



Effect of Shadow Education on Students’ Academic Achievement at
Secondary Level

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Abstract

This study investigates the perceptions and effects of shadow education, specifically private tutoring, among secondary school students in district Bagh. The objectives were: to explore students' perceptions of shadow education among those receiving tutoring, and those not, and to compare its effects between the two groups. The research employed a descriptive research design with a quantitative approach, utilizing a questionnaire to collect data from a stratified sample of 17,204 students. Data analysis included t-tests, Mean, standard deviation, and frequency distributions. Using Stratified Sampling Technique the researcher took 300 students as the sample of the study. Key findings indicate that private tutoring significantly enhances academic performance, with students receiving tutoring showing higher mean scores and effect sizes compared to those without tutoring. Despite challenges such as peer influence and financial constraints, students perceived shadow education positively, associating it with improved grades and enhanced concentration. Recommendations include policy initiatives to promote equitable access to tutoring, efforts to address gender disparities, and encouragement for teachers and parents to recognize and support the benefits of private tutoring.

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INTRODUCTION

Most likely, the history of unofficial education precedes that of official education. Emerging trends have caused the nature and scope of education to change over time. Chan and Bray (2014) state that new approaches to learning styles have proven to be more and more successful over time as research and education have grown. According to Sheikh (2013) the shadow education industry is currently the third fastest-growing in the world. A variety of after-school educational programs called shadow education sometimes referred to as private tutoring or supplemental education are offered to kids in an effort to assist them perform better academically (Bray, 2002). In a relatively methodical manner, Later & Bray (2012) expounded on the concept of shadow education. They contended that the metaphor of shadow originates from the reality that shadow education only exists because mainstream education exists and adapts to the latter's changes, and that the latter's overall picture is more distinct than the former's.

Since the year 2000, there has been a significant growth in the private supplemental tutoring system, sometimes known as the shadow education system. Global in scope, this phenomena was traditionally most noticeable in East Asia (Baker 2010). For young people of all ages, Japan has long been recognized for its *juke*, which functions in addition to and alongside the educational system (Roesgaard 2006); the Republic of Korea has a similarly long history with its counterpart *hagwons* (Seth 2002). The shadow sector is now clearly visible not only in Asia but also in other parts of the world. This pertains to after-hours tuition-paying instruction in academic disciplines for secondary and elementary school students. In line with previous research, these classes are referred to as "shadow education" since they essentially mimic the mainstream curriculum, which changes in the shadow as well (Bray, 2020). Studies have demonstrated how temporal aspects of SE assist these companies in avoiding the educational system and securing a place alongside conventional educational institutions, as opposed to trying to displace them (Gupta, 2022).

The research about the function and effects of this kind of tuition is mainly conflicting and incomplete. Zhang (2017) emphasizes how SE can improve student learning, but they also point out that SE serves a variety of functions, such as providing jobs and money for tutors and teachers, childcare for working parents, and a secure atmosphere for teenagers (Manzon, 2014). The social stratification in the uptake of SE, which is available to some pupils but not others, is the literature's main focus, though. According to Bukowski (2017), cross-national comparative research has repeatedly demonstrated that the adoption of SE is significantly influenced by high socio-economic position, household income, and parental education.

A large portion of the study on SE's effects is limited to academic success and advancement into higher education. However, some contend that the empirical data has been erratic, contradicting, and even muddled (Byun, 2014). Furthermore, the benefits of SE on students' wellbeing have frequently been overlooked in favor of a restricted focus on academic achievements. Concerns about welfare have an impact on students' ability to balance their demanding extracurricular schedules with schoolwork, as well as their availability for extracurricular activities like athletics (Bray, 2017). Other negative consequences of shadow schooling include increased workloads for students, financial strains on households, and social injustices (Jung, 2018). This implies that even if knowledge should be freely accessible to students, they must invest money in order to succeed in the non-fee educational system. Students from low-income families who struggle to pay for private tuition are therefore under pressure from shadow schools

(Brehm, 2012). They may not learn as well or be able to compete with kids receiving private tutoring if they don't attend private lessons. Additionally, when viewed through the prism of two erosions inner erosion, which refers to pressures of performance standards (such as examinations); and outer erosion, which refers to "the forces of privatization, marketization, or commercialization"—shadow education is likely to have become a disposition to detach the public education from its real purposes, that is, "education as education of the public, for the public, and accountable to the public" (Biesta, 2021). As a result, shadow education helps to create a threat to public education.

In other words, shadow schooling serves as a buffer against the heavy pressures of competitions and standards (such as exams and school admissions) when they arise. This story may indicate that teachers' favorable attitudes towards the idea of education as standards or contests rather than as a means of preparing students for society's norms put public education at risk (Tesar, et al., 2021). The research introduction highlights the emergence and growth of shadow education globally, focusing on private tutoring and supplemental education, while revealing a lack of localized research in Bagh, Azad Jammu and Kashmir. The gap lies in understanding the specific impact of shadow education on local students, the role of socioeconomic factors, the regulatory environment, and the effects on student wellbeing. Furthermore, research should delve into local attitudes, the erosion of public education, comparative analyses, long-term educational outcomes, and policy recommendations. Addressing these gaps can offer valuable insights and contribute to more equitable education practices in the Bagh region.

Statement of the Problem

The problem addressed in this study is the growing prevalence of shadow education in Bagh, Azad Jammu and Kashmir, and its implications for secondary school students' academic achievement. The shadow education system has gained significance due to perceived inadequacies in the regular school systems, driven by parents' concerns for their children's academic success in a competitive global education landscape. There is a substantial demand for shadow education at all educational levels, not only at one specific point. Because there is competition in the global education industry, parents are more concerned with their children's academic performance. Students claimed that they joined tutors because ordinary teachers were not meeting all of their demands and that they were in need of high-quality instruction (Chan & Bray, 2014). Despite the importance of shadow education, there is a notable gap in research specific to this region, as limited studies have explored its impact. In particular, consumer perceptions regarding the influence of shadow education on students' academic achievement remain largely uninvestigated. Therefore, this study aims to address this gap by examining the influence of shadow education on the academic performance of secondary school students in Bagh, Azad Kashmir.

Research Objectives

1. To find out the academic performance of students taking shadow education
2. To find out the academic performance of students not taking shadow education
3. To compare the effect of shadow education between two groups of students

REVIEW OF LITERATURE

Studies that have hitherto been done have mostly ignored shadow schooling, a third emerging area in education. Shadow education is defined as after-school tuition-only classes offered for a fee that might take the form of one-on-one tutoring or group tutoring at an academy (Khan, 2013). Stevenson and Baker (2001) described shadow education as a series of after-school learning experiences designed to enhance students' formal academic

performance. These include a variety of activities, such as correspondence courses, private home teachers, and academies (commercial after-school programmers). Shadow education is not a new phenomenon. It has existed in various societies. Different forms of shadow education are growing in the world from one to one tutoring to small and large groups and in the form of agencies or academies. With the passage of time, the demands and needs of the students made it an industry i.e. shadow education in a new paradigm. The two basic forms of shadow education are discussed below.

One-on-one tutoring is when a private tutor works with just one student (Wittwer, 2014). In one-on-one or individual tutoring, a single teacher works one-on-one with a student in a usual setting—the student's home (Lee, 2013). In this arrangement, a single tutor provides tuition assistance to a single student at a time. Compared to other forms of tutoring, this one is typically more expensive and more individualized (Bray & Kwo, 2014).

It would appear that one-on-one tutoring requires little to no classroom management. Additionally, there is flexibility in the duration of lessons, which can be scheduled around learning objectives rather than a schedule, and students receive the teacher's full attention. When a motivated student and an experienced tutor are present, one-on-one tutoring is most effective. Lewis (2015). A private tutor may tutor several students that is called group tutoring or several private tutors may simultaneously tutor several students that are mostly held in organized tuition centers (Wittwer, 2014). In this style of tutoring, students work together in the form of group. Groups can be small as well as large in some societies (Bray & Kwo, 2014). In such institutions, there are often such several tutors who provide private tutoring in small or large groups. Due to having smaller groups in private tutoring, students receive more individualized instruction and actively engaged in learning (Wittwer, 2014). The small and large group tuition establishments use appropriate and suitable approaches to help students get ready for exams. They assist the students by providing the necessary resources, conducting ongoing assessments, providing frequent and prompt feedback, and suggesting sensible study strategies to expedite completion of assignments in a variety of topics. Above all, children receive one-on-one attention—something that is rarely offered, especially in public schools. Group tutoring in shadow education is becoming more and more common since many middle class parents view reputable private tutorial/coaching centers as a matter of social prestige that conveys an air of exclusivity (Sujatha, 2014). Therefore, while group tutoring may not be specifically more effective than one-on-one tutoring, the practices of tutoring and the conditions that may have an impact on students' learning may guarantee the efficacy of the shadow education system.

RESEARCH METHODOLOGY

The purpose of the current study was to examine secondary school students' perceptions of the shadow education system and how it affected their academic performance, so it was a descriptive study. Survey technique was adopted. Descriptive research design is used to systematically collect, analyze, and present factual information about a subject or phenomenon. It aims to provide a comprehensive and accurate depiction of characteristics, behaviors, or attributes of the subject under investigation. This method does not seek to establish causal relationships but rather to offer a detailed description or summary of the collected data. Descriptive research is often used in the early stages of research to understand a topic or to provide a foundation for more in-depth research. Survey research is defined as "the collection of information from a sample of individuals through their responses to questions" (Check & Schutt, 2012). This type of research allows for a variety of

methods to recruit participants, collect data, and utilize various methods of instrumentation.

The female students' population was consisted of 8,836 individuals across all schools; while the male student population was encompass 8368 students. The total population under investigation comprised both male and female students which is 17,204 students. A sample of 300 was selected from the population of 17204 students in secondary school categorized by gender (male, female) from different regions. A stratified sampling technique was employed to ensure that both male and female students from different region were adequately represented in the sample.

The study was conducted by the researcher using a research instrument (Questionnaire). The researcher was adopted questionnaire. The research instrument was consisted of two parts the first part was contained demographic information of the respondents while the second part contain 5 points likert scale statements to assess the effect of shadow education on students' academic performance. The researchers were personally visited the sampled schools and students and distributed the research instrument in the printed form with clear instruction to fill it out. And enough time was given to fill it out and return to the researcher. The data was collected again by researchers.

DATA ANALYSIS

For data analysis frequency, percentage, Mean. Standard deviation, t-test independent sample and Cohens'd value were used.

Table 1: Are You Taking Tutoring facility

Options	Frequency	Percent	Valid Percent
Yes	156	52.0	52.0
No	144	48.0	48.0
Total	300	100.0	100.0

Table 1: Are You Taking Tutoring Facility: Out of the total 300 respondents, 156 students (52%) reported that they are availing tutoring facilities. On the other hand, 144 students (48%) stated that they are not taking any tutoring facility. The percentages show a nearly balanced distribution, with only a slight majority of students (just over half) relying on tutoring. This indicates that tutoring is fairly common among the students surveyed, with more than half seeking additional academic support outside regular classes. However, the gap between those who take tutoring and those who do not is small (just 4%), suggesting that both groups are almost equally represented.

Table 2: Effect of Shadow Education on Students Achievement T-test Result

Factor	Tutoring	N	M	SD	t-value	df	Sig	Cohen s d value
Overall Shadow Education	Yes	156	3.64	.73	3.128	298	.002	0.35
	No	144	3.41	.55				

The independent samples t-test compared the academic achievement of students who receive tutoring (shadow education) versus those who do not. Students with tutoring (N = 156, M = 3.64, SD = 0.73) scored significantly higher than students without tutoring (N = 144, M = 3.41, SD = 0.55). The t-value = 3.128, with df = 298 and p = .002, which is less than 0.05. This indicates that the difference in achievement between the two groups is statistically significant. Thus, shadow education (tutoring) has a positive and significant

effect on students' academic achievement. Cohen's $d \approx 0.35$ this represents a small-to-moderate effect size (Cohen's benchmarks: 0.2 = small, 0.5 = medium, 0.8 = large).

Conclusion

Students who receive tutoring perform significantly better academically than those who do not, with a small-to-moderate practical significance.

Table 3: Effect of Factors of Shadow Education on Students Achievement T-test

Factors of shadow Education	Tutoring	N	M	SD	t-value	df	Sig	Cohen's d value
Learning Attitudes	Yes	156	3.59	.780	3.168	298	.002	0.36
	No	144	3.32	.721				
Teaching Style	Yes	156	4.23	1.84	2.037	298	.042	0.24
	No	144	3.87	1.08				
Problems of tutoring	Yes	156	3.04	.71	.721	298	.472	0.08
	No	144	2.98	.74				
Self Improvement	Yes	156	3.71	.97	2.292	298	.023	0.27
	No	144	3.46	.85				

The table reports independent-samples t-test results examining the effect of different factors of shadow education (tutoring) on students' academic achievement.

1. Learning Attitudes: Tutored students ($M = 3.59$, $SD = 0.78$) scored higher than non-tutored students ($M = 3.32$, $SD = 0.72$). The difference was statistically significant ($t(298) = 3.168$, $p = .002$). This shows that tutoring positively influences students' learning attitudes.
 2. Teaching Style: Tutored students ($M = 4.23$, $SD = 1.84$) rated teaching style higher than non-tutored students ($M = 3.87$, $SD = 1.08$). The difference was statistically significant ($t(298) = 2.037$, $p = .042$). Suggests that students perceive tutoring as offering more effective teaching styles.
 3. Problems of Tutoring: Tutored students ($M = 3.04$, $SD = 0.71$) and non-tutored students ($M = 2.98$, $SD = 0.74$) did not differ significantly ($t(298) = 0.721$, $p = .472$). Indicates that tutoring does not significantly increase or decrease perceived problems.
 4. Self-Improvement: Tutored students ($M = 3.71$, $SD = 0.97$) scored higher than non-tutored students ($M = 3.46$, $SD = 0.85$). The difference was statistically significant ($t(298) = 2.292$, $p = .023$). Suggests tutoring supports students' self-improvement.
1. Learning Attitudes
Cohen's d Significant, = 0.36 (small-medium effect)
 2. Teaching Style
Cohen's d Significant = 0.24 (small effect)
 3. Problems of Tutoring
Cohen's d Not significant = 0.08 (negligible effect)
 4. Self-Improvement
Cohen's d Significant, = 0.27 (small effect)

Interpretation: Tutoring (shadow education) significantly improves learning attitudes, perception of teaching style, and self-improvement, but has little to no effect on students' perception of problems associated with tutoring.

DISCUSSION

The findings from the three tables provide valuable insights into the role of shadow education (private tutoring) in shaping students' academic achievement and related factors. Results revealed that more than half of the respondents (52%) reported availing tutoring facilities, while 48% did not. This near-equal split suggests that tutoring is a widely adopted but not universal practice. Previous studies confirm that shadow education has become a common phenomenon in many countries, reflecting parents' and students' demand for supplementary learning opportunities (Bray, 2021; Byun et al., 2018). The t-test results demonstrated that tutored students significantly outperformed their non-tutored counterparts ($M = 3.64$ vs. 3.41 , $p = .002$). The effect size (Cohen's $d = 0.35$) indicated a small-to-moderate practical effect. These findings align with prior research showing that private tutoring positively contributes to academic performance by providing personalized instruction and additional practice opportunities (Dang & Rogers, 2008; Mischo & Haag, 2002). Analysis of specific factors revealed a nuanced pattern. Tutoring significantly enhanced students' learning attitudes ($p = .002$, $d = 0.36$), perceptions of teaching style ($p = .042$, $d = 0.24$), and self-improvement ($p = .023$, $d = 0.27$). These findings suggest that tutoring not only raises achievement but also strengthens motivation, engagement, and perceived instructional quality (Ireson & Rushforth, 2014). However, tutoring did not significantly affect students' perceptions of problems associated with tutoring ($p = .472$, $d = 0.08$), indicating that students may view challenges such as cost, time burden, or stress as relatively uniform, regardless of participation. Taken together, the results reinforce the notion that shadow education plays a meaningful role in student learning outcomes, but its effects vary across dimensions. While it boosts academic performance, attitudes, and self-improvement, its contribution to addressing systemic challenges in tutoring appears limited.

CONCLUSION

This study concludes that shadow education (tutoring) has a significant and positive impact on students' academic achievement. More than half of the surveyed students participate in tutoring, and these students show higher levels of achievement, stronger learning attitudes, more favorable perceptions of teaching style, and greater self-improvement compared to their non-tutored peers. However, tutoring does not appear to reduce perceived problems associated with supplementary education.

RECOMMENDATIONS

Based on the findings, the following recommendations are suggested:

1. Integration of Effective Tutoring Practices into Schools: Since tutoring improves attitudes and learning outcomes, schools should adopt strategies such as individualized support, interactive teaching methods, and student-centered learning within regular classrooms.
2. Policy Regulation of Shadow Education: Education policymakers should recognize the widespread role of shadow education and consider setting quality standards to ensure that tutoring is affordable, accessible, and pedagogically sound (Bray, 2021).
3. Teacher Training and Professional Development: Training schoolteachers in methods that mimic effective tutoring practices (e.g., differentiated instruction, formative feedback) could reduce students' reliance on private tutoring.
4. Awareness of Tutoring Challenges: Since tutoring does not significantly mitigate its associated problems, stakeholders (parents, schools, policymakers) should work to

minimize issues such as financial strain, inequity, and academic pressure (Byun et al., 2018).

5. Further Research: Future studies should explore long-term effects of tutoring on academic motivation, equity of access, and psychosocial outcomes.

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