The Influence of Parental Education on Children's Participation in Extracurricular Classes

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Abstract. Integrating the influence of parents' education on their children's education, this paper delves into the status of the influence of parents' education on their children's attendance in extracurricular classes. The core idea of this dissertation is to verify that parental education has a significant effect on children's education. In previous studies, the correlation between parent's education level and children's participation in extracurricular classes has been expressed through data analysis such as CGSS. Therefore, concerning the data from previous studies and CEPS data, this paper incorporates descriptive statistics , sum analysis , and logit simple regression analysis. Inspired by real-life examples, this study conclude that parents' education level affects children's participation in extracurricular classes, that parents have different degrees of influence on children's participation in extracurricular classes, and that high parental education level and children's participation in extracurricular classes are not common. The research significance of this paper is that it can clarify the current situation of the development of children's daily education, and according to the research results, it can predict and guide the development trend of education in the future. Participation in educational activities for children, parents, and schools indicates the focus on the direction of choice and planning.

Keywords: parents' education level, shadow education, influence on children's education.

1. Introduction

In recent years, people pay more and more attention to the education industry along with the economic development. How an excellent child is raised has also become a topic of keen discussion. In 2022, through the growth of the genius girl Eileen Gu, more and more people realize that success doesn't come from only one person and they are aware that parents' literacy level has a profound influence on the education of their children.

A range of research and studies on the influence of parental education on children's behavioral choices in various areas have been covered in academia. For example, it includes the shaping of a child's personality [1], the child's performance in school [2], the child's achievement [3], and the child's tendency to choose a spouse [4]. However, the effect of parental education on children's achievement remains a relatively large number of such studies.

For example, the article by Lanying Gao, Research on the influence of parents' education level on children's education level-an empirical analysis based on CGSS2017 data [5]. It mentions that usually, children's education level increases with parents' education level, and the variability of investment in children's education across families is also related to parents' education level. In the article Family capital, out-of-school training, and equity in educational opportunities [6] by Heping Zhang, Qinggen Zhang, and Xia Yin, Tobin's regression model was used to analyze the relationship between family capital and students' participation in out-of-school training and out-of-school training expenditures, and it was shown that family capital has a significant positive effect on participation in out-of-school training. The article also mentioned that the family capital component contains diverse elements such as cultural capital, social capital, and economic capital, where cultural capital is the parents' education level. The Influence of Parent Education and Family Income on Child Achievement: The Indirect

Role of Parental Expectations and the Home Environment [7] mentions that differences and levels of parental education and income levels are reflected in children's achievement. Parental Educational Expectations and Academic Achievement in Children and Adolescents-a Meta-analysis [8] mentioned that parents' expectations of their children's academic achievement and their ability to give to their children differ as a result of differences in parental educational attainment. Highly educated parents have relatively higher idealized expectations and greater commitment to their children. The same attitude is expressed in Wang Xiaolei and Zhang Qiang's Whether Shadow Education Expenditures Are Higher in Highly Educated Families - An Examination Based on Propensity Value Matching [9].

In addition to exploring the influence of parental education on children's achievement in a macro sense, the literature also makes several references to the association between parental education and shadow education. Shadow education, which is a form of extracurricular tuition, can also be referred to as the effect of parental education on children's attendance in extracurricular classes. Thus, the contribution of extracurricular classes to the child's achievement is seen as an element worthy of consideration and tracing.

In recent years, there has been more and more controversy over what is an excellent way of education, especially the issue of extracurricular courses. Does a child need to enroll in extracurricular classes at this time? Is a child's excellence a product of extracurricular classes? There is controversy. For example, the skiing event in which Eileen Gu won the gold medal at the Winter Olympics was not part of the school-based curriculum. This is certainly telling everyone that they should enroll their children in extracurricular classes, not only to improve their academic level but also to broaden their hobbies and develop a skill. There are also many examples of students from poor families who have not had a good learning environment but have been able to get out of the rural and mountainous areas and change their fate through hard work. Therefore, the following will discuss the correctness of these two views and the significance of taking extracurricular classes. At the same time, it is necessary to study whether extracurricular activities are one of the inevitable trends of modern education. In most people's minds, participation in extracurricular courses is an additional product of the family's capital advantage. This will also be discussed as an issue of equity in education. In the following, the problem will be analyzed utilizing descriptive statistics sum analysis and logit simple regression analysis in turn. This is not simply a discussion of the impact of parents' education on their children's attendance at extracurricular classes, but also a guide to better reforms in the education industry in the future.

2. Method

2.1. Data Sources

Data of this group are collected from the survey data of students, parents and school leaders of China Education Tracking Survey (CEPS) 2015. The China Education Tracking Survey (CEPS) is a large-scale tracking survey project designed and carried out by the China Survey and Data Center (NSRC) of Renmin University of China. A total of 112 schools, 438 classes and about 20,000 students will be selected as the survey sample. The objects of the survey include students, parents, teachers and school leaders [10].

2.2. Variable Setting

The independent variables in this paper are parents' education level, mother's education level and father's education level. The dependent variable is whether the child attends extracurricular training classes.

2.3. Research Methods

This paper mainly uses quantitative research method to analyze the questionnaire.The valid number of parents are 1054.

2.4. Research Hypothesis

The hypotheses of this study are:

H1: The educational level of parents has a significant impact on whether children participate in remedial classes

H2: The educational level of the mother has a significant impact on whether the child attends the remedial class

H3: The education level of the father has a significant impact on whether the child attends the remedial class

3. Results

3.1. Sum analysis of descriptive statistics

Table 1. Descriptive statistics of parental degree

Variable name	Mean value	Standard deviation	Maximum value	Minimum value	Sample size
Parents have junior high school or above degree	0.6878558	0.4635883	1	0	1054
Parents have high school or above degree	0.2201139	0.4145199	1	0	1054
Parents have bachelor's or above degree	0.0559772	0.2299869	1	0	1054
Parents have master's or above degree	0.0104364	0.1016726	1	0	1054
Whether children attend training classes	0.2039848	0.4031491	1	0	1054

From Table 1, parents with a junior high school or above degree account for 68.79% of the total, accounting for a relatively large number; Parents have high school or above degree account for 22.01%; Parents with bachelor's or above degree accounted for 5.60% of the total number; Parents with a master's or above degree accounted for 1.04%, accounting for the least. The children who have taken training courses account for 20.40% of the total.

Table 2. Descriptive statistics of mother's degree

Variable name	Mean value	Standard deviation	Maximum value	Minimum value	Sample size
The mother have junior high school or above degree	0.6717268	0.4698078	1	0	1054
The mother have high school or above degree	0.158444	0.3653302	1	0	1054
The mother have bachelor's or above degree	0.0388994	0.1934471	1	0	1054
The mother have master's or above degree	0.0075901	0.0868313	1	0	1054
Whether children attend training classes	0.2039848	0.4031491	1	0	1054

As can be seen from Table 2, the mother with a junior high school or above degree account for 67.17%; 15.84% of mothers with high school or above degree; Mothers with bachelor's or above degree accounted for 3.89% of the total number; Mothers with master's or above degree account for

0.76%. The children who have taken training courses account for 20.40 percent of the total. It can be seen that the mothers surveyed by this questionnaire are generally low in degree, and most of their children have not attended training classes.

Table 3. Descriptive statistics of father's degree

Variable name	Mean value	Standard deviation	Maximum value	Minimum value	Sample size
The father have junior high school or above degree	0.7713472	0.4201644	1	0	1054
The father have high school or above degree	0.186907	0.3900219	1	0	1054
The father have bachelor's or above degree	0.0426945	0.1934471	1	0	1054
The father have master's or above degree	0.0104364	.1016726	1	0	1054
Whether children attend training classes	0.2039848	0.4031491	1	0	1054

From Table 3, the father with a junior high school or above degree account for 77.13%; 18.70% of fathers with high school or above degree; Fathers with bachelor's or above degree accounted for 4.27% of the total number; Fathers with master's or above degree accounted for 1.04%. The children who have taken training courses account for 20.40 percent of the total. It can be seen that compared with the mother, the father's degree is relatively higher. However, most of the children didn't attend training classes.

3.2. Logit simple regression analysis

Table 4. Logit simple regression analysis

Whether children attend training classes			
	Model 1(Parents)	Model 2(Mother)	Model 3(Father)
Junior high school or above degree	0.183017	0.532183**	0.1296778
	(0.1921358)	(0.1906069)	(0.2039135)
High school or above degree	0.6405831**	0.5032074*	0.6170866**
	(0.2037542)	(0.2212216)	(0.2073059)
Bachelor's or above degree	0.3613698	0.779126	0.8979416*
	(0.3416042)	(0.3987517)	(0.386825)
Master's or above degree	0.6931472	-0.450201	-0.5596158
	(0.6749486)	(0.8091087)	(0.7144958)
cons	-1.695795**	-1.875141**	-1.644706**
	(0.1523318)	(0.1583429)	(0.1749043)
Adjusted R2	0.0267	0.0307	0.0257
Obs	1054	1054	1054

Referring to Table 4, the parents who have high school degree has the greatest influence of whether to let their children attend training classes($p<0.01$). Mothers with a bachelor's or below degree will pay more attention to whether their children attend training courses($p<0.05$), while those with a bachelor's or above degree will not pay much attention to whether their children attend training courses. Fathers with a high school or above degree and a master's or below degree will be concerned about whether to send their children to training classes($p<0.05$).

Table 5. Logit simple regression analysis (Parents)

Whether children attend training classes			
	Model 1(Parents)	Model 2(Mother)	Model 3(Father)
Junior high school or above degree	0.465941**	0.532183**	0.1296778
	(0.1763095)	(0.1906069)	(0.2039135)
High school or above degree		0.5032074*	0.6170866**
		(0.2212216)	(0.2073059)
Bachelor's or above degree		0.779126	0.8979416*
		(0.3987517)	(0.386825)
Master's or above degree		-0.450201	-0.5596158
		(0.8091087)	(0.7144958)
cons	-1.695795**	-1.875141**	-1.644706**
	(0.1523318)	(0.1583429)	(0.1749043)
Adjusted R2	0.0069	0.0307	0.0257
Obs	1054	1054	1054

As can be seen from Table 5, the educational level of parents has a significant positive impact on whether children attend training classes ($p<0.01$). The more educated parents are, the more they will pay attention to whether to let their children attend training classes.

Table 6. Logit simple regression analysis (Mother)

Whether children attend training classes			
		Model 2(Mother)	
Junior high school or above degree	0.7153243**		
	(0.1812316)		
High school or above degree		0.8716496**	
		(0.1852987)	
Bachelor's or above degree			1.280921**
			(0.3231287)
Master's or above degree			
cons	-1.875141**	-1.529079**	-1.427524**
	(0.1583429)	(0.0877545)	(0.0795364)
Adjusted R2	0.0159	0.0195	0.0136
Obs	1054	1054	1054

Referring from Table 6, mothers with a master's or below degree have a significant positive impact on whether their children attend training courses($p<0.01$).

Table 7. Logit simple regression analysis (Father)

Whether children attend training classes			
		Model 3(Father)	
Junior high school or above degree	0.3584204		
	(0.1945333)		
High school or above degree		0.8419807**	
		(0.1761859)	
Bachelor's or above degree			1.301799**
			(0.3093014)
Master's or above degree			
cons	-1.644706**	-1.550395**	-1.43533**
	(0.1749043)	(0.0898949)	(0.0798851)
Adjusted R2	0.0033	0.0203	0.0154
Obs	1054	1054	1054

As can be seen from Table 7, fathers with high school or above and master's or below degree have a very significant positive impact on whether their children attend training courses($p<0.01$).

In general, the educational background of parents has an effect on whether children attend training classes, but the effect is different at different levels.

4. Discussion

4.1. Discussion on the data analysis

Based on the results of the data analysis, it is clear that parental education impacts whether or not a child attends classes, but the impact varies by level. This finding differs somewhat from the initial research hypothesis and the reference literature in two ways.

(1) The influence of the mother's education level and whether or not the child attends a course

The study hypothesised that the mother's education level would significantly affect whether or not her child attended tutorials. However, the findings did not show that as the mother's level of education increased, the child was more likely to participate in tutorials. The most significant proportion of mothers who were concerned about and interested in whether or not their children attended tutorial classes had a concentration of education at high school and above. In contrast, the effect of mothers with a bachelor's degree and above on whether or not their children attended classes did not fit our hypothesis. This is in line with Gao Lanying's study on the influence of parents' education level on their children's education level - an empirical analysis based on CGSS2017 data [5]. First, parents' education level degree can provide a good learning atmosphere for their children and can also be well involved in their children's learning. However, as the level of education to a certain extent influences positions, higher positions normally lead to busy work, so that less time is available to participate in children's learning. Secondly, due to the traditional pattern of division of labour in families in China, mothers generally spend more time with their children, but after a certain point, the mother's education will also increase the possibility of her entering the labour market, and therefore may pay less attention to her children's learning.

(2) The effect of different levels of parental education on whether children attend tutorial classes

The study hypothesised that the father's level of education significantly affects whether the child attends tutorials, and the parent's education substantially impacts whether the child attends tutorials. However, the findings show that the child's likelihood of attending classes increases as the mother's education increases, but this is also subject to the father having a higher level of education. Moreover, although both parents' education levels had a significant and positive effect on whether their child attended classes, by rank, fathers with the same level of education had a more substantial effect on whether their child attended classes than mothers, concentrating on parents with high school education and above, and master education and below. As women become more educated and advanced, mothers may have higher job titles and less time to spend with and care for their children.

4.2. Suggestions

Based on the results of the data analysis and the issues reflected behind these two results that deviate from the experimental hypothesis, the following two recommendations are listed.

Firstly, according to the results of the data analysis, parents with high school or higher education have the most significant influence on whether their children attend classes. However, according to data from the China Education Tracking Survey (CEPS) 2015 survey of students, parents and school leaders, parents with junior high school or higher education are more likely to attend classes, followed by parents with high school or higher education, followed by parents with a bachelor's degree or higher education, and parents with a master's degree or higher education are the least likely to attend classes. A minor proportion of parents with a Master's degree or above. But both fathers and mothers with an education level of junior high school and above had the least influence on whether their children attended classes, indicating that they paid relatively little attention to their children's education. Therefore, this study suggests that parents with junior secondary education and above

should devote more time and energy to accompanying and caring for their children and pay attention to their children's learning.

Secondly, in this group of surveys, fathers have higher educational attainment than mothers. However, as women become more educated, higher education increases the likelihood that mothers will enter the labour market and devote more time to their work and less to their children's learning. The real impact on performance is not only the training courses but also the attention of parents and the family's education, so mothers need to invest more time in their children's education.

4.3. Limitations

It is important to note that there are limitations to the operationalisation of some of the variables in this study due to the data from the China Education Tracking Survey (CEPS) 2015 survey of students, parents and school leaders. Firstly, to ensure that the sample sizes of the independent and dependent variables were consistent from beginning to end, this study removed survey samples that had an impact on them, so the sample size for data analysis was small. Besides, when setting dummy variables, this study did not set nine dummy variables according to the nine levels of education provided in the database, but instead set dummy variables at the levels of junior high school and above, senior high school and above, bachelor's degree and above, and master's degree and above. This may lead to a certain degree of information loss and have a slight impact on the final data analysis results.

5. Conclusion

In summary, this paper used the CEPS data, combined with the descriptive statistics sum analysis and logit simple regression analysis in the text, to draw the following four conclusions. First, the proportion of students' parents who have received higher education remains a minority, and those whose parents have not received education beyond college account for ninety percent. Second, attending extracurricular classes did not become a common phenomenon for children to receive education, accounting for only one-fifth of the surveyed population. The above two findings fully demonstrate that family factors, parents' education level, and extracurricular classes are not the only way for children to succeed, nor are they the inevitable trend in modern education, which is relatively fair. Moreover, there is no right or wrong distinction between the educational cases of Eileen Gu and the rural teenagers, and achieving self-worth through their efforts is still the most feasible way. Third, the article confirms the research hypothesis of this paper and the findings in the above-mentioned references, concluding that the different levels of parental education reflect differences in the influence of children's participation in extracurricular classes and that the more educated the parents are, the more concerned they are about their children's participation in extracurricular classes, affirming the importance of knowledge and the inevitable reason for education as a development industry. Fourth, the article expresses that although the single educational attainment of fathers and mothers is reflected in their children's participation in extracurricular classes in a largely similar way, parental gender differences also have a differential impact on their children's participation in extracurricular classes. Mothers with less than a master's degree had a highly significant positive effect on whether their children attended classes, while fathers with high school or higher and less than a master's degree had a highly significant positive effect on whether their children attended classes. In this regard, it is not enough to study the pedagogical factors such as parents' education level, and the integration of psychological and gender difference studies is something that we need to continue to dig deeper into in the future.

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