



Study of the Gap between Policy Intent and Implementation: Digital Disparity in Indian School Education

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ABSTRACT

Bridging the gap between policy intent and implementation is the focus of this study. The gap results from the absence of a connection between implementers and policymakers. The next step after creating a policy is putting it into action. How will the digital divide in education be addressed by proactive digital initiatives? An appropriate research area in West Bengal, India, with a diversified population and Mult economic representation, is the South 24 Parganas model, which serves as the basis for this researcher's article. By employing the snowballing technique to gather genuine primary data and conducting in-depth interviews across three sizable zones, the issue of the digital divide in education will be resolved. The analysis based on case studies illustrates the true extent of digital disconnection by geography and the digital divide between public and private schools. This study outlined several initiatives that may be equally applied globally, given that digitalization is becoming the norm for all organizations, services, and educational institutions.

Keywords: Digital Disparity, Digital Literacy, Digital Inequality, Digital Ambassador, Digitally Empowered Society.

1. INTRODUCTION

India has the world's second largest school system. COVID pandemic had open up the educational inequalities and compounded the existing disparities. India government had already endorsed the country as the flag bearer of the digital revolution as it is supported by New Education Policy (2020). But we all know India is a diverse, multilingual country. E- Learning platform instantly cannot replicate the physical classrooms system. If digital learning is the future, the government policy and proactive efforts must go further to address the feasibility of digital practices to ensure a digitally equal society.

In India, the New Education policy, 2020 is based on the key pillars of access, equality, quality, affordability and accountability. The main objectivity of NEP is to revolutionize the traditional; way of learning by introducing new aspect such as digital libraries, online assessment, virtual lab and more.

Why technological support, online mode of education is important? ("School in the Cloud-DW-11/11/2021) Sugata Mitra, the educationist in the year of 1999 put a computer connected to the internet in a hole in a slum in Delhi and left it there to see what would happen. This is popularly known as Sugata Mitra's hole in the wall experiment. The computer attracted a number of slum children who were illiterate. By the end of the first day, they taught themselves to use the internet without knowing what computer or internet were. Next five years Mitra Progressed the experiment on delivering specific knowledge and surprisingly few non-English-speaking students were able to answer the question related to cell biology. According this Model, Knowledge is available online, students are allowed to learn quickly from the internet what they need when they need it. Mitra's model isn't saying that we don't need teachers,

just that we don't need the type of teachers who gives unidirectional instructions. What Students need is a self-organized learning environment.

1.1 The Statement of The Problem

According to ("Two thirds of the world's school age children have no internet access at home, new UNICEF-ITU report says," 2020) report Low levels of digital equipment and expertise still make it difficult to actively participate in a digital society. Over half of India's 1.3 billion population are under 25, making digital insufficiency a significant issue both at home and abroad. In order to eradicate this social unfairness, digital activities in classrooms are crucial. Our next generation will be better prepared for a flourishing digital society if we can embrace digital activities in a positive way. This research paper focuses on South 24 Parganas, India, however digital inequality is present in all nations, even developed ones.

2. OBJECTIVES

2.1 To Assess the Growth Of Digitalization Through Quality Education

According to (Francis, 2021) a survey by the Indian Institute of Management in Indore, almost 93.4% of students believe that the quality of education has been termed by digital disparities. Indicators used to assess the quality education through digital practices in secondary schools

2.1.1 Capacity To Create Online Content

2.1.2 Impression About E-Study Material

3. LITERATURE REVIEW

The Researcher duo had divided the literature review into two segments.

3.1 Segment 1: World Wide Digital Disparity as Per School Education

According to (Bakhla et al.,2021) Nearly 1,400 schoolchildren from disadvantaged families in 2021 highlight the disastrous effects of the extended school closures during 18 months during pandemic in India. Just 8% of sample children in rural areas routinely study online, 37% do not study at all, and over half cannot read more than a few words. According to ("Annual Status of Education Report(Rural) 2021 (Rural)," 2021) As the pandemic affected livelihoods, particularly for low-income casual and migratory workers, there was also concern that family budgets would be strained, which would result in a rise in dropout rates, particularly among older children and girls, according to the Annual Status of Education Report (Rural) 2021.

This scenario is not only common in the developing nation like India it is also visible in another country. According to public policy institute of California "Full digital access remains lower among Latino (63%), Black (71%), and low-income households with school children (59%). The persistence of these gaps may reflect the longer-term, capital-intensive challenge of providing broadband access, compared to the relative simplicity of distributing mobile devices." United Nations stressed on the need to (United Nation, 2023) "fully integrate the digital dimension into addressing poverty, gender equality and climate change. It noted that although 63 per cent of the world's population is connected, least developed countries still only count 27 per cent of their populations as Internet users. This report warned that, there is a risk that the data economy will be permanently dominated by a few stakeholders from a handful of technologically advanced economies" The key message of the report is that while developing countries should cultivate and empower local research and innovation ecosystems by providing local actors with the necessary knowledge resources and creating an enabling institutional and regulatory environment, concerted international efforts, including research collaboration, capacity-building activities and financial assistance, are needed to strengthen the capacity of national innovation systems for inclusive and sustainable development.

3.2 Segment 2: Studies Reflect The Statistics Of Digital Practice Of India (RESEARCH AREA)

As south 24 parganas of west Bengal is the model of this research paper this segment of literature review is mostly focused on the area. According to (Banerjee,2022) the paradigm shifted in education from accepting online learning to hybrid learning and then to the complete adaptation of technologies in classroom have helped in the transformation of the classroom. Rural area can be highly satisfied by these digital practices, overcoming the dilemma of a shortage of teacher, moreover it assists instructors in rural locations in leveraging technology to improve their skill and expedite the country's embrace of digital and teaching methods. The least degree of distinction between rural and urban areas is seen in Kerala, has the least inequality, with 67% of the wealthiest urban residences having Internet connectivity, while over 39% of the lowest rural homes do the same. Assam, on the other hand, has the most obvious inequality, with around 80% of the wealthiest urban families having Internet access and 94% of those living in the state's poorest rural homes not having it. Uttarakhand has the most computers in urban areas, whereas Himachal Pradesh leads the country in both rural and urban internet connections. Odisha has the lowest rate, with only 10% of homes having internet connectivity, compared to 55% of homes in the nation's capital.

According to this report, in West Bengal after pandemic student enrollment in government schools are more or less same. Even girl students came back to school after pandemic but surprisingly presence in the classroom is not up-to the mark. In the southern part of India enrollment and students' presence ratio is more positive. In primary section 32.4% students are unable to solve the simple subtractions. Only 32.6% students can read the previous class's textbook flawlessly in West Bengal. (ASER, 2023) Researcher received a very insightful report. This report indicated that 89% of youth have smartphone at their home. As per the West Bengal centric report where Cooch-bihar is the survey population, 83.6% have smartphone at home. 92.1% report being able to use a smartphone, of those who can use a smart phone 35.1% have their own smart phone. This report indicated 55.1% are using the smart phone for education related work, 19.3% are using it for getting online services and 83.8% are using it for social media and entertainment. (Khan, 2024) A disturbing trend regarding dropouts was mentioned in a recent newspaper article. According to the Anandabazar Patrika report (Highest Circulated Bengali Daily in West Bengal, India) around 13 lakh children will not be registered for the Class 12 board test, which is a higher secondary exam, between 2016 and 2024. They're where? According to research by the West Bengal Higher Secondary Council, 90% of these 13 lakh kids drop out. They enrolled in Class 11, but the majority of them turned to migrant labor after losing interest in their schooling. (Khan, 2024) However, the question of whether West Bengal's government education system is prepared for the entire digitalization process is crucial because, according to the education department's calculations, 1500 crores was spent in 2024 to provide tablets to class 11 students. This is because, as reality shows, most schools lack adequate classrooms, while only 2 lakhs of money can be used to create 74,000 smart classrooms throughout the state, and only 4 Crores 73 lakhs can be used to improve the quality of the state's midday meals. Three divisions of the Banglar Sikhkah Portal—banglarshiksha.gov.in, the official website of the West Bengal School Education Department—are very relevant to digital practices at the school level. It provides a range of services and resources for schools, students, teachers, and parents. These include online classrooms, e-learning, and digital content. The education department of the West Bengal government assigned the students the activity duty in an effort to close the learning gap between them. Even for Madhyamik (Class X, Board Examination) candidates, the teacher will activate the example activity task; the pre-recorded videos are also posted on the internet. In this section near about 450 videos has been upload on various subjects of different classes. Where teachers explained the topics with proper board work or with basic graphical presentations. All the videos are pre-recorded.

After so many initiatives, why the learning gaps, increase of dropout rates were reflected in each and every survey?

Here once again we can recall the (India TV News, 2021) Supreme Court of India's verdict on the digital divide, against the backdrop of the COVID pandemic, has produced "stark consequences" as the right to education was virtually denied to children belonging to the disadvantaged group (DG) economically weaker section (EWS), as their families could not afford computer-based equipment and access to the internet for online classes. The court said how the right to education of little children now depend on who can afford gadget for online classes and who cannot. According to the verdict, Bench said whose parent are too poor to afford gadgets with optimum internet package at

home for online classes have dropped out and even run the danger of cutting drawn into child labor or worse, child trafficking.

4 RESEARCH GAP

The spread of inexpensive devices and data is enabling India to become more digitally inclusive, but digital empowerment is the goal that India should strive towards, according to this literature assessment. Schools are the breeding ground for morally upright and capable citizens.

4.1 In India we are following 2 set of school systems. One set of schools are under private ownership whereas majority of schools are under government administration. (As per Constitutional Amendment 1976-42nd Amendment, education is moved to the Concurrent List. This allowed both the central and state governments to legislate on matters concerning education). There has never been any prior research comparing the digital practices of government and private schools, India

4.2 No study has previously examined digital practices, including the general digitization of secondary school instructions of, India.

4.3 The proactive measures taken by schools to eliminate the digital divide at the school level have not yet been mapped out in any study. One exclusive case studies and initiatives that can be used as models to reduce the digital divide at the school level globally are included in this paper.

5.1 Method Of Data Collection

Researchers prepared 2 different questionnaires for students separately for Government and Private schools. Questionnaires are consisting of open and close ended questions in a manner of 60:40. Questionnaires were printed and distributed in a hard copy amongst the students, In this research paper, sample size is 650 students, All the data were collected from 6 Government schools and 2 Private schools which are located in rural, coastal and semi urban area. Primary Data were collected in between January and February, 2024 from 8 schools across South 24 Parganas, India

5.2 Sampling Technique

The researchers had selected the convenience methodology under non probability sampling. (*Ahuja,2001*) Under the non-probability sampling researcher had selected snowball or network sampling. In this technique, the research begins the research with the few respondents who are known and available to her.

5.3 Design Research

Here the researchers had designed the paper under mixed method when quantitative and qualitative data, together provide a better understanding which reflects the practicality and multiple viewpoints. In this thesis researcher distributed the questionnaire Here the researchers collected both qualitative and qualitative data. The sequence of the data researchers collects both quantitative data at the same time collect the qualitative data.

5.4 Statistical Tools Used For Data Analysis

In this paper researchers used Statistical Package for Social Sciences or SPSS. In SPSS used the cross tabulation. It is a useful analytical tool which is commonly used to compare the results, to one or more variables with the result of other variables.

6. DATA COLLECTION AND DATA ANALYSIS

SurveyMonkey Cross tabulation/ Crosstab is a useful analysis tool commonly used to compare the results for one or more variables with the result of another variable. It is used with data on a nominal scale, where variables are named

or labelled with no specific order. In this process, researcher can examine the data in a variety of ways to achieve a deeper understanding of groups within the respondents.

6.1. To Assess The Growth Of Digitalization Through Quality Education

6.1.1 Capacity To Create Online Content (Both Government And Private School)

Table 6. 1. 1 Capacity to create Online Content-Students' Reaction

Capacity to create Online Content-Students' Reaction									
			Capacity to create Online Content						Total
			Excellent	Good	Moderate	NA	Poor	Worst	
Type of Ownership	GOVT	Count	2	107	109	2	205	101	526
		% of Total	.3%	16.5%	16.8%	.3%	31.5%	15.5%	80.9%
	Private	Count	80	38	6	0	0	0	124
		% of Total	12.3%	5.8%	.9%	.0%	.0%	.0%	19.1%
Total		Count	82	145	115	2	205	101	650
		% of Total	12.6%	22.3%	17.7%	.3%	31.5%	15.5%	100.0%

This response had been taken from the students. (Both from Government and Private). Out of 526 students from Government school 101 students said they are very worst to create own digital content, 205 said they poor in this skill whereas out 124 private schools' students 80 said they are excellent in creating content.

6.1.2 CAPACITY TO CREATE ONLINE CONTENT (ONLY GOVERNMENT SCHOOL)

Table 6. 1. 2 Capacity to create Online content (Only Govt School)-Students Reaction

Capacity to create Online content (Only Govt School)-Students Reaction									
Count									
Creation of online content									Total
			Excellent	Good	Moderate	NA	Poor	Worst	
Schools' area		124	0	0	0	0	0	0	124
	Coastal	0	0	8	0	2	163	0	173
	Rural	0	2	1	109	0	42	101	255
	Semi Urban	0	0	98	0	0	0	0	98
Total		124	2	107	109	2	205	101	650

The students had provided this response. (from the government school). In this case, the area of the school is an independent variable, while the ability to produce online content is a dependent variable. Here, from the coastal belt out 173, 163 said they are poor at it. The coastal belt is far behind than rural and semi urban area.

6.1.3 IMPRESSION ABOUT E-STUDY MATERIAL TO MAP THE QUALITY EDUCATION (BOTH GOVT AND PRIVATE SCHOOL)**Table 6. 1. 3** Impression about E-study material-Students' Reaction

Impression about E-study material-Students' Reaction						
			Impression about Study Material			Total
			NA	Negative Impression	Positive Impression	
Type of Ownership	GOVT	Count	278	121	127	526
		% of Total	42.8%	18.6%	19.5%	80.9%
	Private	Count	0	0	124	124
		% of Total	.0%	.0%	19.1%	19.1%
Total		Count	278	121	251	650
		% of Total	42.8%	18.6%	38.6%	100.0%

This response had been taken from the students (Both from Govt and Private). Here school's type is independent variable whereas impression about e-study material is a dependent variable. Here the rating graph is showing student from private schools are more satisfied about their e-study material than Government school.

6.1.4. IMPRESSION ABOUT E-STUDY MATERIAL TO MAP THE QUALITY EDUCATION (ONLY GOVT SCHOOL)**Table 6. 1. 4** Impression about E-study material-Students' Reaction (Only Govt School)

Impression about E-study material for students to map the quality Education-Students Reaction

Count							
		e-study Material from teacher					Total
			Good	Moderate	Poor	Worst	
Schools' area		124	0	0	0	0	124
	Coastal	1	0	0	172	0	173
	Rural	0	51	3	2	199	255
	Semi Urban	0	0	98	0	0	98
Total		125	51	101	174	199	650

Students from government schools provided this feedback. In this case, perceptions of the e-study materials are the dependent variable, while the school's location is the independent variable. According to this rating graph, students from rural and coastal areas lack a good understanding of the e-study materials. In the coastal area out of 173, 172 rated it as poor.

7. FINDING AND OBSERVATION

Based on the data analysis of this research paper named, Digital Disparity in School Education: Case Study based on Proactive Efforts of South 24 Parganas, India. It is suggested to boost up the digitisation in secondary school to scale down the socially discriminated society.

7.1. Finding

7.1.A. Gap Between Government And Private Schools

After mapping the digital activities in secondary schools, it is evident how different private and public schools are from one another. Government school pupils lack the ability to produce original digital content, such as digital texts or assignments. The majority of students at government schools are likewise ignorant about e-study resources. Online education most students in public schools have no idea that one of the most important indicators of a top-notch education is the quality of the curriculum. Most respondents are unable to rank it in this area because they have no knowledge of it; instead, they mark it as not applicable. The rating graph shows that students from private schools are more outstanding than those from government schools.

7.1.B Gap Between Government Initiatives and Its Practical Implementation

The Banglar Sikhkha website provides a wealth of helpful applications and administrative processes. They have all lost their purpose because no programs are helping grassroots stakeholders. Despite the government's numerous endeavors, government schoolchildren are falling behind in all aspects of digital practices at the school level.

7.1. C. Location Wise Digital Gap

The findings indicate that private schools outperform government ones, with the issue being more severe along the coastal belt. Students in government schools along the coast are simply not benefiting from the government's digitization efforts. There are examples in this paper that demonstrate the location-wise digital gap.

8. Case Study

In this paper, researchers tried to underline one pro-active example of Digital Practice in Secondary Schools which can be the role model for the state to peruse the digital practices in secondary school education. To map the pro-active positive the researcher had taken the interview as a method of data collection.

A thorough written questionnaire served as the basis for the interview in the case study. As a research tool or a means of gathering data, the interview is prepared methodically, is supervised by the researcher to prevent bias and distortion, and is connected to a particular research question and goal.

L.J.D. Public School-Falta, With its campus located in Falta, District 24 Parganas (South) of West Bengal, India this 10+2 ICSE Curriculum Co-Education private English Medium School (I.C.S.E/ISC) is registered under the Indian Trust Act of 1882. With a focus on coeducation, the school offers distinctive inclusive English-medium teaching features.

The principal of LJD Public School-Falta is Smt. Sanchita Das (According to the 2024 Record)

Question NO 1 Do you support your teacher in creating any online study resources for the students? What recommendations are there to make it better?

Sanchita Das, Principal, LJD Public School, Falta:

“Indeed, it is crucial to encourage educators to provide e-study resources. especially in places with little access to educational resources. We have started seminars to teach educators how to create offline-accessible digital content using open-source platforms. I propose giving teachers gadgets to create test materials and increasing the frequency of training as ways to make things better”.

Question NO 2 What steps are being made at your school to improve the digital practice?

Sanchita Das, Principal, LJD Public School, Falta:

“Our institution has put in place a methodical effort to improve digital operations. At first, we concentrated on teaching teachers and students the fundamentals of computer literacy. Virtual classes, an application to continue the teaching and learning process, were later launched. Additionally, the school introduced CMC, an application. Students

can view their academic calendar, attendance, holiday list, and other information on CMC. Additional programs include the digital ambassador program, in which tech-savvy kids help teachers and their peers.”

Question NO 3 Do you believe that our educational system's future lies on digital communication? Express your viewpoint.

Sanchita Das, Principal, LJD Public School, Falta:

“Unquestionably, digital communication is a key component of the educational environment of the future. This entails modifying digital platforms within our means, such as a digital lab for curriculum-based subjects. Although we recognize the potential of digital communication, it is equally important to acknowledge the digital divide and strive for fair access to these resources in order for them to be truly transformative tools for our educational system”.

8.1 Few Takes Fromcase Study

The best illustration of digitalization and pro-active steps in secondary schooleducation can be seen in this case study from a school.

LMS with minimum investment- With a minimal annual expenditure, schools can launch their own digital platform that allows students and teachers to connect around-the-clock, enhancing the educational process and making it more comprehensive and positive. L.J.D. Public School’s endeavor is excellent.

Digital ambassador and frequent training camp- Schools can implement a well-thought-out plan to improve pro-active digital practices to scale down the digital disparity. It is admirable that the first focus was on teaching teachers and students the fundamentals of computer literacy. Include a digital ambassador program in the second phase, where tech-savvy students and teachers may help institutions and peers advance their digital literacy. L.J.D. Public School's initiative is excellent.

9. LIMITATION

7.1. A Population size should be increase from 650 to at least 1000.In compare to the total number of schools researcher has compare the study between 6 government school and 2 private school which macro in size

7.1. B To map the Digital Disparity and Social Discrimination more specific words and indicators can be used.

7.1.C In this research paper gender wise digital gap is not touched. Digital education and the gender discrimination, this dimension is totally and consciously omitted.

10. CONCLUSION

10.1 POSITIVE ASPECTS AND PRO-ACTIVE DIGITAL EFFORTS IN SCHOOLS: The government should not prioritize digitization, according to numerous survey reports and newspapers, because most schools in India lack of basic facilities including classrooms, bathrooms, electricity, and enough teachers. However, these shouldn't clash with one another. Digital techniques can frequently reduce issues with physical infrastructure and this is applicable not only in Indian context it is applicable for across world with diverse cultural and ethnical and language wise disparity exist.

10.2 TO BUILD A BRIDGE AT THE REMOTE LOCATION: Students who live in the most remote areas of our nation cannot connect through digital education. The vast geographical differences in India can be bridged via digital education, which would contribute to the development of a knowledge-based society and this is applicable across the world.

Policymakers and grassroots users should have a well-coordinated approach on digital practices at the school level. It has been noted that some good initiatives in our nation have failed as a result of poorly executed implementations. A positive attitude is necessary if we are to improve our educational system to the level of the rest of the world. Otherwise in the near future, India will become a digitally segregated society where young and promising minds would live in a suffocating environment if we delay in the pro-active digital practice with hesitation and animosity.

REFERENCE

Ahuja, R. (2001). *Research methods*. Rawat Publications.

Annual Status of Education Report (Rural) 2021 (Rural). (2021, November 17). ASER Centre(www.asercentre.org). Retrieved March 1, 2022, from https://img.asercentre.org/docs/aser2021finalreport_16.116.54pm1.pdf

ASER. (2023). *ASER 2023: Beyond basics*. ASER: Annual Status of Education Report. Retrieved July 13, 2024, from <https://asercentre.org/aser-2023-beyond-basics/>

Bakhla, N., Dreze, J., Paikra, V., & Khera, R. (2021, September 6). *Locked out: Emergency report on school education*. People's Archive of Rural India. <https://ruralindiaonline.org/en/library/resource/locked-out-emergency-report-on-school-education/>

Banerjee, A. (2022, February 10). *West Bengal: School Closure led to sharp dip in junior-level learning skills*. The Times of India. Retrieved January 1, 2022, from <https://timesofindia.indiatimes.com/city/kolkata/school-closure-led-to-sharp-dip-in-jr-level-learning-skills/articleshow/89464152>

Francis, L. (2021, February 5). *93 PC of students say online learning compromises quality of education: Survey - Times of India*. The Times of India. <https://timesofindia.indiatimes.com/home/education/news/93-pc-of-students-think-online-learning-compromises-quality-of-education-survey/articleshow/80703125.cms>

India TV News. (2021, October 8). *Help EWS category kids overcome 'stark consequences' of digital divide: SC*. Retrieved June 19, 2022, from <https://www.indiatvnews.com/education/news-help-ews-category-kids-overcome-stark-consequences-of-digital-divide-sc-739237>

Khan, A. (2024, July 11). প্রায় ১৩ লক্ষ পড়ুয়া গেলেন কোথায়, এঁরা কি মাঝপথে লেখাপড়ায় ইতি টেনেছেন? *Anandabazar Patrika*, p. 1. <https://www.anandabazar.com/west-bengal/wbchse-is-worried-as-out-of-13-lakh-failed-old-higher-secondary-students-only-1500-has-registered-again/cid/1530072>

Khan, A. (2024, July 16). ১৫০০ কোটির ট্যাব, ছাদই ভাঙা বহু স্কুলে. *Anandabazar Patrika*, p. 1. <https://www.anandabazar.com/west-bengal/west-bengal-education-department-to-spend-1500-crores-to-provide-money-for-smart-tabs-to-students/cid/1531250>

Starr Darriya, Hayes Joseph, & Gao Niu. (2024, April 1). *The digital divide in education*. Public Policy Institute of California. <https://www.ppic.org/publication/the-digital-divide-in-education/>

SurveyMonkey. (2023). What is crosstab. Survey.2023. <https://www.surveymonkey.com/mp/what-is-a-crosstab-and-when-to-use/>

The school in the cloud – DW – 11/11/2021. (2021, November 11). dw.com. <https://www.dw.com/en/the-school-in-the-cloud-virtual-learning-as-an-opportunity/a-59621760>

Two thirds of the world's school-age children have no internet access at home, new UNICEF-ITU report says. (2020, November 30). UNICEF. Retrieved March 24, 2022, from <https://www.unicef.org/press-releases/two-thirds-worlds-school-age-children-have-no-internet-access-home-new-unicef-itu>

United Nation. (2023, October 6). *Widening digital gap between developed, developing states threatening to exclude world's poorest from next Industrial Revolution, speakers tell second committee*. <https://press.un.org/en/2023/gaef3587.doc.html>