

A Line of Getting in and out From the University to Society The Crisis of Standardized Examinations on Students' Creative Thinking

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Abstract. In the last decade, examinations, promotions, certificates, etc. have become the proof to judge whether a student is excellent or not, and this phenomenon is the main reason for the degradation of the inner creative thinking, critical thinking, etc. This paper analyzes the impact of standardized testing on the creative thinking of students who will enter the workforce from the time they enter college until they are about to enter society and offers suggestions. The current global demand for talent and the latest trends in future talent selection are discussed. China's standardized tests are gradually being "McDonaldization," college talents have become highly educated "Impoverishment" after graduation in recent decades, and college students are being drawn into a new whirlpool of creativity deficit. China's testing system has long been rooted in a lengthy cultural and historical background and social values, and studies have shown that Chinese students are perceived to lack creativity compared to American students. The lack of creative thinking has come to encapsulate the global stereotype of China, which is a matter of urgency to change the status quo. This article analyzes the shortcomings of the examination education model and the demand for talents in today's society so that government and educators can enlighten.

Key words: Standardized Testing; Creative Thinking; McDonaldization; PISA 2021.

1. Introduction

When faced with exams, Chinese students are always asked by teachers, parents, and others, "How is your exam?" This is the explicit meaning. However, their implicit meanings are "Did you exceed the standard test score line?" This is the impression most students have of the Chinese educational experience. It shows that exams are crucial for Chinese students. The "line" is not only a sign of standard, pass, rule, and authority but also an invisible dividing and separating line. Examinations have long been a testament to students' self-academic competence and a doorway to various industries [1]. The massive number of graduates in recent years has still not met the demand for creative talent in all industries, despite considerable praise for Chinese students in fields such as math and sciences. Previous studies have shown that there is still a large gap between Chinese students' creative thinking and that of American students [14]. Lack of creative thinking has limitations for prospective graduates in terms of their career development and significantly impacts the country's long-term strategy to go international in the future. This paper hopes to improve educators' and the government's awareness of the dangers of standardized testing in the long run through an analysis of standardized testing and data from previous authors on students' creative thinking. The students in this paper include soon-to-be college graduates (seniors) who will be entering the job market and future freshmen who will take the exam to get into college. And this paper is divided into the following areas: Introduction, reasons behind the examination, Insidious side-effect of standardized testing, and conclusion

2. Reasons behind the examination

2.1 Origins

China invented examinations more than 2000 years ago [2]. It has long been a common belief that the Chinese initially selected the most capable scholars for government positions through examinations [3]. In the fourteenth century, regional, provincial and national examinations were

already in place. In other words, they are the origins of students' bachelor's, master's, and doctoral degrees. In the thirteenth century, oral examinations were held in Bologna, Italy, for both civil and common law, but in Europe, written examinations were not recorded until 1702 [3]. Before the imperial examination system, there had been various changes in the way China selected talents (i.e., civil servants). In the Shang and Zhou dynasties, the talent selection mechanism was not yet mature, and the more direct and effective way for rulers to get wise talents to assist them was to look around. The story of "姜太公钓鱼，愿者上钩" (Translation: even though the fish knew there was no hook, they chose to be caught by Jiang Ziya") is derived from the ruler's desire for talented people. From Qin to Han Dynasties, China entered the era of feudal centralization, and the ruler needed a large number of talents to serve it. There was a parallel situation of multiple talent selection methods[3].

The imperial examination system ended in 1905. On June 12, 1952, The "Regulations on the Recruitment of New Students for National Higher Education Institutions in the Summer of 1952" were published by the Ministry of Education of the Central People's Government and mandated the adoption of a common entrance exam by all institutions of higher learning. The Action Plan for Revitalizing Education for the 21st Century was published in 1999 by the Ministry of Education. Since that year, China has started a large-scale expansion of colleges and universities. In just a few years, college enrollment has almost tripled and "mass education" has increasingly surpassed "elitist education," and more and more students took the Gao Kao (Gao Kao, is a standardized college entrance exam held annually in mainland China) [4]. On December 10, 1977, the Gao Kao system, which had been interrupted by the Cultural Revolution, was restored. In reviewing history, the purpose of China's Gao Kao is to select talents applicable to the country in an equal manner and to control the acquisition of social welfare in a reasonable way. It is even more crucial to select and deliver top talent for all walks of life in 21 century.

2.2 McDonaldization

Gao Kao's "fast-food model" ignores the different ways of thinking about subjects and squeezes students' creative thinking. The government's current objective is to view education as if it had some inert material essence as if its production line could be easily removed down into a set of stationary, observable, and quantifiable procedures that admit the title of "useful (or perhaps even excellent) practice," as well as if its outcomes should be easy to predict, quantified and produced [5]. To speed up the standardized test results, the Ministry of Education presents the test content in multiple-choice, short answer, matching items format and uses machines to score the test, completely ignoring the diversity and specificity of each subject. Standardized testing appears to be a process of "Rationalization" that is moving toward McDonaldization [21]. Although "Rationalization" is a product of the progress of human civilization, the efficient way to select talents is the goal to pursue, and human beings are driven forward in uniform and efficient ways. However, this "Rationalization" has destroyed the possibility of students' spontaneous creativity and has led to a gradual loss of self-awareness. Living in such a highly orderly and rule-based society, students are unconsciously bound and deprived of their spontaneous creativity, unconsciously trapped in what Max Weber called a "huge iron cage," and gradually lose their resistance to becoming "natural" laborers. The teacher's role in education is also weakened, being used as a rule-based medium dependent on standardized testing. The testing model is treated as the subject, and both students and teachers are the parts that make it work properly. Test scores, as a definable and comparable "product," allow universities to "match" prospective students to the right university.

2.3 The purpose of examinations

For ninety-nine percent of Chinese students trying to get into college, the motivation to study is focused entirely on passing standardized tests. This process is evident early on. Formalized education in China emphasizes examination from age two, beginning with a home and school-centered life [6]. Zhang mentioned the Exam system Backwash, which is most clearly observed in "high-stakes" tests, which may have a significant effect on students' life for many years [7]. "High are such cases where

admissions, jobs, postings, or award ceremonies are depending on the test," writes Madaus (1990 in Shohami). Testing focuses on "establishing or strengthening the state's identity, enhancing citizens' feelings of belonging to the state, assigning people to roles or activities that benefit the group, and implementing hyper-accountability to maintain uniformity and standardization" [8]. Students who only concentrate on tests frequently lose their creativity and ingenuity [7]. For the government, standardized tests are an intuitive way to select talent, but in the context of rapid social change and global trends, a student's academic ability does not match his ability to work. The plasticity of talent depends entirely on the quantity of prior knowledge acquired, the number of certificates obtained, and the content of what educational resources are given by the government. The student's responsibility is wrongly perceived as being to fulfill the role assigned by the government.

2.4 The devaluation of qualifications

The state's standards and attitudes toward Gao Kao are central to the development of society. Academic involution in China has been festering in the past few years, accompanied by the devaluation of diplomas. The pressure of social competition has not been dampened by the general increase in educational attainment but has intensified. The anthropologist Alexander Goldenweiser coined "involution" to describe the pattern of change in society and education. When a cultural pattern reaches its final state of persistence, it is gradually confined to its internal complexities and transformations. It is then unable to be transformed into new cultural forms [9]. In his new book *The Meritocracy Trap*, Yale Law School professor Daniel Markowitz comments that people's condemnation of the admissions scandal is entirely justified but does not get to the deeper issues; they only see someone breaking the rules of the game but fail to see that the game itself is a trap. The merit system simply does not deliver on its promise of fair competition and social class mobility and is only a trap under the guise of false promises [10]. Academic involution has, in turn, created more severe employment difficulties for society and individuals. Therefore, the value of these diplomas has gradually lost its usefulness as a measure of individual competence under the ferment of the academic involution crisis.

3. Insidious side-effect of standardized testing

3.1 Previous related work

3.1.1 Creative thinking

Most psychology and education experts agree that creative thinking, defined as the practice of engaging in mental processes related to creative work, improves a variety of personal characteristics, including interpersonal problem-solving abilities, and the promotion of identity development, academic achievement, academic ability, and future career success [11-13]. For the study of creativity, Niu and Sternberg chose 139 undergraduate students, including 76 Yale students (12 of whom were Asian Americans) and 63 Peking University students. Both schools are well regarded for producing intelligent students. Despite the fact that the Chinese students attended top institutions and had strong academic backgrounds, the researchers discovered through the test that their artwork was less imaginative, less visually pleasing, and technically inferior to that of the American students [14]. Niu and Sternberg's research results show that creative thinking is still at a disadvantage among the highly educated Chinese group, which is a considerable obstacle to future career development. Therefore, the lack of creativity will be a limitation and more passive for highly educated people to compete in the future employment field and society.

3.1.2 Graduation and Employment

Creative thinking is an abstract concept that cannot be displayed as clearly on your resume as in test scores. Still, its impact will gradually become apparent as graduates enter the workforce and their job performance. The research of Andrews & al. indicates that "the influence of a test could be rapid or delayed"[15]. According to the i-research-2022 White Paper on Learning and Development of

Chinese University Students, the number of Chinese university graduates from 2007 to 2020 has been climbing. The overall number of Chinese university graduates has reached 9.09 million from 4.79 million and is expected to reach 10.76 million in 2022.

In addition, compared to the I-research-2022 White Paper on Learning and Development of Chinese University Students, I-research-2007-2019 data on the destination of Chinese university students shows a different trend. In 2019 the employment rate was decreasing (58%-51%). By analysis, the number of graduates is inversely proportional to the employment rate. Therefore, the increasing number of graduates and society's demand for high-end talents lead to the current severe employment situation. According to a July 2022 report by the China Institute for Employment Research at the Renmin University nationwide, the number of recruitment ads in the second quarter fell by 19% compared to the same period last year, while the number of job applications rose by 135%.

The New Blue Collar Employment and Living Conditions Research Report (2020) released by DCCI - Data Center of the China Internet shows that 38.3% of couriers, 42.8% of online taxi drivers, and 40.3% of delivery workers earn more than and above the starting salary of the first job for college graduates in 2020. In the global competition for job positions, China's disadvantage in the market economy is becoming equally obvious. The company of Shaun Rein questioned Fortune 500 firms in China. It was shown that most of them experience a 30% annual staff turnover. Eleven percent is regarded as high in the US. According to Rein, most Chinese grads are unprepared for a global corporate environment. According to his forecast, this would cause a decrease in the economy. He claims that international corporations, fed up with Chinese employees, may begin to hire more foreigners or move their operations elsewhere [16]. China is now in a critical period of economic transformation and needs highly skilled personnel who are genuinely "Made In China" to increase the competitiveness of university graduates in the domestic and global job market.

3.2 The importance of creative thinking

An essential purpose of education, as stated in the PISA 2021 (Programme for International Student Assessment) the Creative Thinking Framework is to give future graduates the abilities they will need to succeed in society. For today's youth to flourish, the ability to think creatively is essential [17]. It can enable them utilizing new technology to address brand-new issues and more able to adapt to a world that is fast and continually changing. Therefore, schools are crucial in assisting young people in recognizing, honing, and defining their talents, especially their creative abilities. A significant goal of schools is to instill a sense of belonging to their society and the ability to use their talents to advance it [18].

Further research by Niu and Sternberg showed that under standardized instructional conditions, students produced more creative collages when instructed and required to be creative [14], which is tragic for a person with an independent personality. This outcome of the lacking of creative thinking is strongly linked to China's exam-oriented education system, where being told and required to excel in society is gradually becoming a chain for graduates.

3.3 Responsibilities of Universities and Government

What should schools and governments do to weaken the impact of teaching styles aimed at standardized testing on innovative thinking? First, adjustments need to be made to the purpose and approach to education in schools because standardized tests strongly influence how students learn and think and the way teachers teach, among other things. Emphasis should instead be placed on group learning, solving problems that are meaningful to students, and communicating meaning in context. In order to increase the training of students' critical thinking and breakthrough performance scripts, students should be encouraged to look for alternative answers, act counterintuitively when all other options have failed, approach challenges from many angles, and develop original solutions rather than adopt pre-made ones [19]. At the same time, it is also necessary to take advantage of Chinese collectivism and collaborative participation. Because modern research is increasingly

emphasizing creative thinking as a group activity rather than just an individual talent [20]. Only by engaging in intense discussions with team members about different ideas can new creative sparks be generated. In addition should focus on developing students' ability to learn for themselves in the face of new things continually and to maintain the ability to explore new things at any stage, rather than seeing students as empty, passive vessels carrying inherited ideas. The government should use standardized testing as the one way to monitor and change the means of education, rather than regard it as the only way to select talent. Only then will the country be able to improve the returns of talents in the labor market. Excessive testing and overemphasis on test results can only lead to the demise of workforce quality and put the country at a disadvantage in global competition.

4. Conclusion

China's current talent selection and examination system has become inextricably linked and has become the main way for colleges and universities to provide talent to the country, and is currently the fairest way for people from different walks of life to obtain an education and get the same job opportunities. However, the current model of exam-based education is no longer able to keep up with the national and international demand for talents. Only innovative people with "21st-century" skills can adapt to a rapidly changing world, skills that transcend meritocracy and credentialism. Standardized testing is not the key to the innovation economy of the future. China's education model needs to be internally optimized and adjusted. The government and schools should pay more attention to the adaptability of current and future prospective graduates to the ever-changing society by taking a forward-looking view and fostering creative thinking in students, rather than limiting themselves to making highly educated students vessels of knowledge-good at taking tests.

In the future, the author hopes that standardized testing will no longer be a line that binds students to creative thinking and blocks them from moving from school into society to become the best, but will serve as a scale to measure and refine students' self-competence. Only when problems are identified and the proper adjustments are made promptly to fit China's development path will it be more likely that the country will truly become rich and strong. Only by changing the current examination system can we offer more possibilities for developing creative thinking in students. In particular, the special talents of students will be discovered, and more accurate talents will be cultivated so that they will benefit society and individuals.

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