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Shadow education in Beijing: Determinants and disparities from the perspectives of the students

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Abstract

Using 696 questionnaires from grade 12 students from four senior secondary schools in Beijing, this study investigates the types, cost, determinants and disparities caused by shadow education from the perspectives of the students. The paper investigates disparity through the parameters of 'actual disparity'. Unlike disparity which focuses on numbers, actual disparity focuses on the reasons behind such decision and how a person feels about it. The results show that 53% of the students opted for shadow education during the last one year. Parents' education and income appear to have a positive influence on their children's tendencies to receive shadow education. The biggest reason for receiving it was to practice exam questions (enrichment as a group). Amongst those who did not receive it, only 21% stayed away due to unfavorable circumstances. A vast majority stayed away due to their own choice. These findings tentatively suggest that the notion that shadow education causes disparities amongst the students is exaggerated as most of them abstain by their own choice. It suggests a need to look at this issue more deeply, focusing more on the reasons and the feelings than mere numbers.

Keywords: shadow education; disparity; actual disparity; determinants; grade 12; China

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1. Introduction

Shadow education is generally defined as those academic activities which are said to be designed to improve the students' academic learning about formal school subjects. There are quite a few variations of this definition which at times create confusions and ambiguities (Bray, 2010). For example some researchers add "privateness" and "profit-making" as some of its core characteristics (Bray 1999, p. 20) while some others use a broader term and approach (Baker, Akiba, LeTendre, & Wiseman, 2001; Buchmann, Condron, & Roscigno, 2010). The parameters of shadow education that are followed in this paper are the ones set out by Bray i.e. privateness, profit-making and supplementation to academic subjects taught in the formal school (Bray, 1999, p. 20) as they make the definition more specific and avoid some of the confusions.

Although many researchers have explored this area of research in the recent decades, compared to other disciplines in the field of education, it is still in the early stages (Bray, 2010). Shadow education is yet to be explored properly in many parts of the world. Furthermore, there are many aspects of shadow education which require broader and deeper investigation. China, being the most populous country in the world needs special attention, but the research about shadow education here does not match the immense size and rapid growth of shadow education in china (Bray, Kwo, & Jokić, 2015). Although there are quite a few articles and papers about shadow education in China for example Shen (2008), Li (2009), and Xue and Ding (2009); most of them are written in Chinese language which makes it difficult for a vast majority of English speaking academics to understand the situation properly.

Shadow education has its own merits and demerits. On one hand, it can improve the overall educational quality and the students' chances to succeed in their academic career (Stevenson & Baker, 1992; Bray, 1999; Baker et al., 2001; Suleman, Aslam, Hussain, & Ali, 2013) and improves students' self-efficacy (Montebon, 2016); but on the other, it may create many problems including corruption and malpractices (sometimes even coercion and blackmailing) by the teachers (Zhang, 2014), lack of interest in the mainstream school classes by both the students and the teachers who are involved in these activates (Mischo & Haag, 2002), financial pressure on the parents (Aslam, 2011), tax evasion (Silova, Budiene, & Bray, 2006), lack of time for the students for extracurricular activities (Bray, 2011), and various types of disparities it might cause amongst the students (Bray, 1999; Bray & Lykins, 2012). The issue of disparities caused by shadow education is often based on the argument that a certain group of students in the class has an advantage whereas the others do not. The paper suggests that this issue of disparity has to be investigated more deeply and from different perspective. Rather than focusing on the surface level disparities (in terms of numbers), there is a need to focus on the reasons for not attending shadow education. It is important to find out whether the students, who do not receive shadow education, do it by their own choice or due to unfavorable conditions. It is important because contrary to formal education (formal/ mainstream schooling), shadow education is not basic human need, it is an add-on. If one person refrains from something that is add-on or optional, disparity (or surface level disparity as this paper calls it) may not be able to reveal the true picture.

This paper suggests that not receiving shadow education should not be considered actual disparity automatically as it is optional and add-on. Unlike provision of food or basic education where lack of access to them can automatically be considered actual disparity as they are basic human needs, one needs to look deeper to investigate why shadow education is not received, and how those without it feel. This paper tries to look at the issue of disparity caused by shadow education more deeply and find out some of the answers from this perspective.

2. Literature Review

The literature that was studies for this paper covered two main areas: shadow education in China and the disadvantages of shadow education.

2.1 Shadow Education in China

Although there is considerable research about Macao, Taipei and especially Hong Kong (Hsieh, 2001; Bray & Kwok, 2003; Huang, 2004; Southgate, 2009; Liu, 2012; Bray, 2013; Chou, 2014; Bray & Kobakhidze, 2015); research about mainland China on this topic is rather limited. Private tutoring has "long traditions" in China and other East Asian countries partly due to the Confucian philosophy (Bray & Lykins, 2012, p. 8). Confucian philosophy focuses on long, careful and repeated study which can be done easily through shadow education. The opening up of China, and marketization of education system have spurred up this trend in China (Bray & Lykins, 2012). One child policy and improved living standards of the Chinese people have also played a vital part in its growth as the people have more resources to spend on their only child (Bray & Kwo, 2014). Zhang (2011) quoting Xue and Ding (2009) wrote that the spread of shadow education in Kunming City, China was 65.6% in lower secondary schools. The percentage for upper secondary schools was reported to be 53.5% (Zhang, Y., 2011, p. 2).

Zhang also reported some previous studies carried out in different parts of China for different levels of studies. Those previous studies showed a great deal of variation in the spread and intensity of shadow education at different levels: from 13.8% for graduate students to 73.8% for primary school students (Zhang Y., 2011, p. 47). Surveying 25 public senior secondary schools, Zhang found out that in Jinan (capital of Shandong province, China), 23.10% of the students from grade 12 who were surveyed, received shadow education in mathematics and 18.2% in English (Zhang, Y., 2011, p. 124). Another researcher (Zhang, W., 2011) mentioned an urban household survey reported by *Beijing Evening News* (Li, 2009) which surveyed 9,380 houses in 18 different cities in China. The findings showed that 56% of those households were spending some amount of money on shadow education.

2.2 Disadvantages of Shadow Education

Despite some obvious merits and benefits of shadow education (academic improvements, increase in the students' motivation level, helping the teachers financially), its drawbacks and demerits are equally well-documented and reported. Some of the teachers deliberately provide substandard knowledge and guidance in the classroom, and do not teach the whole syllabus to ensure that the students come to get extra classes from them (Aslam, 2011; Silova et al., 2006). It is also reported that some teachers give undue favors to those students who take shadow education from them, and also force the parents to send their children to them for extra coaching (Kobakhidze, 2014). Shadow education also affects the financial situation of the families especially those form middle and lower classes as it consumes a large chunk of family income and increases the gap between higher and lower classes (Aslam, 2011; Bray, 2009; De, Barik, Samanta, Bhattacharya, Biswas, Dasgupta, & Raychaudhuri, 2009). The marketization of education and spread of shadow education has allegedly deprived education from the respect and missionary spirit it used to have, and made the teachers and teaching profession a commodity with price tags. The biggest criticism on shadow education has been that it increases the disparities as those with plentiful resources are able to gain an advantage over those who cannot afford it. It can increase or even give birth to social, economical and academic disparities between haves and have nots (Silova et al., 2006; De et al., 2009; Bray, 2009).

3. Actual Disparity

There are conflicting opinions about the exact definition of disparity. Cambridge Dictionary defines it as "lack of equality and similarity, esp. in a way that is not fair". Cater-Pokras and Baquet (2002) write in their

paper that disparity is a "difference between better and worse off groups" (p. 246). Often disparity is measured in terms of numbers only.

In the field of shadow education, it is often reported that those students who do not receive shadow education may feel at disadvantage (Bray & Lykins, 2012). If some students in a class receive shadow education and others do not, often it is implied automatically that there are disparities in the class as some do not have access to that added advantage. This paper looks at this concept more deeply. Part of the concept is based on part of the 'Capability Approach' presented by Sen (1985). Sen (1985) emphasizes more on capability (having ability of an individual or individuals to carry out activity) than commodity. According to Sen, it is a person's capability (access, resources or ability to have/do something) and then functioning (using that capability to do the desired task) that leads to satisfaction and happiness or otherwise than just having or not having commodity or thing. Part of the idea of actual disparity focuses on the first part of Capability Approach, suggesting that if a person does not have capability to do, have or receive something, it is more likely to cause emotional, social and psychological distress than actually not receiving that.

The paper investigates if someone who stays away from a certain thing (shadow education in this case), does it by one's own choice (have capability- access, permission and/or resources- and then stay away by one's own choice) or is kept out due to the lack of capability (access, permission and/or resources). The point here is that if a person stays away from anything by his or her own choice, it is highly unlikely to cause distress to that person (actual disparity). The idea of actual disparity focuses on how that person feels for not receiving that facility or things. If a person does have the capability of receiving shadow education, but stays away from it as he might not like it, need it or have an alternate; one is highly unlikely to feel deprived or frustrated. As a result, it would be improbable to have actual disparity. On the other hand, if a person stays away from shadow education due to unfavorable circumstances, one is highly likely to have actual disparity; but even in this case, one has to investigate deeper to know if the person who has been forced to stay away from shadow education (or any facility or thing for that matter), feels deprived and frustrated or not. It is because in some cases those who are kept out due to the lack of capability, may develop a strategy or find alternate resource to overcome that disadvantage and hence do not have actual disparity. This researcher presents the framework of three levels of disparity to clarify this idea.

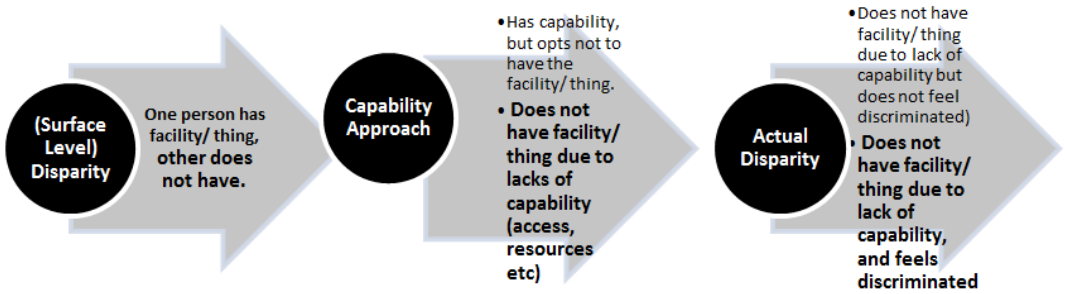

Figure 1. Three Levels of Disparity

First is surface level disparity which is what appears to be a situation of disparity. It is often taken in terms of mere numbers. Second is part of the capability approach focusing if the person without that facility or thing had capability or not. The third is actual disparity which focuses on how the person without that facility or thing feels. Actual disparity is based on a person's emotions and feelings. If someone stays away by one's own choice and does not feel stressed or deprived, there would not be any actual disparity; although, there would appear to be a situation of disparity (surface level disparity).

Another important point is to see the difference between shadow education and education. There is a big

difference between the two. Unlike education which is a basic human need, and must be provided to everyone; shadow education is an add-on. It is supplementary and optional. If one does not like to receive shadow education or feels one does not need it, and as a result stays away from this activity; it would not be logical to consider it to cause actual disparity. In case of basic human needs, it would be logical to automatically call their absence, actual disparity; but in case of optional or supplementary things, one has to go deeply to know if it is due to one's own choice or due to unfavorable conditions, and how one feels about it.

This idea of actual disparity may also be used to some other areas of research such as gender disparity. Often it is assumed that women, who stay at home, are held back and are at disadvantage. It would be more logical to approach them to investigate how they feel, and if the situations is by their own choice or imposed by circumstances and/or other people.

4. Data Collection and Analysis

The data was collected using a questionnaire from grade 12 students studying in four senior secondary public schools situated in three sub-districts of Beijing. The schools were selected randomly, and two classes were selected from each of those four schools. The school leaders were contacted to get the permission to distribute and then gather the filled-in questionnaires from the students. In two schools, the questionnaires were handed over to the students directly with a Chinese assistant, and collected on the spot while in the other two; this process was done through the school teachers. In total, 696 questionnaires were collected. The total population of this group (grade 12 students in public senior secondary schools in Beijing) is 62621 (MOE, 2015). Krejecie and Morgan (1970) presented a chart for selecting sample size from a given population. According to them, if the population is from 50,001 to 75,000; the sample size should be 382. The current research gathered a much larger sample than that to make it more representative.

Grade 12 students were selected as this is the final and most important year of the students' school life, and the shadow education is presumably more common in this academic year. Also, compared to the junior students, the students in this grade are more sensible and mature to understand the questionnaire and answer them properly and independently. It is important to note that the students did not report any major confusion or problem about the questionnaire. The questionnaire consisted of closed questions in Chinese language so that it could be understood easily by the students. Chinese word *影子教育（ 课外补习）* was used for shadow education. On the first page, shadow education was defined and explained in Chinese (as per the parameters of the paper) so that the students could understand the concept clearly. Closed questions made it easy to code and analyze the data without needing language skills. They were divided into three parts: background information, opinion of the students about shadow education (from all the students), and situation and spread of shadow education in Beijing (from those who received shadow education).

5. Findings from the questionnaires

The collected data was fed into SPSS and analyzed using descriptive statistics. There were missing values in most of the scales. Two students did not mention their sex. 54 students did not respond to 'family income' question. It led to some differences in the total, and also different totals based on different analyzing technique. For example, for Table 6 'reasons for not taking shadow education', 222 responses were reported; but when it was further divided based on the family income (Table 7), there were only 202 responses. That is because 20 students from this group did not mention their family income. Keeping this in mind, non-response/missing values were also given (where necessary). The findings took 'percentage' (which includes missing values as well) to accommodate this situation.

5.1 Respondents of the Study

This research consisted of higher proportion of girls in grade 12 in the study area as against MOE (Ministry of Education, China) data of girls' proportion in Beijing. MOE (2015) data about senior secondary schools in

Beijing showed that 91463 out of 177554 senior secondary school students were females, making them 52% of this population. In the current research, 416 out of 696 students (60%) were girls (Table 1). The reported mean age of the students was 17.01. Most of the students (77%) reportedly belonged to urban areas as their parents had urban *hukou* (Chinese term for residence certificate). This trend was almost the same amongst both boys and girls. A higher percentage of girls reported to take social science subjects (59%) whereas a higher percentage of boys (73%) went for pure sciences. 53% students had received shadow education during the last one academic year. It is important to mention that the questionnaires were collected in May, 2015. The school year in China ends in July. Last one academic year here means since the start of grade 12 (September, 2014).

These findings are consistent with the previous research about shadow education at senior secondary schools in China (Li, 2009; Xue & Ding, 2009). Usually it has been reported that more attention is paid to the boys' education and they are more likely to receive shadow education, but it does not seem to be the case in Beijing (in the current sample group at least) as the trend of shadow education appears to be slightly more common amongst the girls as compared to the boys (56% amongst the girls to 48% amongst the boys). Coupled with the findings from family support in academic work, it might suggest a higher emphasis on the girls' education in Beijing. Science subjects are usually considered tougher and more important. As a result, the spread of shadow education is generally found to be greater amongst those students who took science subjects (de Silva, Gunawardena, Jayaweera, Perera, & Rupasinghe, 1991). The same trend was found in this research.

Table 1

Respondents of the Study

	Non-responses	Boys n (%)	Girls n (%)	Overall n (%)
Gender	2	278 (40%)	416 (60%)	696
Urban	18 (3%)	222 (80%)	314 (75%)	536 (77%)
Rural		50 (18%)	92 (22%)	142 (20%)
Social Sciences	12 (2%)	74 (27%)	246 (59%)	320 (46%)
Pure Sciences		202 (73%)	162 (39%)	364 (52%)
Family help in academic work	14 (2%)	38 (14%)	90 (22%)	128 (18%)
No family help in academic work		238 (86%)	316 (76%)	554 (80%)
SE taken in the last one year	18 (3%)	134 (48%)	234 (56%)	368 (53%)
SE not taken in the last one year		140 (50%)	170 (41%)	310 (45%)

5.2 Opinion about Shadow Education

The discussion in this section is on the basis of responses obtained from all students irrespective of the fact if they had received shadow education or not. 35% of the students thought that shadow education could improved students' academic learning while 10% reported otherwise. Mathematics and English were pointed out to be the most important subjects for additional coaching. These two subjects have been amongst the most sought after subjects for extra coaching (Bray, 1999, 2013). Silova (2009) also mentioned mathematics and foreign language as the top two subjects in three Central Asian Republics. When it comes to the type of shadow education, 'VIP (one to one/ personal) coaching at home' came as the overwhelming choice of the students with 43% of the students saying that they would like to go for it. Another 28% selected 'VIP coaching at the coaching centre'. Last question in this section was if the students thought that the teachers unjustly supported those students in the class or the school who received shadow education from them. Interestingly, only 11% of the students disagreed to this notion. A much greater percentage (29%) believed that the teachers tend to favor those students in the classroom or at the school who received shadow education from them. The same kind of fears was expressed by various researchers (De et al., 2009; Bray & Lykins, 2012).

5.3 Influence of Students' Family Background and Socio-economic Status on Shadow Education

Another important question raised by the scholars has been about the influence of students' family background and social and economic status on their tendencies to receive shadow education. Pertaining to this,

the paper specifically focused on three areas: academic help that the family provides to the students, their financial situation, and their parents' educational background. In order to see the relationship between parents' education level and students' tendencies to receive shadow education students were asked to provide their parents' educational background (both father's and mother's separately) by selecting one of the six given options (did not attend any school classes, up to primary school, middle school, senior secondary school, undergraduate, and masters or above). The spread of shadow education was then observed in respect to both mother's education and father's education to explore the situation in a better way. The findings (Table 2) show that both father's and mother's education level has a positive impact on the students' decision to go for shadow education. The higher the parents' education level was, the higher the ratio of receiving shadow education became amongst their children.

Table 2

Parents' Education and Prevalence of Shadow Education

	Education level	Students (n)	Non-responses	SE received	SE not received
Father's Education	Did not attend any school	4	1 (25%)	2 (50%)	1 (25%)
	Up to primary school	7	-	-	7 (100%)
	Middle school	78	1(1.3%)	34 (43.6%)	43(55.1%)
	Senior secondary school	84	2 (2.4%)	37 (44%)	45 (53.6%)
	Undergraduate	105	2 (1.9%)	66 (62.9%)	37 (35.2%)
	MA and above	60	-	41(68.3%)	19 (31.7%)
Mother's Education	Did not attend any school	2	1 (50%)	-	1 (50%)
	Up to Primary school	10	-	4 (40%)	6 (60%)
	Middle school	75	1 (1.3%)	33 (44 %%)	41(54.7%)
	Senior secondary school	90	2 (2.2%)	40(44.4%)	48 (53.3%)
	Undergraduate	126	1 (0.8%)	80 (63.5%)	45 (35.7%)
	MA and above	37	1 (2.7%)	25 (67.6)	11 (29.7)

The second question was to observe if academic help provided by the family had any influence on the students' tendencies to receive shadow education. 682 students answered to this question. As the Table 3 shows, 128 students reported that they got help from their families for their school work. Majority of those 128 students (64%) reported to receive shadow education. On the other hand, those who did not get such help from their families reported a lesser trend of receiving shadow education (51%). It might show the attitude of the parents, and how concerned they are about their children's studies. Those who are more conscious, not only teach them by themselves, but also arrange for extra coaching.

Table 3

Family Help in Academic Work and Family Income and Prevalence of Shadow Education

	Students (n)	Non-responses	Shadow education taken	Shadow education not taken
Family help in academic work				
Family support in academic work	128	4 (3%)	82 (64%)	42 (33%)
No family support in academic work	554	4 (1%)	284 (51%)	266 (48%)
Family income (per month)				
Up to 4000 RMB	132	6 (4%)	50 (38%)	76 (58%)
4,001 to 7,000 RMB	124	-	62 (50%)	62 (50%)
7,001 to 10,000 RMB	122	-	62 (51%)	60 (49%)
10,001 to 15,000 RMB	126	2 (2%)	82 (65%)	42 (33%)
15,001 to 25,000 RMB	76	-	46 (60%)	30 (40%)
More than 25,000 RMB	62	-	48 (77%)	14 (23%)

The last question in this part was about the impact of the students' financial background on receiving shadow education. The findings show that as the students' family income increased, the percentage of the students who received shadow education also increased. Although, there was a dip in the percentage of 5% from

income group 4 (10,001- 15,000 RMB) to income group 5 (15,001- 25,000 RMB), but by and large the trend was consistent.

5.4 Receivers of shadow education

This part of the research focuses only on those students who said to have received shadow education during the last one academic year. It investigates its spread, types, cost and determinants.

Spread, type and subjects - 368 students reported to have received shadow education. 134 (36%) of them were boys and 234 (64%) girls. The biggest source of shadow education was 'the teachers arranged through a company'. Among those who received shadow education, 148 (40%) students said that they got extra coaching through different companies. 'Teacher from my school' and 'teachers from another formal school' were the second and third most common sources of shadow education with 62 (17%) and 52 (14%) students getting guidance from them. Mathematics and English were reported to be the top two subjects taken by the students. Majority of the students (61%) reported that their marks improved after receiving shadow education with only a tiny percentage (3%) reporting a decline in their marks after shadow education. These findings validate the previous research suggesting that shadow education generally improves students' academic performance (Baker et al., 2001; Mischo & Haag, 2002; Liu, 2012; Suleman et al., 2013).

Charges paid for shadow education - Table 4 shows the detailed results about the charges paid for different types of shadow education. VIP (personal/ one to one) at centre' and 'VIP at home' were reported to be the most expensive types of shadow education. Interestingly, students reported to have paid a higher fee for 'VIP at centre' than 'VIP at home'. It seems surprising, but during informal discussion, some students pointed out that the teachers at shadow education centre were professional teachers while the ones who came to teach them in their house were mostly university students. 'Large size class' is a unique type of shadow education which is quite popular in China, Hong Kong and other East Asian countries, but not reported to be very widespread in other parts of the world. They are often taught by "star tutors" who have significant repute and name-power in their respective fields (Bray & Kwo, 2014, p. 6). It was reported to be the most widespread of all with 162 students receiving shadow education in this way. The charges paid for it were also on the cheaper side. 'Online teaching' was the least expensive with 69% students paying up to 50 RMB per hour. This table also shows that a larger number of the students (140+112=252) went to shadow education centres than being taught at home (90+32=122).

Table 4

Charges Paid by the Students for Every Type of Shadow Education (per subject per hour)

Type of shadow education	n (Students)	Up to 50 RMB	51- 100 RMB	101- 150 RMB	151- 200 RMB	201- 250 RMB	More than 250 RMB
VIP at Home	90	2 (2%)	12 (13%)	6 (7%)	32 (36%)	12 (13%)	26 (29%)
VIP at Centre	140	-	6 (4%)	8 (6%)	36 (26%)	32 (23%)	58 (41%)
SG at Home	32	-	4 (12%)	12 (37%)	4 (12%)	4 (12%)	8 (25%)
SG at Centre	112	14 (13%)	20 (18%)	30 (27%)	24 (21%)	14 (13%)	10 (9%)
LS Class	162	36 (22%)	66 (41%)	30 (18%)	14 (9%)	12 (7%)	4 (2%)
Online	32	22 (69%)	2 (6%)	-	2 (6%)	2 (6%)	4 (12%)

Note. *VIP at Home (personal/ one to one coaching at the students' house), VIP at Centre (personal/ one to one coaching at the coaching centre/ teacher's house), SG at Home (Small study groups at the student's house), SG at Centre (Small study groups at the coaching centre/ teacher's house), LS Class (Large size class environment- more than 25 students), Online (online coaching- both VIP and group)

Table 4 provides the details about the fee paid by the students for different types of shadow education. It is interesting to note that when asked about the best type of shadow education, majority of the students went for 'VIP at home' and 'VIP at centre' respectively; but when it came to making decision in the real life, 'large size class' came out as the most common type. The reason is likely to be attributed to comparatively cheaper and more affordable fee structure for 'large size classes' (as seen in Table 4). It is also worth-noting over here that many students ticked more than one option as they took different type of shadow educations for

different subjects. As a result, the total number over here exceeds the total number of students who reported to have received shadow education.

Determinants for receiving shadow education - One very important debate that has been ignited by the rapid growth of shadow education is about the determinants. This rapid growth can be caused by various factors and players in the field (teachers, tutors, parents, students, companies that provide shadow education and many others). As this paper investigates from the students' perspectives, it asked them why they went for the shadow education. The reasons were divided into three main groups: reinforcement (to further improve their learning, weed out their weaknesses), environment and shortcomings in the formal school system, and other non-academic reasons.

Table 5

Determinants for Receiving Shadow Education

Determinants for receiving shadow education		Students n (%)
Reinforcement		
To further practice exam questions		142 (39%)
For guidance on how to solve exam questions		44 (12%)
	Total	186 (51%)
Reasons due to the Environment and Shortcomings in the Formal School Classes		
Too many students in the classroom		2 (1%)
Not enough practice is done in the classroom		48 (13%)
To gain the support of the class teacher		4 (1%)
Cannot comprehend the lecture in the school		26 (7%)
To make up for the time lost in the school due to extra/ co-curricular activities		28 (8%)
	Total	108 (29%)
Other non-academic reasons		
Following the trend		10 (3%)
To have fun		8 (2%)
	Total	18 (5%)
Non-responses		56 (15%)

Table 5 shows the determinants for receiving shadow education. It is important to note that 56 respondents (15%) did not cite any reason.

5.5 Determinants for not receiving shadow education

Those students who did not attend shadow education were asked to tell why they did not opt for shadow education. The main purpose of this part was to identify if they did not receive shadow education by their own choice or due to unfavorable conditions.

Table 6

Determinants for Not Receiving Shadow Education

Determinants for Not Taking Shadow Education		Students n (%)
Students' Own Choice		
Dissatisfaction due to bad quality of shadow education		48 (16%)
My family helps me in studies		2 (1%)
I like to study by myself		102 (33%)
I do not like shadow education		4 (1%)
	Total	156 (51%)
Unfavorable circumstances and external barriers		
Cannot afford it		48 (15%)
The centre is too far from my living place		18 (6%)
	Total	66 (21%)
Non-responses		88 (29%)

Table 6 shows that 156 students (51%) did not receive shadow education due to their own choice while only 21% of them stayed away from it due to unfavorable conditions. It shows that majority of the students stayed away from shadow education by their own choice and are unlikely to feel deprived or at disadvantaged for not receiving shadow education. Even a larger number of students (n=88, 29%) did not respond to this question and left it unanswered. Although, an additional option of 'other, please mention' was given in cases they had any other reasons; but they opted to just leave it blank.

6. Discussion and conclusion

The findings of this research reinforce the previous ones showing that shadow education is a growing phenomenon in mainland China. Girls showed a higher tendency of receiving shadow education which is contrary to what has been said in some of the previous research (Stevenson & Baker, 1992). The most important point in this paper is the concept of actual disparity and if shadow education causes it among the students. Table 6 shows that only 48 students reported that they did not receive shadow education as they could not afford it. Another 18 mentioned that they could not take it as the shadow education center was too far from their living place (which indirectly might also be due to financial issues as affluent families could hire transport or arrange a car and a driver). This means that only 66 students did not take shadow education due to unfavorable conditions, making it 21% of those who did not receive it, and only 9% of the total sample (n= 696). It proves the need to look at this issue beyond mere numbers and focus on the causes and how the students out of shadow education think.

Yet, there is another argument that shadow education creates actual disparity amongst those students who belong to lower classes as they are more likely to stay away due to unfavorable conditions. It was decided to analyze it further based on different family income groups to see if the students from the poor families did not receive it due to unfavorable conditions. Table 7 shows the findings.

Table 7

Reasons for Not Receiving Shadow Education in Different Family Income Group

Reasons	=<4000	4001-7000	7001-10,000	10,001-15,000	15,001-25,000	>25,000	Overall
By Students' Own Choice							
Dissatisfaction due to bad quality of shadow education	8 (13%)	12 (21%)	18 (39%)	4 (11%)	2 (8%)	-	44
My family helps me in studies	-	-	-	2 (5%)	-	-	2
I like to study by myself	16 (27%)	16 (29%)	14 (30%)	22 (58%)	16 (67%)	8 (100%)	92
I do not like shadow education	2 (3%)	-	-	2 (5%)	-	-	4
Total	26 (43%)	28 (50%)	32 (69%)	30 (79%)	18 (75%)	8 (100%)	142
Due to Unfavorable circumstances							
Cannot afford it	16 (27%)	18 (32%)	6 (13%)	4 (11%)	-	-	44
The centre is too far from my living place	6 (10%)	4 (7%)	4 (9%)	-	2 (8%)	-	16
Total	22 (37%)	22 (39%)	10 (22%)	4 (11%)	2 (8%)	-	60

Out of 202 students who did not received shadow education and also provided information about their family income, only 60 (30%) did it due to unfavorable circumstances. Table 7 shows that there is indeed some relationship between students' family income and the causes for not receiving shadow education. It shows that as the family income decreased; there were more chances of the student not receiving shadow education due to unfavorable conditions. The trend is consistent with the exception of income group 2 (4001- 7000 RMB) which shows a slight increase from the income group 1 (37% to 39%). The pattern was quite similar in all four schools independently as well. Also, the main point seems to be strengthened by these findings as in all income groups (even income group 1), majority of the students did not go for shadow education due to their own choice. If someone does not take something due to one's own choice or preferring something else (self study, family help

etc in this case); would it still cause frustration and sense of deprivation? This paper proposes that it maybe disparity at the surface level, but not an actual one as the person went for that option freely and by his or her own choice. Similarly, the students who do not receive shadow education may have a better alternate (or alternates for that matter), think it is not worth it, prefer self-study or use some other strategy to reinforce their school learning. The real focus of research should not be to know which percentage of the students receive shadow education, and which do not. The main focus of investigation should be if those who do not receive it, do it by their own choice or are forced to stay away. If they stay away by their own choice, it may not be logical to say that there is any actual disparity.

Also as it has been mentioned previously, shadow education (unlike education) is not the fundamental human right or basic human need. It is not one of those essentials of life like shelter, food, access to health and education. It is an add-on - something supplementary and optional. One cannot automatically consider that the students, who do not receive it, have actual disparity or being deprived. One has to look at the situation deeply to find out the causes, only then it can be found out if those disparities are 'actual' or just at surface level.

6.1 Limitations and further research

The sample was collected form only four schools in Beijing. Similar kind of research may be carried out on a larger scale or in different settlings to see if this idea of actual disparity is applicable to a larger scale and different setting as well. Actual disparity is based on two things: reasons behind not receiving something, and how one feels about this. The feelings and emotions are better investigated through qualitative research. As this research only uses quantitative method, it does not investigate how the students without shadow education feel. There is a need to carry out qualitative or mixed method research to investigate that part to depict a more comprehensive picture.

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