



**DEPARTMENT OF FINANCE AND BUSINESS
ECONOMICS**

UNIVERSITY OF DELHI

**Effect analysis of covid-19 on education with
respect to different income, Gender, rural
/urban Area and Employment in India**

Project Work

by

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1. Introduction

1.1 Background –

The pandemic COVID-19 is the most impactful incident in history after the Second World War, which has shattered every aspect of human life. The World Health Organization proposed an official name of the virus, emerged from Wuhan, China, as COVID-19 which is an acronym for corona virus disease on 11 Feb, 2020. In India on 30 Jan, 2020 the first case of covid -19 was registered. Since then the numbers of COVID-19 are increasing and changing every seconds. The pandemic nature of COVID-19 forced the world to adopt the lock down to prevent the spread of COVID-19. Lockdown severely affected the educational institute in India. It is estimated that more than 90 % of the total world's student population was affected during mid April due to COVID-19 crisis. Lockdown suspended the classes, examination, internships for a long period. This situation created confusion and disturbance among the teachers and students including primary to higher education institutes. After sometime, online teaching and learning tools used by teachers and students to carry on their educational activities

As we know Education has been a **key component** to measure development changes over time and between countries. Its **effects** range from **poverty** and **inequality reductions** to paving the way for **sustained economic growth**. Other benefits of education include **higher wages, social mobility, useful life skills, improved discipline** and willingness to change.

- *Indian government has imposed one of the **longest school closures** globally as it suffered through multiple waves of the COVID-19 pandemic. These school closures **have revealed the inequities between urban and rural populations, as well as between girls and boys, in adapting to online learning tools.** A more **distressing** impact has been the surge in the number of **dropouts**. Prior to the pandemic, education in rural areas was seen as a **trade-off**, where going to school meant an inability to help parents earn a **living on the farm** or in a shop.*
- During the pandemic, many families were **unemployed, financially stressed or in debt**. This gives rise to the possibility that many parents in the rural areas may not send their children back to school so as to help the family financially. The pandemic has hit everyone but the affects vary from person to person and people from marginalized communities are affected disproportionately, especially the women. The already existing unequal structures of the society are exposed by this pandemic. The affect of lockdown on the educational system across the country, leading to the closures of all educational institutions has further worsened the condition of female education in India. This work deals with the major impact of COVID 19 pandemic on female And rural education in the country

1.2 Relevance/objective of the Study

- Through the findings of this research project, we will be able to identify the impact of COVID 19 on School and college students With respect to different income class and Gender, Jobloss, which will help us understand a overall impact that students in rural area and girl student have had to face in times of the COVID.
- To identify how covid led employment loss and migration which led to income loss of family. This led to different effect on education in male/ female student in different rural area or urban area.

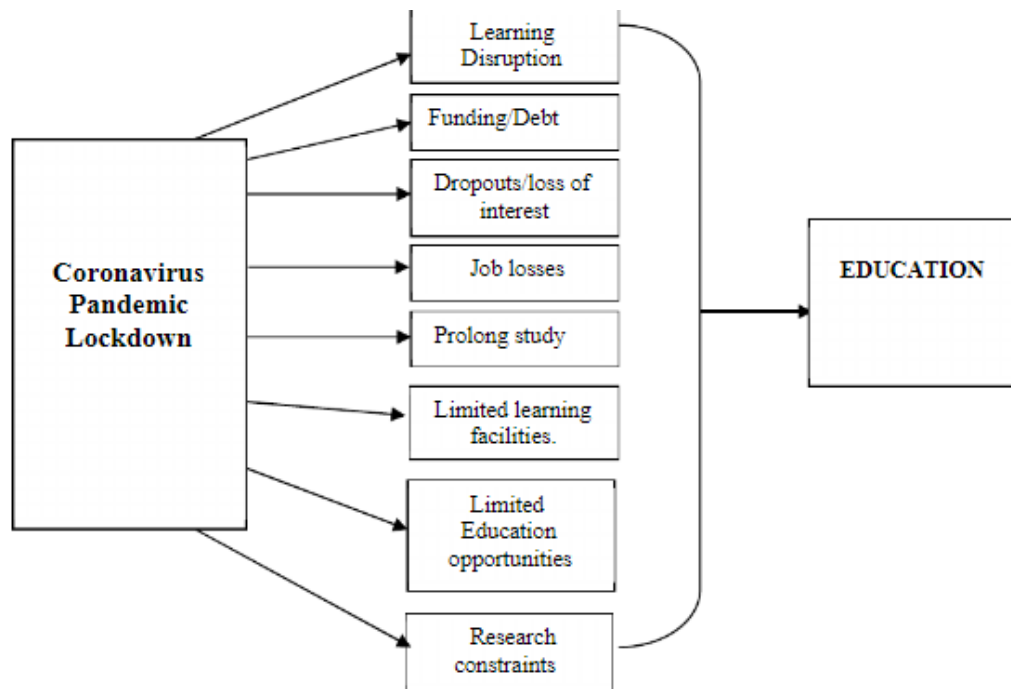
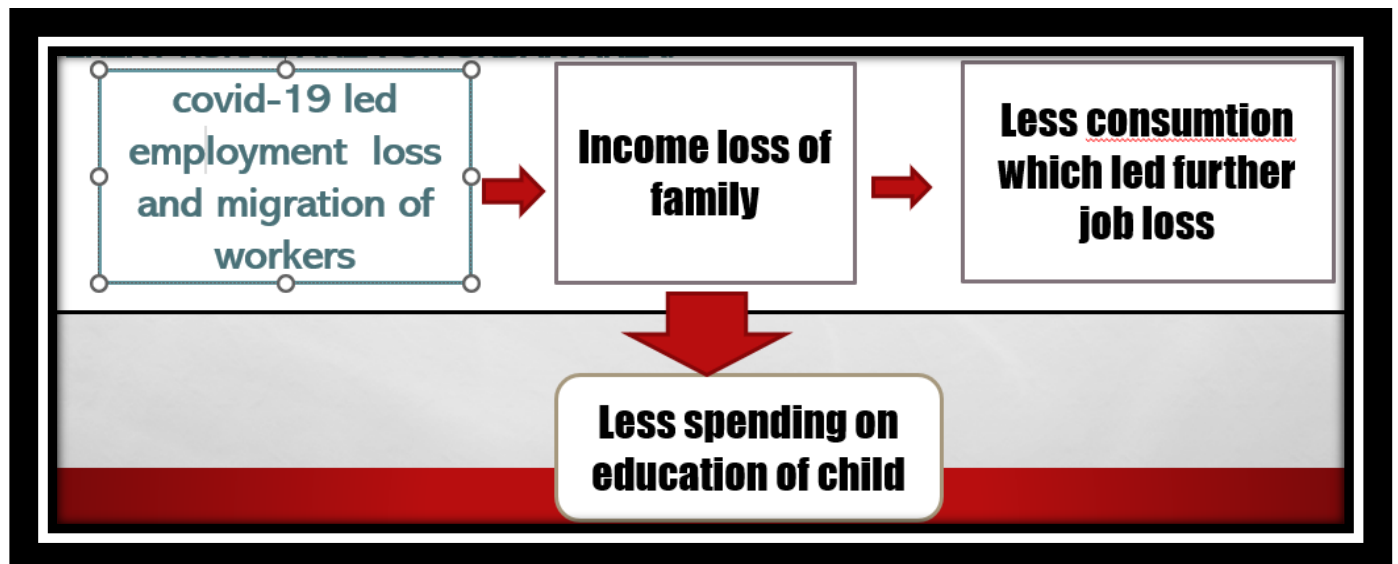


Figure 1: Conceptual Framework of the Study (Source: Researcher)



2. Previous studies and literature review

2.1 Background

Lockdown is pivotal and effective step taken by the Indian Govt.. But at the same time around more than 2 hundred countries in the world, majority of them are investing huge amounts of money in education sector to uplift their countries by boosting diligent ones who yearn to prove their valour in any field .In our country unfortunately this sector is run by bureaucrats selected by ruling parties who have no experience .The more we bureaucratize the education system the more it will fall down. The trauma can be solved only by establishing modern systems equipped with scientific technologies and scrupulous teachers. This will definitely yield paramount mountains

and help in solidification of education system. Without investing there will be no change and if done it should be utilized in a proper-proper manner .Internet the attention grabbing blessing of science is crippled in the India's most of population lives in rural area. As 4G internet service is still not available in many of the rural area.one can guess how adversely it had affected the education sector .Some zealous teachers started to teach on Google class room , YouTube but it too needs fast internet speed , on 2G service it pinches and creates frustration . Moreover not everyone in the country can afford smartphones to attend YouTube lectures.

Following studies have been conducted before on this topic We will carefully examine each of them

2.2.1 Pandemic COVID-19: An empirical analysis of impact on Indian higher education system (P. Churi, 2021)

- *Objective- To confirms the effects of Covid-19 on Higher Education Institutions in India. .*
*Analyzing the **consequences of pandemic on teaching and learning system** in different states in India and the impact of the same on tertiary education as well.*
- *Methodology--illustrative and **informative structured surveys** and library analysis are used to gather the data, analyzed in this research. The gathered data analyzed through **chi sq. measurable instrument** at five percentage level of significance*
- *Major Finding-- The examination and analysis revealed that viral outbreak has significant effects on Higher Education Institutions in India.*

2.2.2 Analysis of the COVID-19 impacts on employment and unemployment across the multi-dimensional social disadvantaged areas(Anzhelika Antipova, 2022)

- *Objective- 1. study of economic impacts in the context of social disadvantage. It specifically considers economic conditions in regions with pre-existing inequalities and examines **labor market outcomes**.*
- *Methodology--Used a **comparative assessment** approach to analyze the COVID19-based labor market outcomes including the rates of COVID-19- related employment and unemployment And test the hypothesis*
- *Major Finding-- Some socio-economic and demographic conditions consistently and significantly impact some communities more often than others*

2.2.3 EDUCATION IN RURAL INDIA : A STATISTICAL PROFILE (Jandhyala B.G. Tilak, 2021)

- *Objective- 1. Examine the progress of EDUCATION rural Area and compare it with that of urban areas..*
- *Methodology--Statistical analysis with secondary data on education enrollment and literacy rate*
- *Major Finding-- In absolute as well as relative terms of rates of growth, we noticed that with respect to all the four variates, viz., number of institutions, enrolments, teachers . More data needed for study.*

2.2.4 Geographic and gender disparities in global education achievement during the COVID-19 pandemic (Mengfan Wu a , Qiwei Yu, 2021)

- *Objective- 1. To study the global learning losses of students due to the COVID-19 in 2020.*
- *Methodology--Harmonized Test Scores (cognitive competence of student).**Descriptive statistics** of HTS in different regions and income-level groups*
- *Major Finding-- Results reveal both global learning losses and gender inequality in learning scores due to the COVID-19 pandemic.*

2.2.5 Investigating the Status of Women Engineers in Education and Employment during the COVID-19 Pandemic (Seema Singh, 2021)

- *Objective- The link between higher education and gender-role attitudes in employment.*
- *Methodology--Descriptive Analysis of Secondary Data. Research An independent-samples t-Test is a statistical method,*
- *Major Finding-- This paper shows that the impact of COVID-19 is not significantly different between genders in engineering education and employment,*

2.2.6 Covid-19 impacts on unemployment on the migration-gender intersections in Spain, a multilevel study Socio-economic effects of COVID-19 -a study of the University students and teachers in Pakistan. (Núria Pedrós Barnil,2022)

- *Objective- Study aims to assess and explore the short-term impacts of the pandemic on the labor market in Spain, through the intersectional and multilevel analysis of unemployment rates*
- *Methodology- **Cross-sectional study** using data from the Spanish Labour Force Survey from the three quarters before and after the outbreak of covid-19. Multilevel logistic regressions were used to calculate the odds of being unemployed for the intersectional positions on gender and migration background*
- *Major Finding-- The pandemic affected **women's employment unequally**. Migrant women experienced an increase in the risk of being **unemployed 6 times larger than native women**. Migrant women are disproportionately bearing the short-term economic consequences of the pandemic.*

2.2.7 Investigating the Status of Women Engineers in Education and Employment during the COVID-19 Pandemic (Seema Singh, 2021)

- *Objective- The link between higher education and gender-role attitudes in*

employment.

- *Methodology--Descriptive Analysis of Secondary Data. Research An independent-samples t-Test is a statistical method,*
- *Major Finding-- This paper shows that the impact of COVID-19 is not significantly different between genders in engineering education and employment,*

2.2.8 . COVID-19 and its impact on education, social life and mental health of students(K. Chaturvedi, 2021

- *Objective- the impact of COVID-19 on the students of different age groups: time spent on online classes and self-study, medium used for learning, sleeping habits, daily fitness routine, and the subsequent effects on weight, social life, and mental health*
- *Methodology-19-set questionnaire was developed, which included a variety of multiple-choice questions, Likert scale and for a few questions, the respondents were allowed to enter free texts. non-parametric test was used to assess the significant difference in the time spent*
- *Major Finding-- his study analyses the impact of different factors to measure stress levels among students. Alarminglly, 51.4% of respondents reported that they did not utilize their time during the period of lockdown.*

2.3 Objectives

To analyse the impact of covid-19 in india

- To analyze the impact of covid-19 On different income level student and their education
- To analyze the impact of covid-19 on rural / urban child on their education
- To analyze covid-19 impact on girl's education
- To Analyze impact of covid 19 job loss (unemployment) on child's education.
- To analyze Impact of covid 19 led learning loss on different level (primary/higher/college/research) of education

2.4 Research Gap

This research aims to address a gap in the evidence by specifically seeking to better which factors are Education and COVID centric and how they have been impacted the Children Education. This cut has been made across the countries to give a world comprehensive view and to be able to understand whether the disproportionate impact of COVID-19 on Education is a Demographic geographic specific issue/phenomenon. Most of research done on specific areas or group like how covid effect on higher education , social disadvantage groups, labor market. Not much on their interrelation.

Following Research Gap identified in our Literature review -

1. There is not much research on School enrollment effect After covid 19
2. How Unemployment, layoff ,Migration Loss of income affected school/college enrollment in India.
3. Studies are on mental health, other effects due to online classes on students. Not much on the learning loss of student of student in rural area, low income class in India.
4. Only media articles are on effect of covid on female education in india . Most research on effect of covid19 on global level are on global level or on foreign countries.
5. Most of research include only secondary data, media articles, govt statistics. primary survey. But not both type of data.

3. Objectives and Hypothesis

Objectives

To analyze the impact of covid-19 on Education in India

- To analyze the impact of covid-19 On different income level student and their education.
- To analyze the impact of covid-19 on rural / urban child on their education .
- To analyze covid-19 impact on girl's education.
- To Analyze impact of Covid-19 job loss (unemployment) on child's education.
- How student learned during covid school closure. Use of Govt. Platforms in learning
- To analyze Impact of Covid-19 led learning loss on different level (primary/higher/college/research) of education.

Hypothesis

H0: Null hypothesis

H1: alternate Hypothesis (opposite to null)'

These are null hypothesis we are going to test

1. H0: There is a no relationship between Level of income of family and student able to attend online class or got education during Covid-19.
2. H0:Govt. based free E-learning platform helped student in learning During Covid-19.
3. H0: there is no effect on enrolment of girl student in school and college due to covid
4. H0:there is relationship between type of institute student studying and school language instruction medium with respect to Income and Region of living of student.
5. H0 : There is no effect of job loss and income decrease on education of child in different area

4. Research Methodology

First, I will collect secondary cross-sectional data and do data analysis based on that analyse the various factors and test the hypothesis.

Then, I will adopt a quantitative approach and use a cross-sectional survey for data collection that includes information collected through questionnaire-based on students learning experience of different type of students in different regions of india.

After that I Will Analyze the relationship between dependent and independent variables

5. Data Sources and Description

5.1 Secondary data collection

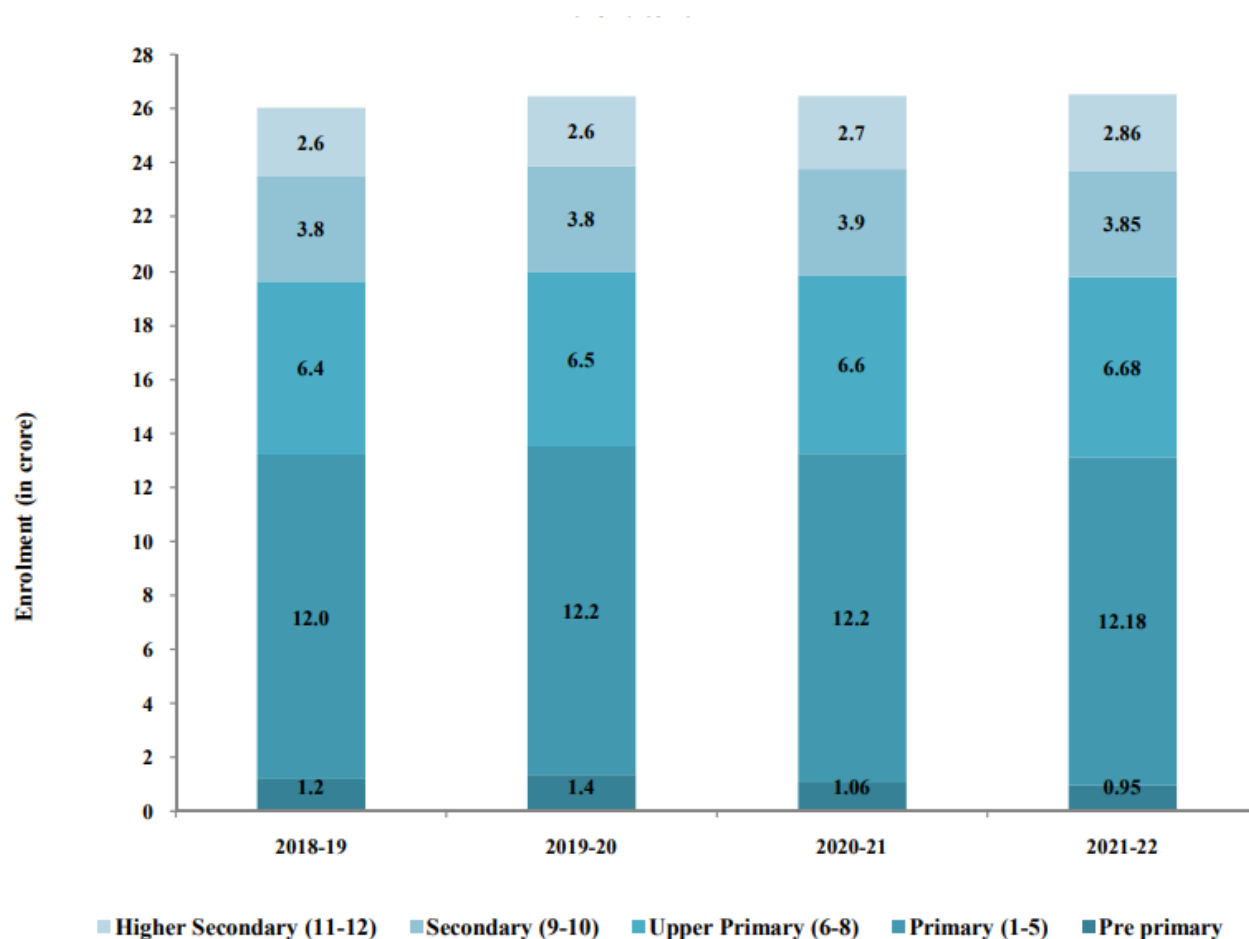
The Indian school Education System is one of the largest in the world with nearly 14.89 lakh schools, more than 95 lakh teachers and nearly 26.52 Crore students of pre-primary to higher secondary level from varied socio-economic backgrounds.

The system strives to maintain standards and uniformity across the country while giving ample scope for the country's diverse culture and heritage to grow and flourish.

Distribution of School in india Accourning to management.

School Management	PS (I-V)	UPS (I-VIII)	HSS (I-XII)	UPS (VI-VIII)	HSS (VI-XII)
Department of Education	465992	152039	16929	64398	21673
Tribal Welfare Department	26909	5729	620	1818	745
Local body	138661	47664	228	235	187
Government Aided	17692	12010	5836	9087	6977
Private Unaided (Recognized)	85945	106292	38190	16810	7053
Other Govt. managed schools	306	154	134	158	285
Unrecognized	11238	11103	160	484	12
Social welfare Department	389	163	344	31	125
Ministry of Labor	153	14	0	2	0
Kendriya Vidyalaya / Central School	14	58	981	0	1
Jawahar Navodaya Vidyalaya	0	1	4	9	564
Sainik School	5	1	15	3	32
Railway School	11	2	35	1	8
Central Tibetan School	3	2	8	0	2
Madarsa recognized	11188	5871	694	512	21
Madarsa unrecognized	1943	979	145	164	5
Other Central Govt. Schools	11	10	43	1	11
Total	760460	342092	64366	93713	37701

Enrolment of students-The total enrolments and enrolments of boys and girls for the years 2018-19 to 2021-22 for different levels of education namely, pre-primary, primary, upper primary, secondary and higher secondary.



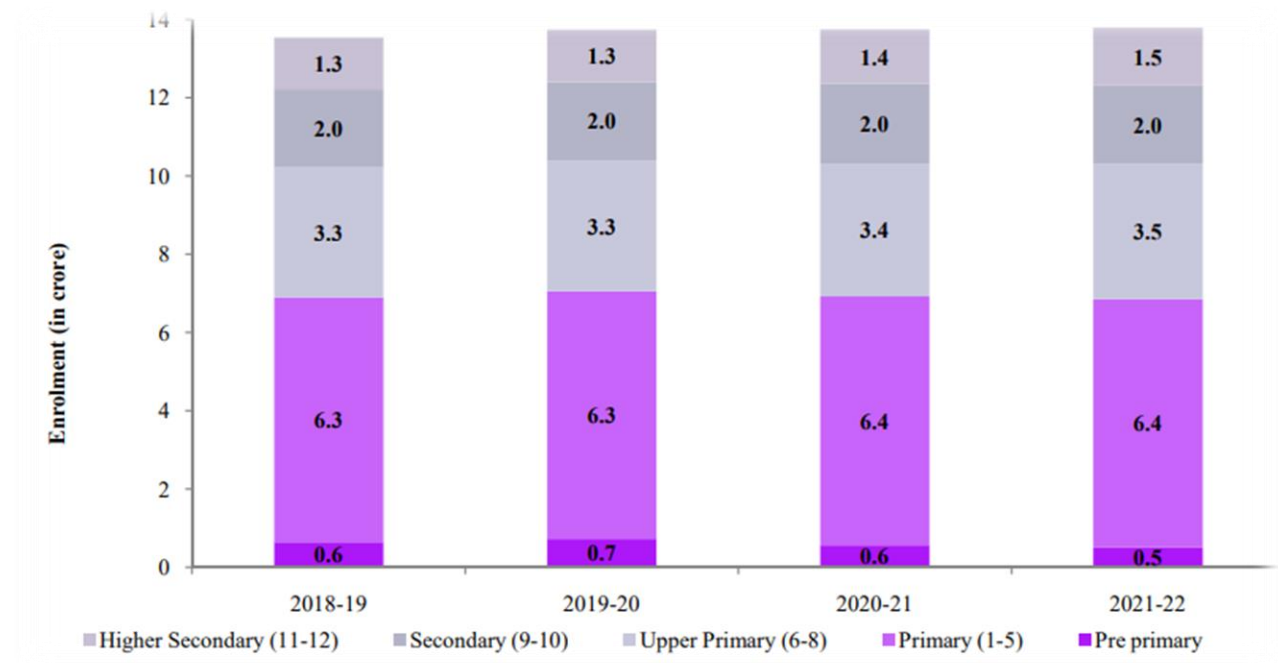
Effect of covid 19 on enrollement

- Although the impact of the COVID-19 pandemic is cross-cutting, this is particularly noticed in the enrolment of young and vulnerable kids like pre-primary, class 1 and Children With Special Needs (CWSN) may be attributed to postponement of admissions due to COVID-19.
- In 2020-21 enrolment of students in school education from primary to higher secondary is around 25.4 Crore. This is higher by 28.3 lakh as compared to the enrolment of students in 2019-20.
- However, enrolment of students in pre-primary level and class 1 has reduced by 29.1 lakh and 18.8 lakh respectively in 2020-21 as compared to 2019-20.
- This may also be due to postponement of school admission of young children during pandemic.
- Total enrolment of Children With Special Needs (CWSN) in 2020-21 stands at 21.69 lakh as compared to 22.49 lakh in 2019-20 showing a decrease of 3.55% during 2020-21 as compared to 2019-20.

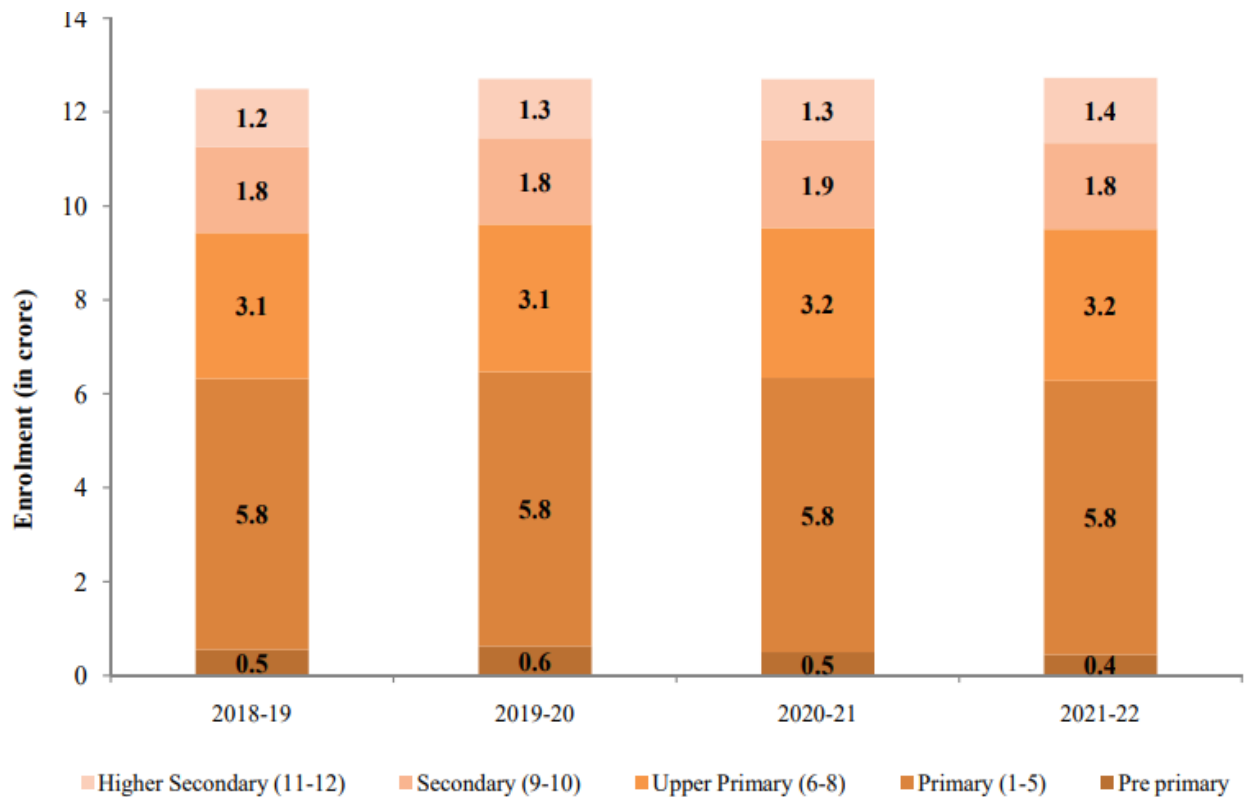
- More than 82% schools conducted medical check-up of students in 2019-20. This percentage has dropped drastically to 50% in 2020-21

Total enrolment in schools (Class 1 to 12) has increased by 1.12 % in 2020-21 as compared to 2019-20

ENROLLMENT OF BOYS --



ENROLLMENT OF GIRLS IN SCHOOL --



Number of school decreased due to school closure in covid

	2020	2021
Total Number of Schools	1509136	1489115
Total Private Unaided Recognized Schools	343314	335844

	2020	2021
Total Number of Enrolments (Pre-Primary to Higher Secondary)	264449987	265235830

Internet facility in school-

Half of school does not have internet facility or computer

	2020	2021
Percentage of schools having computer facility	41.25	47.51
Percentage of schools having internet facility	24.51	33.91

8.4.2 Questionnaire –

I will include both hindi and English language questions for survey to better understanding of question.

1. Name (optional)

Short answer text

2. Region

- ☐ urban
- ☐ semi-urban
- ☐ Rural

3. Gender

- ☐ Male
- ☐ Female
- ☐ Other

4. Which Class or Course are you currently pursuing ?

- ☐ 1- 8 class
- ☐ 9-12 class
- ☐ Graduation
- ☐ Post-graduation/ research

5. Medium of instruction in your school(in which medium you taught in school)?

- ☐ Hindi
 - ☐ English
 - ☐ Regional /Mother-tongue language
-

6. Is Enrollment in your class decreased after covid-19?

- ☐ yes
 - ☐ no
 - ☐ don't know
-

7. State- where you studying/studied ?

Short answer text

8. What is your current annual family income ?

- ☐ less than 1 lakh
- ☐ 1 lakh to 2.5 lakh
- ☐ 2.5+ lakh to 5 lakh
- ☐ 5+ lakh to 8 lakh
- ☐ 8+ lakh to 12 lakh
- ☐ 12+ lakh to 18 lakh
- ☐ 18+ lakh

9. What is your family's main source of income –

- ☐ self-employed/Business
- ☐ Agriculture
- ☐ regular wage/salary earning
- ☐ casual labour
- ☐ Other...

10. What is effect of covid-19 on your family income ?

- ☐ No Effect
- ☐ Income decreased by 10% due to covid
- ☐ Income decreased by 20% due to covid
- ☐ Income decreased by 33.33% due to covid
- ☐ Income decreased by 50% due to covid
- ☐ Income decreased by 75% due to covid
- ☐ Lost job/ layoff / business Shut down

11. What is your education expenditure per year by your parents-(School + hostel/living expenses+ stationary+ other)

- ☐ below 10,000
 - ☐ between 10,000- 25,000
 - ☐ between 25,000- 60,000
 - ☐ between 60,000- 1,00,000
 - ☐ between 1,00,000- 1,50,000
 - ☐ 1.5 lakh to 3 lakh
 - ☐ 3 lakh+
-

12. how many siblings do you have?

- ☐ 0
- ☐ 1
- ☐ 2
- ☐ 3
- ☐ 4+

13. Had your school or college give online classes to students ?

- ☐ Yes,
- ☐ No
- ☐ yes, but not regular

14. Did you have availability of device(laptop /smartphone) for attending online class or internet connection ?

- ☐ Yes
- ☐ yes , but internet does not work well in our area
- ☐ No, i have to share with others

...

15. Which type of institute are you studying/studied ?

- ☐ Government School/ college
- ☐ private school/ college
-

16 .Did you use any Govt. online E-learning platform during Covid-19?

- ☐ Swayam
 - ☐ Nptel
 - ☐ Diksha
 - ☐ e-PG pathshala
 - ☐ other
-

17. which online platform did you use most for your learning ?

- ☐ Youtube
- ☐ Paid platform like coursera/Udemy etc.
- ☐ Paid online coachings
- ☐ other
- ☐ None

1. नाम: (वैकल्पिक)

Your answer

2. जिस क्षेत्र में आप रहते हैं

- ☐ शहरी
- ☐ अर्ध शहरी
- ☐ ग्रामीण

3. Gender

- ☐ Male
- ☐ Female
- ☐ other

4. आप वर्तमान में कौन सी कक्षा या पाठ्यक्रम कर रहे हैं?

- ☐ 1-8 वर्ग

4. आप वर्तमान में कौन सी कक्षा या पाठ्यक्रम कर रहे हैं?

- ☐ 1-8 वर्ग
- ☐ 9-12 वर्ग
- ☐ Graduation
- ☐ Post-graduation/ research

5. आपके विद्यालय में शिक्षा का माध्यम (आपने विद्यालय में किस माध्यम में पढ़ाया)?

- ☐ हिन्दी
- ☐ अंग्रेज़ी
- ☐ क्षेत्रीय/मातृभाषा

6. क्या कोविड-19 के बाद आपकी कक्षा में नामांकन कम हो गया है?

- ☐ हां
- ☐ नहीं
- ☐ पता नहीं



8. आपकी वर्तमान वार्षिक पारिवारिक आय क्या है?

- ☐ 1 लाख से कम
- ☐ 1 लाख से 2.5 लाख
- ☐ 2.5 लाख से 5 लाख
- ☐ 5 लाख से 8 लाख
- ☐ 8 लाख से 12 लाख
- ☐ 12 लाख से 18 लाख
- ☐ 18 लाख से अधिक

9. आपके परिवार की आय का मुख्य स्रोत क्या है -

- ☐ व्यवसाय
- ☐ कृषि
- ☐ वेतनभोगी नौकरी
- ☐ दैनिक वेतन भोगी
- ☐ Other: _____

10. आपकी पारिवारिक आय पर कोविड-19 का क्या

10. आपका पारिवारिक आय पर कावड-19 का क्या

प्रभाव पड़ा है?

- ☐ कोई प्रभाव नहीं
- ☐ कोविड के कारण आय में 10% की कमी आई
- ☐ कोविड के कारण आय में 20% की कमी आई
- ☐ कोविड के कारण आय में एक तिहाई की कमी आई
- ☐ कोविड की वजह से आमदनी आधी हो गई
- ☐ कोविड के कारण आय में 75% की कमी आई
- ☐ नौकरी छूटना/छंटनी/व्यापार बंद होना

11. आपके माता-पिता द्वारा प्रति वर्ष आपकी शिक्षा का खर्च क्या है - (स्कूल छात्रावास / रहने का खर्च स्टेशनरी अन्य)

- ☐ 10,000 से नीचे
- ☐ 10,000- 25,000 के बीच
- ☐ 25,000- 60,000 के बीच
- ☐ 60,000- 1,00,000 के बीच
- ☐ 1.5 लाख से 3 लाख
- ☐ 3 lakh+

12. आपके कितने भाई बहन हैं?

- ☐ 0
- ☐ 1
- ☐ 2
- ☐ 3
- ☐ 4+

13. क्या आपके स्कूल या कॉलेज ने छात्रों को ऑनलाइन क्लास दी थी?

- ☐ हाँ,
- ☐ नहीं
- ☐ हाँ, लेकिन नियमित नहीं

14. क्या आपके पास ऑनलाइन क्लास अटेंड करने या इंटरनेट कनेक्शन के लिए डिवाइस (लैपटॉप/ स्मार्टफोन) की उपलब्धता थी?

- ☐ हाँ
- ☐ हाँ, लेकिन हमारे क्षेत्र में इंटरनेट ठीक से काम नहीं

14. क्या आपके पास ऑनलाइन क्लास अटेंड करने या इंटरनेट कनेक्शन के लिए डिवाइस (लैपटॉप/स्मार्टफोन) की उपलब्धता थी?

- ☐ हाँ
- ☐ हाँ, लेकिन हमारे क्षेत्र में इंटरनेट ठीक से काम नहीं करता है
- ☐ नहीं, मुझे दूसरों के साथ साझा करना होता था

15. आप किस प्रकार के संस्थान में पढ़ रहे हैं ?

- ☐ सरकारी स्कूल / कॉलेज
- ☐ निजी स्कूल / कॉलेज
- ☐ Other: _____

16. क्या आपने कोविड-19 के दौरान किसी सरकार के ऑनलाइन ई-लर्निंग प्लेटफॉर्म का इस्तेमाल किया?

- ☐ Swayam
- ☐ Nptel
- ☐ Diksha
- ☐ e-PG pathshala

16. क्या आपने कोविड-19 के दौरान किसी सरकार के ऑनलाइन ई-लर्निंग प्लेटफॉर्म का इस्तेमाल किया?

- ☐ Swayam
- ☐ Nptel
- ☐ Diksha
- ☐ e-PG pathshala
- ☐ Other

17. आपने अपनी पढ़ाई के लिए किस ऑनलाइन प्लेटफॉर्म का सबसे ज्यादा इस्तेमाल किया?

- ☐ Youtube
- ☐ Paid platform like coursera/Udemy etc.
- ☐ Paid online coachings
- ☐ other

 Submit Clear form