Journal of Education and Educational Research
ISSN: 2957-9465 | Vol. 16, No. 1, 2025

The Impact of Shadow Education on Middle School Students' College Entrance Examination under the "Matthew Effect"

Jiayi Lei *

International and Applied International College, Guangzhou Huali College, Guangzhou, Guangdong, 511325, China
*** Corresponding author Email:** leijiayi20040109@outlook.com

Abstract: Against the backdrop of uneven distribution of educational resources, shadow education has evolved into a key force shaping the competitive landscape of the college entrance examination. This study, framed by Bourdieu's capital theory, focuses on how cultural capital and economic capital drive high school students' participation in shadow education, and examines its consequences for further education and the risk of the "Matthew effect". Using freshmen from multiple universities as samples, this study collects relevant variables covering cultural capital, economic capital, participation in shadow education, and college entrance examination results through online questionnaires, and conducts matching analysis with existing databases. By systematically modeling the capital-shadow education-further education pathway, this study aims to reveal the reproduction logic of shadow education and provide empirical evidence and policy implications for alleviating educational inequality.

Keywords: Matthew Effect; Shadow Education; Bourdieu's Capital Theory; Middle School Students; College Entrance Examination.

1. Research Background and Significance

1.1. Research Background

Educational equity is the rational allocation of educational resources. In the context of Chinese society, its goal is to bridge the education gap between urban and rural areas, regions, and social classes through the design of systems such as balanced compulsory education and college entrance examination enrollment policies. In March 2022, Xinhua News Agency and Baidu jointly released a report titled "Big Data: Attention and Expectations for the 2022 National People's Congress and Chinese People's Political Consultative Conference", which pointed out that from February 24, 2022 to March 2, 2022, education equity ranked tenth in content related to "education reform". In recent years, due to the increasing influence of family capital, the development of "shadow education" outside the mainstream education system has accelerated. Scholars have found that shadow education has become an important supplement to high school education and an important component of the education system. It has both positive and negative effects on students' development [1]. Therefore, this study aims to explore the impact of shadow education on high school students' college entrance examination, analyze the factors that affect high school students' participation in shadow education, and deeply explore whether shadow education practice strengthens the development of the "Matthew effect", in order to provide theoretical basis for improving education policies.

1.2. Theoretical Significance of Research

In terms of theoretical significance, this study is conducive to revealing the influence of economic capital and cultural capital on the choice of shadow education in Bourdieu's theory, and enriching the relevant content on the impact of shadow education on college entrance examination in previous studies. At the same time, this study helps to explore the relationship between the college entrance examination education system and shadow education, providing theoretical references for the fairness of college entrance examination education and social diversion.

1.3. Significance of Research Practice

In terms of practical significance, this study can effectively determine the degree of influence of family economic and cultural capital on the choice of participating in shadow education and the impact of shadow education on college entrance examination by examining whether different families choose to participate in shadow education and whether high school students participate in shadow education. Therefore, it is possible to better focus on the regulation of regions with differences in the intensity of the "Matthew effect" and build a more fair and just educational resource environment.

2. Literature Review

2.1. Definition of Core Concepts

2.1.1. Matthew Effect

The phenomenon of 'the rich getting richer', also known as the 'Matthew Effect', was proposed by sociologist Merton. This concept originates from a sentence in the Gospel of Matthew in the Bible: 'To whoever has, let him have more; and whoever has nothing, let him take away what he has.' [2]. In this article, the "Matthew Effect" refers to the phenomenon where the results of high school students' college entrance exams in more developed regions are increasingly better by obtaining different shadow education resources.

2.1.2. Shadow Education

Shadow education "originally referred to extracurricular tutoring aimed at exam oriented education, which appeared in Sri Lanka and Malaysia and was paid for by individuals [3] .

Shadow education, also known as "extracurricular tutoring", "tutoring classes" or "tutoring education" in China, is a paid tutoring and tutoring provided by institutions or individuals for profit, in addition to formal school education. Its purpose is to improve the academic performance of students in participating institutions.

2.2. Research on the Influencing Factors of Shadow Education

Shadow education is an educational model in today's society, in addition to family education, school education, and social education. It is also a popular tutoring method in high school education. Many scholars from various countries have found through investigation and research that shadow education is showing a rapid growth trend globally, especially in East Asia. For example, the shadow education market in South Korea, Japan and Taiwan, China is large and has a high participation rate. Scholars believe that this phenomenon is closely related to the educational competition pressure in these regions. Shadow education, as a common phenomenon in the global education system, is influenced by multiple factors in terms of its participation mode and intensity. Existing research explores the complex driving mechanisms behind this phenomenon from multiple dimensions, including economic capital, cultural capital, social capital, institutional environment, technological change, and social psychology.

This article is based on the Bourdieu capital theory framework, combined with the Chinese educational context, to systematically sort out the core influencing factors and their impact paths that affect the development of shadow education.

2.3. Influencing Factors

2.3.1. Economic Capital

From the perspective of economic capital, family economic capital is the core material basis that determines the participation in shadow education, and family economic status is one of the important factors affecting children's participation in shadow education. Families with better economic conditions are more capable of bearing the cost of shadow education and providing their children with richer extracurricular tutoring resources. For example, Lei Wanpeng's research found a significant positive correlation between household income level and high school students' education and tutoring expenses [4]. Xue Haiping's research also shows that middle school students with more family capital have more opportunities for shadow education and invest more in it. The advantage of family capital is transformed into a dual opportunity advantage of school and shadow education for children, leading to social stratification in high school and higher education, ultimately resulting in social stratification of students with different family capital in terms of employment opportunities and outcomes [5] .

2.3.2. Cultural Capital

From the perspective of cultural capital, factors such as parents' education level and cultural literacy have a significant impact on their children's participation in shadow education. Parents with higher levels of education place greater emphasis on their children's education and are more capable of selecting suitable extracurricular tutoring courses for their children, as well as providing guidance and supervision during the learning process. At the same time, the high level of education of parents will to some extent affect the amount of books in the family, and the amount of books in the family is a potential factor that affects the cultural atmosphere and study habits of students' families. Studies by scholars have pointed out that family cultural capital affects parents' expectations and participation in their children's education, thereby influencing the degree and effectiveness of their children's participation in shadow education [6] .

2.3.3. Social Capital

Factors such as school, students' self-learning ability, society, and traditional educational concepts in China can all have an impact on the choice of shadow education. In terms of schools, the quality of teaching greatly affects whether students participate in shadow education. If the quality of teaching in schools is poor and the teaching level of teachers is not enough, it may lead to students having difficulty understanding the knowledge points, and they need to seek help from shadow education to improve their grades. If students themselves lack the ability to understand the knowledge points on campus, they will spend extra time on tutoring with the aim of passing school exams. At the same time, in recent years, the increasing social pressure and the difficulty of employment for ordinary college graduates have prompted college entrance examination graduates to want to enter better universities, which has led to more people choosing to participate in shadow education. And this phenomenon is more pronounced among students in higher education because they are susceptible to the influence of neighborhood relationships. Under the influence of educational competition and anxiety, they are more willing to choose shadow education [7] . In addition to neighborhood relationships, some scholars have pointed out that peer group factors are also a major factor affecting shadow education and can have varying degrees of impact on other aspects[8] .

2.4. Review of Previous Research

From the perspective of student performance, most studies have shown that shadow education has a certain effect on improving student performance. For example, the empirical research of Fang Chenchen and Xue Haiping shows that extracurricular tutoring has a significant beneficial impact on the academic performance of students in compulsory education, especially in the subjects of Chinese and mathematics [9]. Other scholars' research on the impact of extracurricular tutoring in primary schools on middle school academic performance has also shown that participating in tutoring in higher grades of primary school can improve students' starting grades in middle school to a certain extent [10], and has a positive effect. Among different forms of tutoring (tutoring institutions, home tutoring, etc.), tutoring institutions have the highest correlation with academic performance [11].

However, this connection is not inevitable, and this idea is reflected in the research of scholars such as Wu Sa [12]. At the same time, Liu Shanshan also pointed out in her research that when entrance exams are used as a measure of academic performance, extracurricular tutoring has little impact on academic performance among middle school students [13]. Therefore, when parents choose whether to participate in shadow education, they should consider multiple factors such as the student's academic level, personal needs, and family abilities, carefully compare and make a choice. Because conducting subject shadow education during holidays may affect students' enjoyment of learning, although participating in shadow education can effectively improve students' academic performance in the short term, long-term all day

learning will make students want to avoid school education. To avoid situations where students are under excessive academic pressure and unable to focus on completing their studies on campus, leading to a reversal of priorities.

At present, scholars are not only studying the impact of shadow education on student performance in China, but also studying the impact of shadow education in other countries. For example, Leng Dihao proposed that South Korea has formed an education ecology dominated by make-up classes, and Yu Jinshen and Jia Lishuai pointed out in their research on shadow education in Japan that more and more students choose to participate in shadow education in order to enhance their competitiveness in further education [14-15]. It can be seen that shadow education has become the choice of parents in various countries, and is the first choice for students to improve their grades, with significant effects in most shadow education programs.

On the other hand, Meng Qingyan proposed in her research that shadow education in China has its specific living space and rapid development factors. Although shadow education meets students' learning needs to a certain extent, it also brings objective negative social impacts [16] . For example, in terms of educational resource allocation, the development of shadow education has also exacerbated educational diversion to a certain extent, leading to educational inequality. Students with differences in economic and cultural capital in their family capital also have disparities in accessing shadow education resources, which reduces their opportunities to receive shadow education and lowers the quality of shadow education. As a result, the ability levels of students from different social classes have once again been widened, and the situation of "noble children from humble backgrounds" has become increasingly rare, which is also the "Matthew effect" in education.

Meanwhile, in Huang Jiaohong's research, it was found that more investment in "shadow education" in urban and rural areas is influenced by the number of children, according to the resource dilution theory [17]. Families with fewer children are more likely to invest in shadow education. If a family has more children, the proportion of family funds in shadow education will correspondingly increase. Furthermore, scholars have explicitly pointed out that in the context of vigorously promoting balanced compulsory education in China, the gap in the quantity and quality of extracurricular tutoring time for students from different family backgrounds and school types, influenced by family capital, will further widen the gap in their future academic performance, further education, and employment opportunities. It can be seen that extracurricular tutoring has become a new channel for intergenerational transmission of family capital, which also reflects to some extent the inequality of education and society [18].

Therefore, the negative impact of the key school system and the academic track system on education equity and even the overall social inequality in China should be given sufficient attention [19]. In addition, the uneven quality of shadow education institutions may lead to such tutoring only being superficial [20]. The country should appropriately control the development of shadow education and strive to maintain educational equity between different regions and social classes.

The teacher-student relationship plays an important role in shadow education. A harmonious teacher-student relationship helps to improve students' learning efficiency, stimulate their enthusiasm for learning, and promote their comprehensive development. Shadow education also has a certain impact on the teacher-student relationship. Cao Yanju's research pointed out that the prosperous development of shadow education institutions may lead to students relying on shadow education, thereby disrespecting the classroom teaching of teachers on campus and affecting the harmony of teacher-student relationships.

In summary, most scholars at home and abroad have focused on family factors in their research on shadow education. By comparing the differences in family capital among different social classes, they analyze their impact on shadow education choices. In terms of the impact of shadow education on student performance, most scholars have studied the influence of primary and secondary school students participating in shadow education during the compulsory education stage. They believe that when students are too young, conducting shadow education too early may have a counterproductive effect, leading to a decrease in students' interest in learning and inhibiting their personal development. Conducting shadow education in higher grades is to some extent beneficial for improving students' academic performance. However, the current research in our country involves shadow education in high school, which partially affects the impact on college entrance examination admission. The study on whether college entrance examination admission exacerbates the "Matthew effect" is not sufficient.

Based on this, this study focuses on high school students, exploring whether they receive shadow education during their high school years, the improvement of their academic performance, and their ultimate choices for college entrance examination. This study will ultimately conduct a conclusion analysis on the impact of shadow education on college entrance examination and whether it exacerbates the "Matthew effect", improve the research on shadow education for high school students that is relatively scarce in China, and provide theoretical support for society to reasonably control the development of shadow education, balance educational resources between different regions and social classes, reasonably reduce the serious exacerbation of the "Matthew effect", and avoid resource accumulation leading to severe resource imbalance.

3. Research Methods and Result Analysis

3.1. Research Methods

Based on the above-mentioned content, this questionnaire is based on Bourdieu's capital theory and is designed to address three aspects: "economic capital," "cultural capital," and "social capital. This study used a questionnaire survey method, with a total of 400 questionnaires distributed and 373 valid questionnaires collected, resulting in an effective response rate of 93.25%.

3.2. Sample Overview

The survey subjects of this study are college students, with females accounting for 59.79% and males accounting for 40.21%. In the questionnaire survey, the direction of the college entrance examination was investigated. As shown in table1 and 2, the proportion of ordinary undergraduate students was 27.08%, which was the largest proportion. 211 universities account for 24.93%, ranking second. 985 universities account for 16.09%, private undergraduate

programs account for 13.94%, junior colleges account for 10.46%, and repeat programs account for 7.51%.

Table 1. Student Gender Statistics Table

	Select number of people	Proportion
Male	150	40.21%
Female	223	59.79%

Table 2. Career Path for College Entrance Examination

	Select number of people	Proportion
985	60	16.09%
211	93	24.93%
regular undergraduate program	101	27.08%
Private undergraduate program	52	13.94%
Junior college	39	10.46%
Re-reading	28	7.51%

3.3. Result Analysis

3.3.1. Economic Capital

Scholars have pointed out that family economic capital belongs to explicit capital, which can provide material resources for children's life and learning, and transform them into educational opportunities. Family economic capital is a key factor restricting education acquisition[21] . Therefore, this study investigated the household income situation of students. As shown in table 3, students' family economic capital shows a clear concentration trend, with the group with an annual income between 400000 and 600000 accounting for the highest proportion, reaching 36.46%. Families with an annual income above 600000 also account for a considerable proportion, accounting for 25.47%, while those with an annual income between 0 and 400000 account for 23.32%.

Table 3. Annual Household Income

	Select number of people	Proportion
0-40 (Ten Thousand)	87	23.32%
40-60 (Ten Thousand)	136	36.46%
>60 (Ten Thousand)	95	25.47%
Not know	55	14.75%

In addition, a survey was conducted on the proportion of total expenditure on shadow education by student families to their annual income. As the table 4 showed that 26.81% of students reported that the total expenditure on shadow education by their families accounted for 5% -10% of their annual income. The number of students who chose to spend less than 5% and between 20% -30% were similar, accounting for 23.32% and 23.06%, respectively. However, students with cost ratios between 20% -30% and 30% -50% are slightly lower, with only 16.09% and 10.72% of students choosing these two options. As scholars Xu Ji and Zong Qingqing have shown in their research, household income has a significant impact on children's higher education opportunities, namely their college enrollment rate and graduation rate. Moreover, rural families are more significantly affected by household income compared to urban families [22].

This phenomenon is also reflected in Gao Xuelian's research. The scholar pointed out that "shadow education" maintains and strengthens the phenomenon of children obtaining high-quality resources in cities, indirectly solidifying the fragmented state of urban and rural social life in China [23]. This is consistent with the meaning of the "Matthew effect" mentioned in this article, which indicates that families with abundant economic capital will allow children to have more access to shadow education, leading to the continuation of their parents' social status, continuous accumulation of capital, and becoming "richer and better".

Table 4. Proportion of Total Expenditure on Shadow Education (Tutoring Classes) by Household Annual Income

	Select number of people	Proportion
Less than 5%	87	23.32%
5–10%	100	26.81%
10–20%	86	23.06%
20–30%	60	16.09%
30–50%	40	10.72%

3.3.2. Cultural Capital

As shown in table 5, in terms of cultural capital in this questionnaire, parents' education levels show a characteristic of "high in the middle and low at both ends", with the highest proportion being college and junior high school education, with college accounting for 36.19% and junior high school accounting for 35.66%. The group of highly educated individuals with a master's degree or above also holds a significant share, accounting for 33.78%.

Table 5. Parents' Highest Education Level

	Select number of people	Proportion
Primary school and below	124	33.24%
junior high school	133	35.66%
High school/vocational school	124	33.24%
Junior college	135	36.19%
Regular college course	77	20.64%
Master degree above	126	33.78%

In table 6, as an important indicator of objective cultural capital, more than half of households have a book collection of less than 200 books, reflecting significant differences in the cultural capital stock of sample households. According to the survey, the majority of students believe that the amount of books in their family will affect their academic performance.

Table 6. Household Book Collection

	Select number of people	Proportion
Less than 50 books	87	23.32%
50-200 books	117	31.37%
200-500 books	84	22.52%
500-1000 books	41	10.99%
More than 1000 books	44	11.8%

The more books a family has outside of textbooks and magazines, the higher the proportion of students participating in shadow education. In his results, it was shown that students with more family cultural capital had a higher proportion of participating in shadow education [24].

3.3.3. The Impact of Shadow Education on College Entrance Examination

This study focuses on the impact of shadow education on college entrance examination enrollment, and surveyed 373 students to determine whether they have participated in shadow education. As shown in table 7 and 8, 92.49% of students chose yes, while only 7.51% chose no. The majority of these students who chose no were due to time conflicts, which accounted for 32.14%.

Table 7. Have you participated in shadow education

	Select number of people	Proportion
Yes	345	92.49%
No	28	7.51%

Table 8. Reasons for Not Participating in Shadow Education

	Select number of people	Proportion
Economic burden	5	17.86%
Times conflict	9	32.14%
Distrust effect	5	17.86%
School teaching is sufficient	4	14.29%
Parents oppose	2	7.14%
Other	3	10.71%

In table 9, more than half of the students who have attended tutoring classes believe that their on campus grades have improved after attending tutoring, but over 20% of students also believe that attending tutoring classes will not improve their on campus grades. This indicates that most people recognize the effectiveness of shadow education in improving their grades, allowing students to achieve better results in the college entrance examination.

Table 9. After attending supplementary classes, my academic performance on campus has improved

	Select number of people	Proportion
Strongly disagree	37	10.72%
Disagree	40	11.59%
Average	70	20.29%
Agree	100	28.99%
Strongly agree	98	28.41%

At the same time, in table 10, 28.12% of students and 37.54% of students agree and strongly agree that tutoring classes can help them face the college entrance examination more confidently, but there are also 6.96% and 15.65% of students who strongly disagree and disagree with this idea. The selection of this section is similar to the distribution of the proportion of choices regarding whether it can improve grades mentioned above.

Table 10. Tutoring classes help me face the college entrance examination with more confidence

	Select number of people	Proportion
Strongly disagree	24	6.96%
Disagree	54	15.65%
Average	75	21.74%
Agree	97	28.12%
Strongly agree	95	27.54%

In table 11, more than 50% of students who participate in tutoring agree that the efficiency of shadow education is higher than that of on campus classroom learning. However, about 20% of students still disagree that shadow education is more efficient than in school classroom learning.

Table 11. I believe that the efficiency of tutoring is higher than that of classroom learning on campus

	Select number of people	Proportion
Strongly disagree	27	7.83%
Disagree	48	13.91%
Average	81	23.48%
Agree	87	25.22%
Strongly agree	102	29.57%

Most students participate in shadow education to supplement their math and English skills, as different subjects have different learning characteristics and the effects of participating in shadow education may vary. Scholars have found that participating in math and English tutoring can significantly improve students' academic performance and non cognitive abilities, while participating in Chinese tutoring has no significant impact on academic performance, only improving students' interpersonal communication skills. Educational tutoring exacerbates academic inequality caused by different family backgrounds, and the impact on students with different learning foundations is heterogeneous [25]. This viewpoint is also reflected in table 12, and according to the data, it can be seen that students are more inclined to choose science subjects for tutoring.

Table 12. Participating Subjects

	Select number of people	Proportion
Chinese	125	36.23%
mathematics	185	53.62%
English	193	55.94%
physics	157	45.51%
chemistry	113	32.75%
biology	36	10.43%
geography	25	7.25%
politics	25	7.25%
Other	1	0.29%

From table 13 regarding the time spent participating in shadow education, it is mostly concentrated in 2-5 hours, with a similar proportion of less than 2 hours and 5-10 hours. Table 14 shows that most students choose offline one-on-one, online one to many, and offline one-on-one forms of shadow education. Among them, online one to many has the highest number of selections, accounting for 60.58%. Table 15 shows when choosing shadow education, students pay more attention to four aspects: price, distance from home/school, reputation of teachers, and recommendations from classmates.

Table 13. Average Weekly Duration

	Select number of people	Proportion
Less than 2 hours	92	26.67%
2-5 hours	120	34.78%
5-10 hours	89	25.8%
More than 10 hours	44	12.75%

Table 14. Main Forms

	Select number of people	Proportion
Offline one to many	128	37.1%
Offline one-on-one	198	57.39%
Online one to many	209	60.58%
Online one-on-one	170	49.28%
Home tutoring	90	26.09%

Table 15. Primary considerations for choosing shadow education

	Select number of people	Proportion
Teacher reputation	161	46.67%
Price	210	60.87%
Distance from home/school	192	55.65%
Recommended by classmates	154	44.64%
Commitment to further education	95	27.54%
Brand	38	11.01%
Other	1	0.29%

4. Conclusion

4.1. Summary

This study is based on the Bourdieu capital theory framework and empirically analyzes the relationship between family economic capital, cultural capital, shadow education participation, and college entrance examination results through retrospective surveys of 373 college freshmen. The study focuses on exploring the dual role of shadow education in shaping educational equity and its potential "Matthew effect".

Firstly, family capital is a key prerequisite factor affecting participation in shadow education. Economic capital may directly determine the feasibility and investment level of participation. In this study, 61.93% of households had an annual income of over 400000 yuan, and 10.72% of households were willing to spend 30% to 50% of their annual income on shadow education, reflecting their clear intention to transform economic capital into an educational competitive advantage. Cultural capital subtly influences participation in decision-making through parental education, family book collection, and educational beliefs. Students whose parents have a college degree or above and have a large family book collection are more inclined to participate in shadow education, demonstrating the "implicit" role of cultural capital in identifying, selecting, and utilizing shadow education resources.

Secondly, shadow education is widely perceived as effective at the individual level. More than half of the participants believe that it has improved their on campus grades, accounting for 57.4%, while 55.66% of them believe that it has enhanced their confidence in the college entrance examination and that the efficiency of tutoring is higher than that of on campus classrooms, accounting for 54.79%. Participants are highly focused on tutoring core subjects such as mathematics and English in the college entrance examination, with 53.62% and 55.94% respectively, reflecting a strong emphasis on exam taking and instrumental rationality.

However, at the macro level, shadow education exhibits a significant "Matthew effect". The advantage of family capital is effectively transformed into the advantage of further education through the intermediary mechanism of shadow education. In this study, 92.49% of students who were admitted to 985 and 211 universities had experience in shadow education participation, and their families often had advantages in economic and cultural capital. This means that shadow education is not an equal "catch-up" mechanism, but more like an "excellence training" accelerator in practice, systematically reproducing existing social inequalities. It exacerbates the academic gap and unequal opportunities for students from different capital backgrounds, making it even more difficult for "poor families to produce noble children".

4.2. Suggestions

Based on the above conclusions, this study proposes the following suggestions: firstly, strengthen the role of schools as the main battlefield of education, deepen classroom teaching reform, promote free or low-cost quality improvement projects on campus (such as after-school tutoring and strong foundation programs), and maximize the satisfaction of students' diverse learning needs, reducing the "essential need" of families for extracurricular tutoring. Secondly, implementing precise education compensation policies can compensate for the lack of educational opportunities caused by insufficient family capital for students from low-income and low cultural capital families by providing "education vouchers" or public welfare tutoring opportunities purchased by the government. Thirdly, strengthen the regulation and guidance of the shadow education market, clarify the fee standards, teacher admission and quality evaluation system, curb excessive marketing and anxiety selling, and guide it to transform from "exam oriented training" to beneficial supplements such as quality education and interest cultivation. Fourth, steadily promote the comprehensive reform of the college entrance examination, build a more diverse comprehensive evaluation system, reduce the absolute weight of exam scores in admission, alleviate the pressure of exam preparation from the root, and "cool down" shadow education.

The limitation of this study is the use of retrospective surveys, which may result in recall bias. The samples are all from college students and do not include the group of students who failed the college entrance examination, which may overestimate the positive effects of shadow education. Future research could adopt a tracking design and include a broader student population to further validate the long-term causal effects of shadow education on academic outcomes.

References

[1] Zhao, R. (2022). Shadow education: A study on the learning and life patterns of high school students in off-campus training institutions. Master Thesis of Northeast Normal University, 2.

[2] Wu, S. Y., & Li, Z. (2025). Decoding the "Matthew Effect" in second language vocabulary acquisition: Constituent elements of the "wealthier, richer" phenomenon. Foreign Language Guide, 48(2), 76–85, 160.

[3] Zhong, Z. S., Bao, W., & Feng, Q. Q. (2015). Shadow education in Japan: Focusing on extracurricular tutoring expenditure in high school. Peking University Education Review, 13(3), 17–28.

[4] Lei, W. P. (2005). Expenditure on educational tutoring for high school students: Influencing factors and policy implications. Education and Economics, (1), 39–42.

[5] Xue, H. P., & Li, J. (2016). Family capital, shadow education, and social reproduction. Educational Economics Review, 1(4), 60–81.

[6] Li, J. L., & Hu, Y. M. (2017). Who benefits from shadow education? A discussion on the impact of shadow education on equalization of educational outcomes. Education and Economics, (2), 51–61.

[7] Xue, H. P., Yang, L. L., & Xu, D. C. (2023). Children from other families: A study on the impact of neighborhood effect on students' participation in shadow education: An analysis based on panel data from China Family Tracking Survey. Education and Economics, 39(6), 21–30.

[8] Xi, W., & Li, Y. (2020). Adolescent shadow education participation: School groups and ascribed differences—A multilevel analysis based on CEPS data. Journal of East China Normal University (Educational Science Edition), 38(11), 56–68.

[9] Fang, C. C., & Xue, H. P. (2014). An empirical study on the impact of extracurricular tutoring on the academic performance of students in compulsory education. Shanghai Education Research, (12), 5–9.

[10] Zhang, Y., Chen, D., & Liu, J. J. (2015). The impact of extracurricular tutoring in primary schools on academic performance in junior high schools: An empirical study based on nine-year tracking data from a junior high school in Beijing. Education Development Research, 35(Z2), 18–25.

[11] Hao, Y. D. (2016). Research on the relationship between extracurricular tutoring and junior high school students' mathematics academic performance. Shanghai Education Research, (1), 50–52, 56.

[12] Wu, S., & Tang, L. Z. (2008). The impact of tutoring on middle school students' English learning. Foreign Language Teaching in Primary and Secondary Schools (Middle School Edition), 31(6), 1–5.

[13] Liu, S. S., & Yang, X. D. (2015). Meta-analysis of the impact of extracurricular tutoring on students' academic performance. Research on Educational Development, 35(22), 55–64.

[14] Leng, D. H. (2024). How does Korean tutoring affect math grades? An analysis of double linear model based on TIMSS 2019 data. Fudan Education Forum, 22(3), 68–81.

[15] Yu, J. S., & Jia, L. S. (2020). Governance and enlightenment of Japan's "shadow education". Contemporary Education Science, (4), 65–69.

[16] Meng, Q. Y. (2020). The social impact and reform path of shadow education in China. Teaching and Management, (15), 25–28.

[17] Huang, J. H. (2020). A comparative study on the differences in shadow education between urban and rural primary school grades [Master's thesis, Jilin Normal University].

[18] Song, H. S., & Xue, H. P. (2017). Extracurricular tutoring time, student performance, and social reproduction. Contemporary Education Forum, (5), 51–62.

[19] Wu, Y. X. (2013). The educational streamlining system and educational stratification in China (1978–2008). Sociological Research, 28(4), 179–202, 245–246.

[20] Cao, Y. J., & Yan, G. J. (2017). The problems, causes, and countermeasures of shadow education. Teaching and Management, (33), 26–28.

[21] Jiang, S., & Long, J. (2022). The impact of family culture and economic capital on education acquisition. Education Academic Monthly, (1), 51–57.

[22] Ji, X., & Zong, Q. Q. (2016). Household income and children's higher education opportunities in China during the transition period: Based on the exogenous changes in household income structure. World Economic Journal, (6), 24–41.

[23] Gao, X. L. (2017). Differentiated childhood: The extracurricular world of urban children and rural migrant children. Beijing Social Sciences, (9), 24–33.

[24] Xue, H. P. (2017). Family capital and education acquisition: A perspective of shadow education. Educational Science Research, (2), 31–41, 48.

[25] Li, B. (2018). Is educational tutoring really effective? From the perspective of academic performance and non-cognitive development. Beijing Social Sciences, (6), 38–47.