

The “Theatre Effect” of Shadow Education: A Study Based on Data from China Education Panel Survey

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Abstract: *Based on data from the China Education Panel Survey in the academic years of 2013-2014 and 2014-2015, this article sought to investigate whether shadow education can yield the “theater effect” and whether the “theater effect” of shadow education is heterogeneous between families of different socio-economic status as well as between urban and rural families, using the hierarchical linear Bernoulli model.*

Best Evidence in Chinese Education 2023; 13(2):1709-1713.

Doi: 10.15354/bece.23.ar038

How to Cite: *Xue, H., & Xu, D. (2023). The “theatre effect” of shadow education: A study based on data from China Education Panel Survey. Best Evidence in Chinese Education, 13(2):1709-1713.*

Keywords: *Shadow Education, Theatre Effect in Education, Peer Effects*

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Conflict of Interests: None.

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Introduction

When a student successfully improves his/her academic achievements with the help of shadow education, his/her classmates and their parents will follow suit and join in after-school supplementary tutoring. An analogy is made between this phenomenon and the scenario in the theatre where if some viewers stand up from their seats to get better view, those sitting right behind will stand up too, and eventually all those sitting behind them will rise. This is how the term “theatre effect in education” was coined. This study established its theoretical framework based on the Reference Group theory and the Effectively Maintained Inequality (EMI) theory. Data from the China Education Panel Survey (CEPS) in the academic years of 2013-2014 and 2014-2015 were utilized to investigate whether shadow education can produce the “theater effect” and the differences in the “theater effect” of shadow education between families of different socioeconomic status (SES) as well as between urban and rural families. The hierarchical linear Bernoulli model was used in the analysis. In addition, the lag phase of shadow education participation rates of class and school peers was incorporated in the regression model to test the robustness of the “theatre effect” of shadow education.

Research Hypotheses

In this study, classmates and schoolmates were treated as the reference group of the individual student. A reference group is typically used by an individual as a standard for evaluating themselves and their behaviors and plays the role of “norm-setter”.

The individual student has the most communication with their classmates during the school days. Classmates play the major role of norm-setting of the reference group. Therefore, hypothesis one (H1) was proposed: The higher the shadow education participation rate of class and school peers, the greater the probability of the individual student participating in shadow education, and class peers pose a greater influence on individual’s participation in supplementary tutoring than schoolmates.

Families of middle SES are typically more engaged in the educational competition, so more likely to participate in shadow education due to the peer effects. Hence, suggested were hypothesis two (H2): The higher the shadow education participation rate of classmates and schoolmates, the more likely it is that students with parents of the middle occupation level will participate in shadow education; and hypothesis three (H3): The higher the shadow education participation rates of classmates or schoolmates, the greater the probability that students from middle-income families will participate in off-campus supplementary tutoring.

Urban parents and students are more ready to make decisions about participating in shadow education, because they have more chances to be influenced by their peers due to their constant interactions. Thus, hypothesis four (H4) was proposed: Classmates’ or schoolmates’ shadow education participation has a greater effect on urban students’ participation in after-school tutoring than that of rural students, that is, there is heterogeneity between the class or school peer effects on urban and rural students’ participation in shadow education.

Data Sources and Variables

Data Sources

This study sourced data from CEPS, which set the 2013-2014 academic year as the baseline and the grade 7 and grade 9 in that year as the initial points of investigation. A follow-up survey was conducted to gather information for the 2014-2015 academic year. Using multi-stage probability-proportional-to-size sampling (PPS), the study randomly selected 28 county-level regions as investigation sites, from which 483 classes from 112 schools were randomly sampled. All students from the sampled classes were included as research subjects. The samples for the two academic years were made up of 14376 and 6726 students, respectively.

Variables

- The Independent Variable: Participating in shadow education or not.
- Dependent Variables: The shadow education participation rate of class peers and that of school peers.
- Control Variables: Individual-, family-, and school-related factors that may influence student shadow education participation.

Research Methods

Null Model

The total difference in the shadow education participation rate was decomposed into individual and school levels in order to examine whether there are significant gaps in student shadow education participation rate between schools.

Full Model

Based on the zero model, the full model was constructed by incorporating student- and school-related variables to examine their influences on students' decisions on shadow education engagement.

Conclusions

According to the descriptive statistics, in the 2013-2014 academic year, 47% of junior secondary school students engaged in shadow education, and the shadow education participation rates of students' class and school peers were both 47%; in the 2014-2015 academic year, 50% of students participated in shadow education, and the shadow education participation rates of students' class and school peers were 46%. Research findings based on the hierarchical linear Bernoulli model show that: (i) The “theater effect” exists in shadow education, which is supported by the fact that the shadow education participation rates of class and school peers have robust and significant positive effects

on students’ participation in after-school tutoring; (ii) The “theater effect” of shadow education of classmates has a greater impact than that of schoolmates, which is evidenced by the analysis result that the coefficient of the variable of the shadow education participation rate of class peers is greater than that of shadow education participation rate of school peers; (iii) The “theater effect” of shadow education is heterogeneous among families of distinct SES, with the strongest impact on students from families of middle SES; (iv) The “theatre effect” of shadow education varies between urban and rural families, with more significant influences on urban students than on their rural counterparts.

The Chinese version of this article has been published in China Economics of Education Review, 2022, 7(1):75-98. The English version has been authorized for being publication in BECE by the author(s) and the Chinese journal.

薛海平 & 徐丹诚. 影子教育的剧场效应研究—基于中国教育追踪调查数据分析. 教育经济评论, 2022, 7(1):75-98.

Received: 14 January 2023

Revised: 17 February 2023

Accepted: 22 February 2023