An Analysis of Causes and Countermeasures of College Students’ Cheating in Examinations Based on Economics

Yan-ming HUANG¹,a

¹Teaching Affairs Office, Nanjing University of Finance and Economics, Nanjing, China

a yanming_huang@163.com

Keywords: Examination, Cheating, Economic Principles, Game Theory.

Abstract. As a method of knowledge level assessment, examinations require strict disciplines and any cheating is absolutely prohibited. However, with the expansion of college enrollment in recent years, there has been an upward trend in the number of college students cheating in exams, leading to a series of harm to schools as well as to students. It is an urgent problem which needs to be solved. From two aspects of economics and game theory, this paper tries to analyze the reasons for college students’ cheating in exams and to make the corresponding countermeasures.

Introduction

Examination is the main method to evaluate the students’ knowledge level and the quality of testing in school teaching activities. It examines the students’ knowledge and skills through a variety of ways, such as written examinations, papers, and practical operations. The main purpose is to test their degree of mastery of knowledge or skills. Besides, it aims to test whether the student has the basic ability to acquire certain qualifications. From these two purposes, the examination can be divided into the effect test and the qualification test [1].

1. Effect test

No matter from the examiner’s point of view, or from the student’s perspective, the effect test is only to test the knowledge level of learners, so as to better design the teaching or learning strategy. The typical effect tests are the mid-term examination and final examination.

2. Qualification test

The core purpose of the qualification test is to give students a fair chance to obtain a higher level of study or job qualification. The typical qualification tests include college entrance examination, postgraduate entrance examination, and TOEFL examination, etc.

However, in order to ensure the fairness of the results, any examination must require strong disciplines and absolutely any cheating must be prohibited.

Identification of Cheating and its Harms

Examination cheating, refers to that candidates take improper means inside and outside the test-room to get higher grades than their actual accomplishments. The common cheating forms include peeping, smuggling, passing notes, and taking exams for sb. Cheating destroys the normal rules of examinations, and the fairness and authenticity, which exerts seriously bad influences on the credibility and validity of exam results [2].

Recently, due to enrollment expansion, college admission rates have been increased, but the quality of students has dropped significantly. The phenomenon of cheating in examinations has occurred frequently which displays a tendency of high incidence. Numerous studies abroad have shown that it is quite common that college students cheat in examinations with the number between 13% and 95%. It is also found from the surveys by educators in our country that 30.8% of college students admit that they have cheated in the exams, and 10.65% have cheating intentions [3].

It is obvious that cheating in the exams will cause a great deal of harm. From the perspective of the school, the exam disciplines have been gradually destroyed. Even some students believe that it is not as good as cheating to study hard, which leads to the deterioration of academic atmosphere.
Therefore, colleges will fall into the vicious cycle of deterioration of study style and examination disciplines. From the perspective of students, cheating in examinations is harmful for their physical and mental health as well as their long-term development. On the one hand, cheating, as an act of deception, will always be a psychological burden, which will inevitably result in students’ nervousness and unnecessary anxiety and affecting their normal performance in the exams. And once they fail, they will feel bad which exerts a negative influence on the next examinations of the other subjects. Meanwhile, from the Ministry of Education to the universities, they have formulated very strict test disciplines. Any cheating students will be severely punished, which will become the stains in their lives and affect their further education and development. On the other hand, although students may be lucky enough to obtain good results in an examination through cheating, they cannot correctly measure their actual level of knowledge and it is not conducive to their future improvement.

Due to much bad effects of cheating in exams discussed above, it is urgent to effectively curb the spread of this phenomena and give full play to the seriousness, impartiality and scientificity of examinations. So, cheating in exams has become a hidden problem that we must solve in any case. Therefore, a reasonable and comprehensive analysis of the causes of college students’ cheating in examination will help us correctly understand and deal with this issue, so that we can more effectively put forward the countermeasures. At present, most studies on cheating in exams at home and abroad are based on sociology, pedagogy, and psychology. However, this paper mainly analyzes the reasons for cheating in exams from the perspective of economics and gives corresponding countermeasures.

Economics is a study of the general affairs of human life. The principles of economics can be applied to many aspects of life and can help us understand the world we live in. From the point of view of economics, there are mainly two ways to analyze the phenomenon of cheating in examinations. One is to use the relevant principles of economics for analysis; the other focuses on game analysis.

Economic Analysis of Cheating in Exams

Analysis from the Principles of Economics

Gregory Mankiw is a professor of economics at Harvard University. His book “Principles of Economics” interprets the basic theories of economics with simple words and vivid cases and sums up the famous “Ten Principles of Economics” which is the guideline of the entire economics. It concisely summarizes the major basic economic theories, which provides great references for the decision-making in daily life. This paper mainly analyzes from some of the ten principles.

Principle One: People Face Trade-offs

Economics is a science that studies how to effectively allocate scarce resources to the competitive applications so that human can get maximum satisfaction of desire. Economic theory is based on some important assumptions, an important one among which is that resources are scarce, while human desires are endless. There is a contradiction between the limited resources and the unlimited desires and needs of human beings. People must do some choices in the face of scarce resources and their endless desire [4].

Owing to resource scarcity, people have a strong desire and motivation to pursue various limited resources. Obviously, the resources behind the various exams are limited and scarce. Theoretically, it is necessary to pass the exam through diligent learning and self-effort in order to get the resources. However, the scarcity of resources determines that not all students can successfully pass the exam and obtain the enormous benefits of the resources behind the exam, so they choose to cheat in exams. By the same token, the limited resources behind the exam and the boundless benefits result in cheating. Therefore, it is the scarcity of resources that allows many students to attempt to cheat in exams and lay the foundation for gaining the benefits in the future.
**Principle Two: The Cost of Something is What You Give up to Get it**

There is a key concept in Cost Theory in economics, namely, Opportunity Cost, which refers to the maximum benefit that the same resource has lost in other applications. Generally, the cost of something is what you give up to get it. The resources people have are limited, so people's desires cannot be satisfied without limitation. How to select limited resources to maximize people’s needs leads to a choice of behavior. For individuals, their limited ability and resources determine that people need to make optimal choices at all times. But different choices will have different results, and people have to pay for the choice, which is, the cost of choice—opportunity cost [5].

According to individual rationality, students often take two aspects into consideration when choosing cheating. On the one hand, they compare the benefits of cheating with the losses of punishment after being caught cheating. If the former is lower than the latter, the students will not cheat. Otherwise, they will do. On the other hand, they think about the possibility of being caught cheating. If they feel that there is a strong probability of being found, they are less likely to cheat, otherwise the possibility will be very high [6].

**Principle Three: People Respond to Incentives**

Another important assumption in economics is Hypothesis of Economic Man, which points out that people are essentially selfish. The economic man attempts to maximize the profits at an established cost or tries to minimize his own costs in the case of an established profit. As a result, people will weigh the benefits and costs when making decisions, and incentives will, to some extent, change the costs and benefits of economic actions. This is bound to make people respond to incentives.

In general, students cheat only within a short time. In the eyes of other students, it is almost impossible for them to have a warning or just for a very short period of time. On the contrary, many cheating students who are lucky enough to escape punishment will exert a bad influence. Similar to the purchase of lottery tickets and stock speculation, most people who lose money always choose to leave quietly, and the extremely rich individuals have become the focus of attention, playing a significant role in demonstration and encouragement.

**Analysis from the Game Theory**

**Analysis from Static Game Theory**

1. For the effect test, since there is almost no competitiveness in this kind of examination, the competition among students is small. Therefore, in terms of cheating in exams, more focus is on the co-cheating of students or the game between students and invigilators. Obviously in this case, the tendency of co-cheating is larger under the same conditions than the qualification test.

2. For qualification test, there is a competition among students, and they eventually obtain the opportunities according to their own grades. Compared with the effect test, the opportunities, as scarce resources, make the competition too much fierce. For cheating in exams, the game is mainly played in two aspects: the game between students and invigilators and the game between students and opportunities. These two kinds of games have different effects on the possibility of cheating in exams. In the former, if the invigilator is irresponsible, this will lead potential cheaters to cheat. In the latter, the game between students will strengthen mutual supervision among them, so that there will be a decrease in the probability of cheating. However, the group of students must also be considered. Assuming that there is a culture of identifying cheating among students, then cheating will occur at this time. Therefore, the type of cheating in qualification test is more complicated.

**Analysis from Dynamic Game Theory**

For exams, the incidence of cheating has a great relationship with the risk of being found, that is, the seriousness of punishment, and the possibility of self-conceited successful cheating. In addition to the means of cheating, the possibility of successful cheating is considered to be related to the previous cheating experience of the student. If there is only one test, students have no relevant cheating experience. The potential cheater cannot accurately know the above-mentioned risk. At this time, the rational choice is not to cheat. When there are multiple chances for the game, students can judge the risk of being caught. If they think the punishment is not strict, they will choose to
cheat. This phenomenon is particularly evident in colleges and universities. Students generally study for more than one year, and each year they participate in many examinations organized by the school. There are many opportunities for the game. After several games, if students find that the invigilation is not strict or that the punishment is not severe, then when there is an opportunity, they are more likely to cheat.

The Ministry of Education and universities have all established very severe punishments for students’ cheating in examinations. For example, Nanjing University of Finance and Economics has formulated the “Regulations on Exam Disciplines and Disciplinary Action”. The regulations stipulate that any student cheating in the exam should be given a record of demerit or more; those who have cheated twice must be expelled from school; any student who has been given demerits must not be awarded the degree; for cheating, the related punishment materials should be included in the student’s own file. Those severe punishments will substantially affect the lifetime of students who cheat. However, both the invigilator and the supervisory department are very clear about the impact of these punishments on a student. To protect the students, although the regulations prescribed by the universities are strict, the implementation is relatively insufficient, especially in the face of the fragile psychological tolerance of contemporary students. Colleges and universities are all cautious when making penalties. In fact, some students are only slightly punished by verbal warnings and forced to hand over the papers in advance. This makes many students think that there is a small probability of being punished for cheating. At the same time, many cheating students have not been punished and the actual punishment is very less, which make them more likely to commit cheating.

Countermeasures of Cheating in Exams

Invigilation System

Perfecting Invigilation System

Some cheating in exams is mainly due to invigilators’ misconduct or deliberate indulgence. Students are certainly responsible for this, but the key is that the invigilator and the department have not fulfilled their responsibilities. Some invigilators sympathize with cheating students, and do not register for disciplinary violations, leading to a more serious cheating atmosphere. The examination rules are invalid. If the invigilator strictly enforces the rules, students will have no chance to cheat.

Improving Reward and Punishment System

Another important reason for the frequent cheating in exams is the weak supervision of the invigilator. Therefore, we must reward and punish clearly. We must properly increase investments in the reward for invigilators who are responsible and be flexible in adopting anonymous incentives for them who find cheating to increase their income, thereby reducing the cheating in exams. For the negligent invigilator, it is necessary to give them severe criticism and even economic punishment.

Benefits and Costs of Cheating in Exams

Reducing the Expected Benefits of Cheating

Under the current university system in our country, the test results basically determine a series of student-related interests, such as the assessment and award, and graduation employment. It can be seen that in order to obtain the various benefits behind the exam, students will choose to cheat.

In view of this situation, first of all, students should correctly understand the purpose of the examination. The student’s evaluation system has to be gradually improved. The school needs to appropriately reduce the direct link between scores and awards, appraisals, and so on.

Increasing the Risk of Cheating

When students choose to cheat in exams, they will generally compare the benefits they receive and the costs they pay. When the benefits are constant, if the cost of risk increases, then the net benefits will decrease. At this time, students will abandon cheating. So when students’ cost of risk is large enough, cheating in exams will be effectively prevented.
By increasing the cost of cheating, strengthening the supervision of examinations and the execution of punishments, the net benefits of cheating can be reduced, and so is the cheating rate when the additional benefits of cheating are the same.

Raising the Cost of Dishonesty

In the market economy, honesty is the basic criterion of people’s activities, and cheating is an unfair competition that violates honesty. In colleges and universities, the importance of observing disciplines is repeatedly stressed before each exam. In some major exams such as CET4 and CET6, students are allowed to sign the honesty examination paper. However, it cannot be avoided that students cheat in violation of exam disciplines.

Colleges and universities should strengthen the honesty education, so that each student is aware of the huge cost of cheating. At the same time, students who have already cheated must be severely punished according to regulations.

Competition among Students

Many examinations in colleges belong to the effect tests. Students only need to meet the requirements. Cheating will inevitably occur if the invigilator fails to make a good supervision. If it is a qualification test, students will be selected according to the marks they get from high to low, and then the cheating will be reduced.

Colleges and universities should study the rules of examination in different subjects, adopt some examination methods to reduce cheating, and explore a scientific and reasonable mode of talent assessment [7].

Conclusion

The essence of cheating in the examination is that students want to get the scarce resources and interests behind the exam by means of improper ways. According to the principles of economics, under the premise of scarce resources, cheating will be better prevented if the expected benefits of cheating are reduced and the risks are increased.

References

[1] Information on https://baike.baidu.com.
[2] Information on https://baike.baidu.com.
[3] L. M. Yao, College Students’ Cheating and Its Control. Higher Education Research, Vol. (3), 2001, pp: 78-81.
[4] Mankiw, G., Essentials of Economics. Beijing: Beijing University Press, 2017: 3-4.
[5] Mankiw, G., Principles of Economics. Beijing: Posts and Telecom Press, 2017: 2-6.
[6] X. Y. Zhang, Analysis of Cheating Behaviors from Game Theory. Journal of Northeast Normal University: Philosophy and Social Sciences, Vol. (5), 2006, pp. 156-160.
[7] L. L. Zhang, Analysis on the Phenomenon of Cheating in Exams in terms of the Game Theory. Journal of Wuhan Metallurgical Manager’s Institute, Vol. (12), 2005, pp. 23-25.