

Unit: SPOLM1061: Informing and Evaluating Policy - Research Methods and Analysis

Research proposal title: The impact of Covid-19 on academic performance of children in Delhi public schools.

Word count: 4000 (excl. references and appendices)

EXECUTIVE SUMMARY

The pandemic has had a profound impact on education, and the learning gap has widened dramatically because of school closures imposed by lockdown (Jena, 2020). The research will investigate the impact of covid-19 on the academic performance of children in public schools. Public schools in India are those schools that are funded by the government and these schools provide education at a very low fee or no fee at all. The study will evaluate the reading and writing abilities of public-school students in Delhi in grade 5 and understand the challenges parents and teachers faced in assisting the child in education during school closures. The research will be conducted using mixed methods. Mixed methods are a research approach that employs both qualitative and quantitative tools. Also, the research will be carried out with appropriate ethical safeguards in place to ensure no one is harmed during the research. The findings of the study would be able to direct the Delhi education ministry, as well as the NCERT and the education ministry at the national level, in developing policies and programs which can prepare the schools to absorb similar such shocks in the education sector in the future.

OBJECTIVE AND SIGNIFICANCE

COVID-19 has had an impact on every industry and every human being in some form, with education being one of the hardest hit (Jena, 2020). According to new UNICEF data, COVID-19 lockdowns have resulted in the closure of schools for almost a year for over 168 million students around the world (UNICEF, 2021). Furthermore, almost 214 million children worldwide – or one out of every seven – have missed more than three-quarters of their in-person schooling (ibid). Covid's effects have hindered India's long-term efforts to improve education. India is one of the two countries with the largest number of school-aged children.

With this background, the objective of the study is:

1. Explore the impact of the pandemic on children's academic performance in a public school in India
2. Examine the challenges that parents, and teachers faced in assisting their children with their education during the pandemic.

The objective will be tested out at Delhi Public schools in India and study the academic performance of students in grade 5.

Significance

In India, it has significantly disrupted schooling, with 247 million elementary and secondary school students missing school (ibid). Indeed, in line with the rest of the world, a remote e-learning system was implemented to ensure that learning continued even when the school was closed.

According to a Ministry of Rural Development survey conducted in 2017-18, only 47% of Indian families have access to more than 12 hours of electricity per day (Modi and Postaria, 2020), and only 24% of Indian households have internet access to access e-education (UNICEF report). As a result of everything becoming online during the epidemic, the learning gap between affluent, middle, and low-income households would have widened (PTI and Mondal, 2020). Above all, children from low-income families are more likely to have illiterate parents who send their children to public schools. While public school education is notorious for its education quality and Infrastructure (Jitendra, 2014), Covid's impact and introduction of technology into education would have further deprived children of any kind of education. As a result, the **study's goal** is to examine the current English

reading and writing status of primary school students (grade five) in Delhi public schools after a year of being impacted by a lack of technology, internet access, and parental inefficiency (acknowledged by literature). It will also investigate what other challenges parents and schools were facing to improve education online.

Delhi is considered because it is India's capital and the country's second most developed (Abhinaya, 2020) and inhabited city (worldpopulationreview.com). The results of a study conducted in a city like Delhi can be utilised to generalise the findings to a degree. The study is only offered to fifth-graders due to a lack of resources, time constraints, and accessibility. It fills a research gap in the literature on Covid's educational influence on public schools in Delhi and the kind of support structure in place because it focuses on government schools and tries to explore the issues faced by parents and schools (if any). Furthermore, this study can also aid in the development of a better understanding of structural issues and based on the findings, suggest better policy interventions to the policy audience, which includes the Delhi Ministry of Education and other district implementing bodies, as well as the Ministry of Education and the National Council of Educational Research and Training (NCERT) at the national level.

RESEARCH QUESTIONS AND HYPOTHESIS

With various sub-questions, three main questions will be addressed:

- 1) The challenges that students encounter between March 2020 and December 2021
 - i. How many people had access to computers and the internet?
 - ii. How many people attended lessons on a regular basis if they had access to technology and the internet?
- 2) How are children's reading and writing skills?
 - i. Can they read and grasp the appropriate text for the class?
 - ii. Can they spell simple words and understand their meaning?
 - iii. At the end of the term, how did the school evaluate the students?
- 3) What other challenges were faced by parents and teachers to ensure that the child has a better education?
 - i. Did their parents assist them with their studies?
 - ii. Were there enough materials and textbooks with the child?
 - iii. Did the school try to modify the curriculum to meet the child's needs?

The first question will aid in developing a knowledge of the situation during the pandemic and filling in the gaps in the public-school literature, as there is no comprehensive literature on public schools. The second question will aid in determining the students' writing and reading abilities. The final question focuses on the challenges to improve education during the pandemic.

LITERATURE REVIEW

This section will go over what is already known about (Bryman, 2012) public education in India, specifically in Delhi. It will also discuss the various studies conducted to better understand the impact of the school closure on education.

This section is divided into 2 sections: public schools pre-pandemic and education during pandemic.

Public school education pre-pandemic

In their research titled Government versus Private Primary School, Gouda et al. (2013) highlights the poor state of the children's reading, writing, and maths knowledge when compared to children who attend private school. At the national level, children at both privately recognised aided and non-aided schools can read stories better (41 and 49 percent, respectively) than children in government-run elementary schools (27 percent). In metropolitan areas, 41% of students in private aided and recognised primary schools can read the narrative, whereas just 36% of students in government-run primary schools can. This is backed up by the findings of the Annual Status of Education Report (ASER 2016), which show that the number of children in Std III who can read at least Std I level material has increased little across the country, from 40.2 percent in 2014 to only 42.5 percent in 2016.

'In 2017-18, Delhi had a total of 1227 government and government-aided schools, accounting for 21.30 percent of all schools in the city, while the share of enrolment in government and government-aided schools was 37.24 percent of all school enrolment in Delhi,' according to the Economic Survey of Delhi 2018-19 report. According to the same survey, kids at Delhi public schools in Class 3 and 5 performed below the national average in mathematics, environmental studies, and language. These findings help the research in setting the basic understanding of the general performance of public schools and help in comparing the past with the present situation

Several pieces of literature suggest the following explanations for poor learning capacities in public schools (these factors differ by state): very high teacher- student ratio: some figures crossing 3 three-digit value; low on infrastructure (Economic survey of Delhi, 2018-19; Krishna, 2017); inefficient teachers, with 31% of them not having a degree (Krishna, 2017); parents illiteracy: some reports highlight that students who have illiterate parents don't touch their textbooks at home and their illiteracy is also the reason for school drop-outs (Sharma, 2015) and the socio-economic status of these children puts a load on them to earn and focus less on education.

The Delhi Economic Survey (2018-19) considers enrolment status, teacher-student ratio (28 per student, greater than the national average of 23), and infrastructure, which lacks computer facilities and a basic playground. However, there is no literature on the impact of illiterate parents on their children in Delhi. The knowledge on the reasons behind the poor performance informs the study of its approach while comparing the situation with much worse off condition i.e., the pandemic

Pandemic

More than 320 million learners throughout all stages of education (Van Cappelle et al., 2021) were impacted by the closure of educational institutions across the country, which moved to the e-learning business, which now includes a network of 1.5 million schools (Modi and Postaria, 2020). When students were pushed to conform to the "new normal" of online instruction, pre-existing learning disparities were exacerbated. Socioeconomic imbalances exacerbated discrepancies in educational access, participation rates, and learning outcomes. According to a report by Azim Premji University, students have experienced "learning regression" because of online and remote learning being significantly less effective than teacher-led, physical classroom learning. According to the report, the experience is comparable across India's vast socioeconomic spectrum (kalra and Jolad, 2021).

The country's current digital gap has made it much more difficult for low-income children to get an education. According to a survey issued by Azim Premji University, over 60% of children do not have access to online learning opportunities. According to Wave 1 of the ASER (2020) study, just 18.3 percent of children enrolled in government schools in rural areas have viewed video recordings, and only 8.1 percent have attended live online classes. This was due to a variety of factors, including a

lack of a smartphone, several siblings sharing a smartphone, and difficulty using apps for online learning, among others. For disabled children, the difficulty of access is exacerbated (Research group, 2020). In addition, the research group found that minimal and ineffective teaching-learning processes, as well as teachers' lack of awareness of digital platforms or their use, coupled by a lack of training and support, contributed to Learning Regression (A. K. Singh et al., 2020). According to a survey conducted by Azim Premji University, 92 percent of children in all grades have lost at least one specialised language and 82 percent have lost a mathematics ability from the previous year (Singh, Das and Ravindranath, 2020).

Different tools and different devices approach were taken by the government for youngsters who had no or limited access to technology. However, according to Van Cappelle et al., (2021), utilisation of these services was extremely low, with only 2% of people using radio. As a result, children with no or limited access to technology suffered greatly in terms of learning. However, it is important to note that having access to technology does not ensure higher education (kalra and Jolad, 2021; Van Cappelle et al., 2021)

In 2019, Delhi had just 68 percent internet penetration, which varied according to socioeconomic position and gender (keerley, 2020), leaving 32 percent of the population without access. There isn't a single study that focuses solely on public school children's internet access. There is no sufficient material that does a cross sectional analysis on the impact of pandemic on the education of children from different socio-economic groups and no detailed literature on the challenges faced by parents in assisting their children during pandemic. However, Bhatnagar and Roy investigated how parents supported students in public schools and discovered that most of their assistance was limited to providing mobile phones, reminding their children to study, assisting in the preparation of the timetable, and purchasing stationery for their children.

All this material contributes to the researchers' understanding of the pre-pandemic state of education in general, with a concentration on public schools to some extent. It also gives evidence for the study to begin with a knowledge of the negative perceptions of public schools in India. The study will build on current knowledge and give special attention to the impact of the epidemic on public school children, as well as the primary hurdles that parents confront in assisting their children, which may be exacerbated by their low economic status and illiteracy.

RESEARCH DESIGN AND METHODOLOGICAL APPROACH

This research proposal's philosophical and methodological approach is based on critical realism. It implies that there is a real world out there (Furlong and Marsh, 2018: 205); in this case, the pandemic is real and exists independently, but the pandemic's effects on government school education are shaped in response to the society's social construction, which is divided into haves and have-nots. As a result, the research is based on the idea that social phenomena have deep structural linkages that cannot be observed directly and objectively. As a result, the research will take a mixed-methods approach, integrating quantitative and qualitative approaches. The use of mixed approaches will provide a rich context for studying the impact and issues that the pandemic has had on children's schooling.

Sampling

The main population for this study is the children in grade 5 attending public schools in Delhi, and the second set of population is the parents and the teachers of those children. In Delhi, there are currently 1240 government and government-aided schools (Economic Survey of Delhi, 2020-21) split throughout five zones: West, East, Central, North, and South (cbseportal.com, n.d.). To ensure that schools from all zones are fairly represented, this research will use quota sampling. The information submitted on the cbseportal.com website will be used to contact the selected institutions and to get

in touch with the sample population. The ideal sample size is around 300-350 government schools (Siegle, 2015), however due to time and other resource constraints, 2 schools from each zone will be selected. From the chosen schools, a list of parents, class teachers, and students in grade 5 will be collected and through random sampling technique 10 students from grade 5 will be selected for test and 10 parents and class teacher of grade 5 will be selected for interview and survey.

Quantitative methods

Assessing the reading and writing ability

The Quantitative interview method will be used to examine the pandemic impact on child's academic performance. The academic performance will be judged through the reading and writing ability of the child in grade 5. The research will begin by designing an interview schedule to guide the interviews (Blackstone and Saylor Foundation, 2012). Age-appropriate reading and writing materials will be included in the interview schedule. The sample population of children will be given 2 task- the first one is to read age-appropriate material, and after one minute, they will be asked to explain how much they understand. Their writing abilities will next be tested by asking the same child to spell and write age and grade-appropriate sentences. These two tasks will help in answering the sub question 2 of the research. Also, to separate out the effect of pandemic, the child will be asked to read and write the text of their previous grade. The results will be graded in scale of 1-10: where 10 represents the ability to read and write efficiently and 1 where child cannot do so.

This procedure, however, is not without bias and error because only those pupils whose parents have given permission will be evaluated, resulting in selection bias (Nunan, Bankhead and Aronson, 2017). Furthermore, because not all the children engaged may be in excellent health or able to read and write as well as they could at the time of the examination, grading the children and drawing conclusions may contain mistakes. To reduce the chances of this happening, students will be requested to pre-inform about their status or any other concerns before taking the test. The result will be evaluated only after considering all the pre-informed situations.

Surveying

The other instrument that this study aims to employ is a questionnaire with close ended questions. The aim of this questionnaire is to investigate the challenges faced by parents and teachers in helping the students during pandemic. This research will survey parents and teachers of children in classes four, and five who live in Delhi and attend Government schools to collect data. The surveying method is appropriate in this case, since the goal is to acquire original data for a population that is too large to monitor directly (Babbie, 2010, p.254).

Closed-ended questions and statements will be included in the study's questionnaires. The reasoning behind this is to ensure that we receive clear responses from the responders. When constructing closed-ended questions and statements (for example, did the parent invest more time in helping their child than before) keep the following in mind: If the respondent's replies do not match the list (yes/no), an extensive list of possibilities will be presented, including the category "Other (Please specify:)". Clear, basic text will be utilised, and "double-barrelled inquiries" (ibid) shall be avoided for the sake of simplicity. Because the same questionnaires will be presented to two different groups of people, any question that does not pertain to the respondent will be marked as non-applicable. The survey will look into a variety of factors, such as technology availability and how parents assisted their children. It will also inquire about the school's support provided through the curriculum and other means, as well as how the kids were assessed.

As mentioned earlier, the participants will be recruited using the contact information of the school. Given the internet's limitations, as suggested by the literature, a computer-assisted telephonic interviewing tool will be employed to interview both parents and teachers. There are also various other benefits of the tool, such as low cost, speed, simplicity, respondent safety, and interviewer

support. (Babbie, 2010; Vehovar, Slavec, and Berzelak, 2012; Vehovar, Slavec, and Berzelak, 2012). The computer-assisted system will allow the researcher to type the response in real time and start analysing the data before the respondent answers to all the questions in the survey (Babbie, 2010, p.282) The drawback of a high non-responsive rate will, however, be mitigated by using mixed modes: the target sample will receive a text, then a phone call offering them the option of a telephonic or web survey, and the survey will be done based on their response (Vehovar, Slavec, and Berzelak, 2012).

Qualitative method

Interviewing

Along with the survey, qualitative interviews will be done with some of the same parents and teachers. This will supplement the data collected from surveys and provide a deeper knowledge of the broader issues. The qualitative interview's epistemology is more constructionist than positivist, allowing participants to be seen as meaning producers rather than passive receivers of data (Gubrium and Holstein, 2001). The interviewees' perspectives can be obtained in this style of interview (Bryan, 2015). The interview will be conducted in a semi-structured format, which means that an interview guide will be developed outlining board subjects, and the interviewee will have the freedom to respond as they see fit (ibid), but all board topics will be covered by the end. It will concentrate on questions such as what difficulties teachers and parents encounter in assisting the kid and what hurdles teachers face in enhancing the child's learning abilities.

Due to constraints such as Covid and geography, these interviews will be conducted via online services such as Zoom or Skype. Only individuals who own a phone, have a good network connection, and are ready to serve as respondents will be included in the sample (Palinkas et al., 2015). This method causes bias in opinions; nonetheless, a telephonic qualitative interview would be explored, if possible, to obtain the opinions of persons who do not have access to the internet.

Teachers may feel intimidated and fear losing their jobs if they answer honestly, and thus conceal the truth, which will not be a real reflection of their perspective and will make it impossible to generalise the findings. To avoid this, the respondents would be made aware of the information's anonymity as well as their own identity.

How will the data analysis take place?

Many studies have combined inductive and deductive methodologies for improved data analysis, and this study will do the same (DeCarlo, 2018).

It will begin with a deductive approach (Babbie, 2010), beginning with a broad observation of poor online learning outcomes and progressing to a closer examination of the specific circumstances of public schools in Delhi.

The data analysis will begin by entering on data spreadsheet each student's test scores on two tests taken (Grade specific test and previous grade test), and then calculate the percentage of persons who improved or worsened on the second test. Students who scored well will be excluded in order to better understand the causes for poor performance. The survey responses will now be tabulated, and the percentages of each characteristic will be compared to others. for example: suppose 70% of parents of those children who didn't perform well says that they are illiterate and similarly 85% of them says they had only one phone in house- these percentage will be used to analysis the major factors that effected the education. This will reveal the variables that influenced the child's performance. The results from this analysis will deeply inform the topics of the interview. The aim of the interview is to gain deeper understanding of the challenges faced in supporting children and improving the learning ability. Thus, inductive approach will be applied to develop a theory that could explain the patterns. Excel will be used do the enter the data and perform the calculations.

The interview will be transcribed verbatim using Nvivo with comments for behaviour (e.g., hesitating, halting) and phonetic transcription of dialects and filler words (Busetto, Wick, and Gumbinger, 2020)

Thus, the interviews will support the information collected through statistical analysis and add weightage to the policy recommendation at the end.

ETHICAL CONSIDERATIONS

This study will adhere to all ethical guidelines that apply to social research (Babbie, 2010). It is primarily guided by the six core ethical standards of the UK Economic and Social Research Council (Economic and Social Research Council, no date). These are the following:

1) Maximize gain while minimising harm

Human research should never harm the individuals being studied, regardless of whether they volunteer for it (Babbie, 2010). As a result, the study will take special care to minimise any risk to the participants by keeping the respondents' identities hidden.

Because this study focuses on the Covid-19 impact on public schools, it intends to assist society by expanding knowledge of a child's reading and writing abilities and the causes behind it.

2) Individual and collective rights and dignity are respected.

Anonymity and secrecy are two strategies that will aid the research in this regard (Babbie, 2010). Because the research entails assessing the child, which may be intimidating to the child who fears expulsion from school or other unknown fears, all names and identities will remain confidential, and I will assure the teachers and parents that their identities will remain anonymous throughout and after the research.

3) A willing and well-informed participant

A consent form will be created with the various types of responses in mind, and each participant will be asked to sign it if they agree with it; in the case of children, the consent form will be signed on their behalf by their parents. Throughout the study, all volunteers will have the option of withdrawing their involvement at any point. They will also have the option to withdraw their whole data at any time during the research. As this involves children, it will be ensured that they have a good knowledge of the research's goals, and that the objectives and needs of the research will be effectively explained to their parents.

4) Conduct research with integrity and transparency

The research will be conducted in accordance with the norms for preserving professional standards and expectations, as well as all other measures that will ensure the openness of the research's findings (www.bath.ac.uk, n.d.).

5) Responsibility and accountability to be defined clearly

As the researcher, it will be my responsibility to be accountable for the research's actions and outcomes. I will assume responsibility for ensuring that all necessary safeguards are followed to the greatest extent possible while doing this research (Code of Conduct for responsible Research, 2017)

6) Maintaining research independence and avoiding conflicts of interest must be avoided and made explicit.

Any impartiality and judgments on my part will be set aside while conducting interviews and surveys to avoid any conflict and maintain confidence in the research outcomes. To keep this up, I'll keep re-evaluating respondents' impressions and challenging pre-existing assumptions and theories (Sarniak, 2015).

ANTICIPATED POLICY IMPACTS

The deplorable circumstances of public schools in India are well documented in the literature (ASER, 2021; Economic survey of Delhi). With a growing number of kids attending public school because of economic hardship (Shree, 2021), it is critical for the government to act quickly and effectively to improve school learning capacity. As a result, this study will assist policymakers in the field of education in framing policies that are relevant to the current day to improve education in public schools.

New recommendations may arise other than pushing private-public partnerships Karunakaran, (2017). For instance: District administrators can be given the autonomy to design the policies that falls within the needs of their zone, free education for parents so that they are able to support their child, or training of the teachers to redesign curriculum and so on.

Furthermore, apart from education, it can also direct towards improving the life of a child at home and how parents can be better equipped to help and support their child. Thus, this research can have a wider implication for policy design.

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