their daily lives; Strictly demand children and not overly indulgent. In the face of children cheating, it is necessary to deal with it seriously; Do not give children excessive learning pressure and high expectations, in order to prevent them from recklessly speculating and obtaining high scores.

4. Suggestions

4.1. External Aspects

(1) Firstly, it is necessary to carry out more relevant courses in schools, focusing on cultivating the honesty and trustworthiness of college students; Increase efforts to punish

4.2. In Terms of Oneself

(1) Actively participate in the integrity education courses organized by the school, learn from excellent teachers and classmates, and achieve comprehensive development in morality, intelligence, physical fitness, aesthetics, and labor.

(2) In the learning process, attention should be paid to previewing, focusing on learning, actively participating in the classroom, and reviewing in a timely manner after class. If encountering difficulties, one should be brave enough to ask questions and communicate with the teacher; We should arrange our time in a planned manner and study independently; Avoid following the trend and refuse to submit to the will of certain people who engage in cheating behavior.

(3) Honesty and trustworthiness are our fundamental principles and our common pursuit. It reflects our common ideals and becomes the code of conduct for each of us. As young people and successors of socialism in the new era of China, contemporary college students should strictly demand that they start from eliminating cheating in exams, be honest and trustworthy, and solidly learn their professional knowledge. In the future, they should use their specialized knowledge to make important contributions to socialist construction.

5. Conclusion

Through a questionnaire survey, the author analyzed the reasons that affect English major college students' cheating in exams, and based on the analysis results, gave some suggestions to try to prevent students from cheating.

(1) Learning time has a significant impact on the cheating behavior of English major college students in exams, and there is a significant negative correlation between the two.

(2) Whether or not students have received integrity education or have a passion for English majors, their cheating behavior in exams will not be affected.

(3) The stronger the learning ability, the lower the likelihood of English major college students cheating in exams.

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