



# The Research on the Impact of Extracurricular Tutoring on Academic Self-efficacy of Urban Pupils

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**Abstract.** The enactment of the “Double Reduction” policy in China has been followed by significant adjustments in after-school institutions. Considering about the fact that academic self-efficacy has a positive influence on academic performance as extracurricular tutoring does, this paper uses a questionnaire survey to explore the impact of extracurricular tutoring on academic self-efficacy of urban pupils after the “Double reduction”. Using the duration of extracurricular tutoring and urban primary school students’ attitudes towards extracurricular tutoring as the independent variables and academic self-efficacy as the dependent variable, ANOVA, correlation and regression analyses were applied on the basis of 209 valid data. It was concluded that prolonged extracurricular tutoring had a negative effect on academic self-efficacy and personalised extracurricular tutoring had a positive effect on academic self-efficacy. The new situation of extracurricular tutoring in the wake of the “Double Reduction” policy offers corresponding advice to the government, schools and families, emphasising the need to improve regulations, the quality of teaching in schools and the importance of families paying attention to the psychological needs of their children.

**Keywords:** Extracurricular Tutoring · Academic Self-Efficacy · Urban Pupils · “Double Reduction” policy

## 1 Introduction

As a newly emerging thing in the development of modern education, after-school institution is an essential component of the education market. After releasing the “Double Reduction” policy in China, after-school institutions made adjustments based on it, such as the double reduction of K12 education and the prevalence of online teaching and after-class tutorial. Faced with this policy, different families hold different attitudes.

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Some think cram session is a supplement of school education, which helps students lay a solid knowledge foundation. Some suggest that after-school institution should focus on interest-oriented class, promoting students' individuality development. Some argue that after-school institution undermines the fairness of education and increases parents' economic burden and psychological pressure.

First, the authors will try to localize Pierre Bourdieu's cultural capital theory combined with the "Double Reduction" policy, analysing the time investment in extracurricular tutoring. Then, highlight the "people-oriented" education concept and select urban primary school students as the research object and use self-efficacy to measure the effect of extracurricular tutoring. Lastly give a critical assessment based on the pros and cons, revealing that after-school institution is reasonable to exist. The authors hope this research could stimulate the public's thinking about the future development of extracurricular tutoring.

### 1.1 Extracurricular Tutoring

Extracurricular tutoring, also known as shadow education, is related to school education and provides courses about the contents and objects of school education. Extracurricular tutoring institutions continue to expand, diversify and become an essential factor in the education market as the product of economy, education and society. Zhu explained that functions of institutions include subject knowledge training, potential development training and hobby training [1]. Similar to, other scholars found that after-school institutions in China now have wider scopes of business. With the development of China economy, more and more parents can afford the fee for extracurricular tutoring, but some of them consider the rapid development of after-school institutions as the cause of the increasing peer pressure of students. The social reason of this phenomenon refers to the deeply rooted convention in China that academic performance is the only standard of students' evaluation. It leads a consistent demand for high-quality education, which is gradually transformed into a demand for extracurricular tutoring as a platform of resources that is largely egalitarian is provided [2]. In terms of education, the orientation of the extracurricular tutoring is shifting from compensating academically poor students to providing top-notch assistance to excellent ones, which becomes increasingly institutionalized and standardized [3]. Extracurricular training course provides a learning platform, which serves a beneficial function in fostering potential, coping with the selective learning needs of students and developing creative abilities, various interests and comprehensive quality [4]. The development of after-school institutions satisfies students' diversified needs and attracts them to engage in.

Several studies were conducted in China to investigate the relationship between extracurricular tutoring time investment and academic performance. The conclusions in this field are inconsistent. A positive effect on the academic performances of extracurricular tutoring time has been claimed. Liu discovered that students' mathematics achievement, reasoning and deductive abilities will be considerably influenced by tutoring, while this benefit diminishes with increasing tutoring duration [8]. Fang et al. found a statistically significant effect of tutoring time on primary school students' achievement. Moreover, it has been proved that a positive link between extracurricular tutoring time

and academic attainment [5], and a negative link between tutoring duration and mathematical achievement [6]. Li et al. pointed a non-linear association between tutoring time and academic achievement, with an initial increase and later a decrease. Specifically, compared to those who do not receive any extracurricular tutoring, students receiving tutoring less than 6 h per week demonstrate a significant increase in academic achievement. While students having 6–8 h of tutoring per week illustrate a slight drop in academic performance, those who take more than 8 h of tutoring show a significant fall [7]. Besides, only when tutoring time exceeds a particular threshold level can a qualitative gain in academic achievement occur, which means too little tutoring time cannot display its function [8]. The disparity in extracurricular tutoring plays an essential role in the uncorrelation between the two variables.

## 1.2 Academic Self-efficacy

Self-efficacy is the belief that an individual is skilled enough to finish the given assignment, based on beliefs about talents and behaviors leading to achievement. Academic self-efficacy is the trust in learning ability and behaviors for which a student believes himself or herself can gain good grades. Self-efficacy plays an important role in academic performance. Good students tend to have better self-efficacy and more utilization of problem-solving coping strategies [9].

Scholars found that parents' influence and self-efficacy can significantly influence students' academic performance if parents' involvement is high [10]. Considering that extracurricular tutoring is part of parents' involvement, there might be some relations between them [11]. Similarly, it found a notable positive link between self-efficacy and future prospects with academic performance. Students' self-efficacy affects students' academic performance by impacting their learning-related emotions and metacognitive learning strategies [12]. With low self-efficacy, students are more likely to lose confidence in finishing their tasks, and they try to avoid the tasks, or give them up soon. Students with high self-efficacy attribute their failure to their behaviors and abilities, so they tend to rely on themselves to come up with a solution to the problem when faced with complex issues.

The majority of recent studies focus on the relationship between extracurricular tutoring and academic performance and how self-efficacy affects academic accomplishment, which emphasized economic investment instead of time investment. There is no research investigating the relationship between extracurricular tutoring and self-efficacy. Simultaneously, there were fewer researchers investigating how discrepancies in time investment in extracurricular tutoring amongst students from diverse families result in different levels of self-efficacy. After the release of the Double Reduction Policy, the form of after-school institutions has changed dramatically, influencing the self-efficacy of students to some extent. To address this gap, this study undertakes pertinent research on the relationship between extracurricular tutoring and students' self-efficacy by giving questionnaires to primary school students in several cities in China, which is divided into three parts: personal information, extracurricular tutoring investigation and academic self-efficacy. In the aspect of personal information, it takes interviewees' grades and cities into consideration. More details of questionnaires will be shown in the discussion about tools.

## 2 Method

### 2.1 Objects and Variable Description

The survey of this study covers a purposive sample of urban pupils. Given the fact that students' realization about the questionnaires, the investigation examined a total of 208 pupils from third-year to sixth-year in Guangdong, Jiangsu, Shanxi, Hubei and Shanghai. There are 41 third-graders (19.71%), 82 fourth-graders (39.42%), 36 fifth-graders (17.31%) and 49 sixth-graders (23.56%).

Table 1 lists the variables used in this survey. Extracurricular tutoring includes subject tuition class and interest class. Subject tuition class aims at improving students' grades of a certain subject, such as Chinese and mathematics, and interest class provides students a chance to explore and cultivate an interest, like playing the piano.

### 2.2 Tools

#### 2.2.1 Extracurricular Tutoring Investigation

The part was designed to inquiry students' actuality of extracurricular tutoring they have every week. It is divided into subject tuition class and interest class, and there are 5 questions for each kind of tuition. This part aims at investigating weekly time investment in extracurricular tutoring and students' attitude to extracurricular tutoring. The latter uses 5-point Lickert scale (from 1 Totally Disagree to 5 Totally Agree) to evaluate satisfaction, and a higher score means the student is more satisfied about extracurricular tutoring.

#### 2.2.2 Academic Self-efficacy Scale

The survey was adapted from Song and Liang's scale to assess academic self-efficacy. There are 12 questions in it, involving two aspects of academic self-efficacy, academic ability and academic behavior. 5-point Lickert scale was applied to measure students' level of academic self-efficacy (from 1 Totally Disagree to 5 Totally Agree). The higher scores the interviewee gets, the greater academic self-efficacy he or she has.

**Table 1.** Variable Description

Variable Type	Variable (M ± SD)
Dependent Variable	Academic competence self-efficacy
	Academic behavioral self-efficacy
Independent Variable	Grader
	Time spent on subject tuition classes (per week)
	Time spent on interest classes (per week)
	Attitude toward subject tuition classes
	Attitude toward interest classes

**Table 2.** Demographic Variables of the Survey Respondents

Demographic Variables		Number of People (person)	Percentage (%)
Grade	Third Grade	41	19.7
	Fourth Grade	82	39.4
	Fifth Grade	36	17.3
	Sixth Grade	49	23.6

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### 3 Data Analysis

#### 3.1 Correlation of Study Variables

As can be seen from Table 3, there were significant differences in academic self-efficacy by grade level, as evidenced by the fact that academic behavioural self-efficacy was higher in Grade 4 than in Grades 3 and 5, and in Grade 6 than in Grades 3 and 5. However, the differences in academic competence self-efficacy were not significant across grades, indicating that students' academic competence self-efficacy was consistent across grades at the primary level. As can be seen from Table 4, academic self-efficacy differed significantly in terms of the length of time spent in subject tutorials per week, as evidenced by the fact that students who did not attend, those who attended for less than one hour, and those who attended for 1–2 (inclusive) hours had higher self-efficacy in academic ability than those who attended for more than 5 h. In terms of academic behavioural self-efficacy, the effect of length of attendance in subject tutorials was not significant. This suggests that, to some extent, attending subject remedial classes for too long tends to have a negative impact on students' academic self-efficacy. As shown in Table 5, according to the questionnaire statistics, the "p" values were too large and the differences in the data were not significant. This shows that there is no significant association between the length of time primary school students spend in hobby classes each week and their academic self-efficacy. The length of time primary school students spending in interest classes each week is influenced by a combination of subjective and objective factors, their performance is uneven and does not reflect the role of academic self-efficacy.

#### 3.2 Regression and Correlation Analysis of Variables

At the same time, correlation and regression analyses were used to analyze the relationship between urban elementary school students' attitudes toward different out-of-school

**Table 3.** Differences in Grades of Academic Self-Efficacy (M ± SD)

Grade	Academic Competence Self-Efficacy	Academic Behavioural Self-Efficacy
Third Grade (41) ①	3.10 ± 0.99	3.08 ± 0.97
Fourth Grade (82) ②	3.44 ± 0.89	3.59 ± 0.81
Fifth Grade (36) ③	3.00 ± 1.11	3.05 ± 0.92
Sixth Grade (49) ④	3.28 ± 0.89	3.48 ± 0.78
<i>F</i>	2.268	5.294
<i>p</i>	.082	.002
<i>LSD</i>		② > ① ③ ④ > ① ③

**Table 4.** The difference of Academic Self-Efficacy in the Weekly Time of Participating in Subject Remedial Classes (M ± SD)

Time to Attend Subject Tuition Classes per Week	Academic Competence Self-Efficacy	Academic Behavioural Self-Efficacy
Not Participating (89) ①	3.47 ± 0.98	3.49 ± 0.65
Within 1 h (21) ②	3.27 ± 0.70	3.25 ± 0.71
1–2 h Including 2 h (42) ③	3.18 ± 0.72	3.39 ± 0.71
2–5 h Including 5 h (40) ④	3.13 ± 1.03	3.35 ± 0.85
More than 5 h (16) ⑤	2.58 ± 1.18	2.84 ± 1.05
<i>F</i>	3.473	2.015
<i>p</i>	.009	.094
<i>LSD</i>	① ② ③ > ⑤	

training and academic self-efficacy. Table 6 shows that there is a significant negative relationship between academic competence self-efficacy and the length of time spent in subject tutorials. There was a significant negative relationship between academic behavior self-efficacy and the length of time spent in subject remediation classes. Table 7 shows that there was a significant negative predictive effect between academic competence self-efficacy and length of time spent in disciplinary remedial classes, with length of time spent in disciplinary remedial classes predicting 5% of the variance in academic competence self-efficacy. There was a significant negative predictive effect between academic behavior self-efficacy and length of time spent in disciplinary tutorials, with length of time spent in disciplinary tutorials predicting 1.6% of the variance in academic behavior self-efficacy.

As shown in Table 8, academic self-efficacy was divided into academic competence self-efficacy and academic behavior self-efficacy, and attitudes toward off-campus training were divided into attitudes toward subject tutorials and attitudes toward hobby

**Table 5.** Differences in Academic Behavioural Self-Efficacy in Weekly Participation in Interest Classes (M ± SD)

Weekly Participation in Interest Classes	Academic Competence Self-Efficacy	Academic Behavioural Self-Efficacy
Not Participating (54) ①	3.08 ± 1.09	3.19 ± 1.06
Within 1 h (43) ②	3.25 ± 0.82	3.40 ± 0.66
1–2 h Including 2 h (73) ③	3.33 ± 0.89	3.47 ± 0.76
2–5 h Including 5 h (33) ④	3.36 ± 0.97	3.46 ± 0.97
More than 5 h (5) ⑤	3.43 ± 1.55	3.10 ± 1.47
<i>F</i>	0.713	1.008
<i>p</i>	.584	.405
<i>LSD</i>		

**Table 6.** Correlation Analysis between Academic Self-Efficacy and Off-Campus Training Time

	Academic Competence Self-Efficacy	Academic Behavioural Self-Efficacy	Duration of Subject Tuition Classes	Duration of Interest Class
Academic Competence Self-Efficacy	1			
Academic Behavioural Self-Efficacy	0.830**	1		
Duration of Subject Tuition Classes	−0.234**	−0.146*	1	
Duration of Interest class	0.111	0.093	0.019	1

Note: \*  $p < 0.05$  \*\*  $p < 0.01$  \*\*\*  $p < 0.001$ , the same below.

classes. There was a significant negative relationship between academic ability self-efficacy and attitudes toward subject tutorial classes and attitudes toward hobby classes. There was a significant positive relationship between academic behavior self-efficacy and attitudes toward subject tutorials and hobby classes. Table 9 shows that there was a significant negative predictive effect between academic competence self-efficacy and attitudes toward subject tutorials, with attitudes toward subject tutorials predicting 7.4% of the difference in academic competence self-efficacy. There was a significant negative predictive effect between academic competence self-efficacy and attitudes toward interest classes, with attitudes toward interest classes predicting 2.2% of the variance in academic competence self-efficacy. There was a significant negative predictive effect

**Table 7.** Regression Analysis of Academic Self-Efficacy and Off-Campus Training Time

Dependent Variable	Independent Variable	R	R <sup>2</sup>	Adjust R <sup>2</sup>	F	Beta	t
Academic Competence Self-Efficacy	Duration of Subject Tuition Classes	-0.234	0.055	0.050	11.890**	-0.234	-3.448**
	Duration of Interest Class	0.111	0.012	0.008	2.577	0.111	1.605
Academic Behavioural Self-Efficacy	Duration of Subject Tuition Classes	-0.146	0.021	0.016	4.462*	-0.146	-2.112*
	Duration of Interest Class	0.093	0.009	0.004	1.781	0.093	1.334

**Table 8.** Correlation Analysis of Academic Self-Efficacy and Attitude Towards Off-Campus Training

	Academic Competence Self-Efficacy	Academic Behavioural Self-Efficacy	Attitudes towards Subject Tuition Classes	Attitude towards Interest Classes
Academic Competence Self-Efficacy	1			
Academic Behavioural Self-Efficacy	0.830**	1		
Attitudes towards Subject Tuition Classes	-0.280**	-0.209**	1	
Attitude towards Interest Classes	-0.163*	-0.154*	0.328**	1

between academic behavior self-efficacy and attitudes toward subject tutorials, with attitudes toward subject tutorials predicting 3.9% of the variance in academic behavior self-efficacy. There was a significant negative predictive effect between academic behavior self-efficacy and attitudes toward interest classes, with attitudes toward interest classes predicting 1.9% of the variance in academic behavior self-efficacy.



**Table 9.** Regression Analysis of Academic Self-Efficacy and Attitude Towards Off-Campus Training

Dependent Variable	Independent Variable	R	R <sup>2</sup>	Adjust R <sup>2</sup>	F	Beta	t
Academic Competence Self-Efficacy	Attitudes Towards Subject Tuition Classes	-0.280	0.079	0.074	17.565***	-0.280	-4.191***
	Attitude Towards Interest Classes	-0.163	0.027	0.022	5.613*	-0.163	-2.369*
Academic Behavioural Self-Efficacy	Attitudes Towards Subject Tuition Classes	-0.209	0.043	0.039	9.363**	-0.209	-3.060**
	Attitude Towards Interest Classes	-0.154	0.024	0.019	5.001*	-0.154	-2.236*

## 4 Discussion

### 4.1 Reflection

Firstly, the double reduction policy has not been effectively implemented. According to the questionnaire data, subject-based tuition courses for urban primary school students have not been completely banned. To a certain extent, the opposite is even true, but it has instead fuelled the culture of subject tuition. With the rise of out-of-school training in the form of online courses and after-school care, the burden of learning on urban primary school students has only increased, thanks to the low cost and flexibility of time and space.

Secondly, in this vicious circle, prolonged out-of-school training only reduces students' sense of self-efficacy. Not only do students become burned out and resistant to studying for too long. They may also psychologically suggest that they are not capable of learning and question whether they are less receptive than the average person. This lack of self-efficacy has a direct impact on students' academic life. Finally, students' attitudes towards interest classes also indirectly reflect students' self-efficacy for learning. The data show that the more positive a student's attitude towards interest classes is, the higher his or her learning self-efficacy is. This is reflected in the fact that they generally have a high level of self-efficacy in their own learning and understanding abilities, and they are good at exploring the unknown and challenging difficulties. This also reflects the

need for personalised education. Personalised education not only gives students the most sensible and scientific guidance, but also boosts their confidence and interest in learning, creating a love of learning rather than an aversion to avoiding it. In summary, the questionnaires and data analysed suggest that moderate scientific out-of-school training has a positive impact on students' self-efficacy in learning. However, the proliferation of subject-specific training and the blind adherence to the tutorial culture has had a negative impact on students' learning self-efficacy, which is an issue we need to address now.

## 4.2 Suggestion

### 4.2.1 Government Should Pay Attention to Education Regulations

After the “Double Reduction” policy, there are plenty of changes in the education system, especially in the extracurricular tutoring market [13]. In this period, some institutions have tried to provide brand-new tuition, like tutorial software and recorded broadcasts, to escape from the regulation of extracurricular tutoring.

Given that institutions take advantage of a legitimate, two solutions are put forward. First, it is vital to improve the education system. For instance, keep an eye on extracurricular tutoring institutions, making sure that their service is non-profit and not occupy vacations and weekends. Second, new kinds of extracurricular tutoring after the policy released should be regulated and monitored.

### 4.2.2 Schools Should Improve Teaching

The policy intends to stress the importance of school education, rebuilding a better educational organism. On the other hand, it has cut down the extracurricular tutoring market, so responsibilities of subject tuition, which used to be carried by extracurricular tuition, now come to schools. Schools' education recourse become more and more important, which decides the most significant part of students' academic. That is why school needs to improve teaching quality, strengthen teaching staff and keep a tight grip on family.

### 4.2.3 Families Should Care About Kids' Needs

According to our survey, more than 40% students dislike subject tuition, but only 18% feel terrible about interest class. It is obvious that family would better take children's interests into consideration, not turn extracurricular tuition into albatross.

In the meanwhile, nearly 90% of families declare that they won't give up subject tuition in spite of “Double Reduction”, and academic pressure still remains.<sup>2</sup> It means family should always prepare to deal with kids' mental issues, providing psychological care for children when it is needed.

## 5 Conclusion

Our research also has several limitations. First, the urban coverage is not broad enough, with only seven cities. Also, the authors did not classify cities according to their geographical location or economic level. Coastal cities have higher economic status, better

educational resources and faster reform processes than inland cities. The differences between each city may affect the results.

It's not reliable to generalize our results to other students as China is a large country. To increase the universality, we should collect data from more provinces. Second, the Double Reduction policy has only been in effect for a short time, so the duration and impact of this policy are not that clear yet. The relationship between time investment in off-campus tutoring institutions and academic competence self-efficacy in the context of the Double Reduction Policy may change with the further implementation of the policy. Third, our findings may be influenced by differences in the quality of off-campus tutoring institutions. Factors that influence the quality of institutions include teacher quality, patience and responsibility. Fourth, considering the researchers only withdraw 208 copies of effective questionnaire, the sample of our research is not large enough. Also, the research methods of this paper are relatively single, so more research methods can be used to help get the conclusion.

Researchers came to the conclusion that enrolling in extracurricular education for the advised amounts of hours increases academic self-efficacy after examining the relationship between off-campus tutoring institutions and academic self-efficacy. Future research in this field needs to focus on a mixed-methods study. It's suggested to use high-quality qualitative interviews and quantitative analysis to research in this topic in order to better understand the logic behind the impact of off-campus tutoring institutions on academic competence and self-efficacy.

Under the context of the Double Reduction policy, extracurricular tutoring classes are developing in a diversified direction, which has multi-level effects on students' self-efficacy. This is a topic worthy of further study and investigation. Lastly, reverse causality might occur between academic self-efficacy and Extracurricular Tutoring. Students' self-efficacy may also affect their time investment in extracurricular tutoring classes.

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