

Two Years After Covid: Trends in Enrolment, Retention, and Dropout in Gujarat's Schools (2022 - 2024)

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Abstract

This paper examines post-COVID trends in enrolment, retention, and dropout in Gujarat's school education system using Unified District Information System for Education Plus (UDISE+) data for the academic years 2022–23 and 2023–24. These two years are methodologically comparable due to the introduction of student-wise data collection, allowing for a reliable assessment of post-pandemic recovery patterns. The analysis reveals a near-elimination of dropout at the primary level and a modest improvement in secondary retention, indicating the relative success of enrolment drives and foundational education policies. However, dropout rates at the higher secondary level remain persistently high, suggesting structural vulnerabilities during adolescent transitions in schooling. The findings indicate that post-COVID recovery has been uneven across educational stages, with greater resilience observed in lower grades and continued fragility in senior secondary education. Socio-economic pressures, early entry into the workforce, gendered expectations, and limited alignment between schooling and livelihood opportunities emerge as critical risk factors influencing dropout. The paper situates these trends within broader national and international evidence on educational disruption and recovery, emphasizing the limitations of access-focused interventions in addressing retention challenges. The study concludes by underscoring the need for targeted, stage-specific policy interventions, strengthened social support mechanisms, and social work-led strategies to ensure sustained participation and completion of schooling in Gujarat.

Keywords: School Education, Dropout, Enrolment and Retention, Gujarat, UDISE+, Post-COVID Recovery

1. Introduction

Education is fundamentally recognized as a crucial element for enhancing human life and fostering national development. It significantly influences individual success by equipping people with knowledge and the ability to apply what they learn in academic settings. Education can be defined as a structured process through which individuals acquire knowledge, skills, values, and cultural understanding, supported by curriculum, institutional practices, and social environments that promote academic growth

and personal development (Yousufi, 2025). An educated person gains a better understanding of their environment and can recognize their rights, leading to improved personal and communal well-being. Furthermore, education is vital for creating job opportunities, particularly in fields requiring specialized skills, and contributes to the overall progress of the state through the growth of an educated populace (Shavkidinova et al., 2023). The outbreak of COVID-19 was a devastating phenomenon for the world, especially in the education sector. The COVID-19 pandemic profoundly impacted the world, leading to significant disruptions, particularly in the education and healthcare sectors. The global spread of the virus necessitated the widespread adoption of online learning as face-to-face interactions in schools, colleges, and universities diminished. This shift led to complex variations in educational effects globally, with studies like this one examining day-to-day and week-to-week changes. Beyond education, the pandemic also had immediate effects and implications for the healthcare sector, prompting a need for better planning in the event of future outbreaks (Paritala, 2024). The global educational landscape has undergone a significant transformation, with far-reaching implications for learning systems, particularly in the Indian context. This dynamic evolution has been characterized by the rapid integration of digital technologies and a redefinition of pedagogical approaches. These shifts have necessitated a comprehensive assessment of adaptation strategies and their multifaceted dimensions, revealing challenges, opportunities, and long-term consequences that continue to shape the future of education (Khan et al., 2024).

The COVID-19 pandemic emerged as a significant public health crisis, profoundly affecting educational systems globally and highlighting existing inequities in learning. The transition to distance learning during school closures led to a 'regression in learning,' impacting over 1.5 billion children whose education was disrupted. This learning loss, while affecting students from all socioeconomic backgrounds, disproportionately impacted disadvantaged populations. The resulting schooling gap and learning regression are anticipated to have long-term consequences, cascading through an entire generation of students (Singh & Patawari, 2023). In India, government-mandated school closures on March 25, 2020, profoundly affected the educational sector, impacting around 320 million students and 63 million educators (Kaur, 2023). The COVID-19 pandemic led to widespread educational disruptions, with school closures affecting over one billion children and resulting in significant learning losses, particularly in mathematics and science. A global average decline of 0.11 standard deviations in student achievement was observed, with longer closure durations linked to more severe losses, disproportionately impacting low performers, girls, and linguistic minorities with losses up to 0.22 standard deviations (Gajderowicz et al., 2025a).

India's school system emerged from the COVID-19 disruption with deepened inequities and renewed concerns about students at risk of disengagement, especially in the secondary grades where the risk of permanent dropout is structurally higher. In Gujarat, the most recent Unified District Information System for Education (UDISE+) data allow for a clean, post-pandemic comparison between 2022–23 and 2023–24 (student-wise reporting began in 2022–23), making it possible to assess short-run changes in dropout patterns as schools stabilized operations. Notably, the UDISE+ 2023–24 booklet clarifies that estimates from 2022–23 onward are comparable with 2023–24, but not with 2021–22 and earlier series, which used different methodologies. (UDISE+2022_23_Booklet_nep, 2024)

Within that comparable window, Gujarat exhibits the common Indian pattern: very low dropout in the early grades and substantially higher attrition at the secondary stage, with gendered differences by level (boys often at greater risk in secondary, girls showing elevated risk at upper primary)(*UDISE+2023_24_Booklet_nep*, 2024). These stage- and gender-specific patterns underscore that “dropout” is not a single phenomenon but the result of multiple, interacting risks that accumulate differently across adolescence. At the same time, evidence from India’s pandemic-era distance learning responses highlights that access to devices alone did not guarantee engagement or learning; use, support, and modality mattered, with persistent gaps by gender, location, and school type (government vs. private). These findings matter for “recovery to re-enrollment” pipelines: the same structural factors that limited remote participation can also impede return-to-school and sustained attendance, particularly for vulnerable adolescents (*UDISE+2023_24_Booklet_nep*, 2024). International and Indian studies further show that technology or analytics are neither silver bullets nor irrelevant: predictive approaches can flag risk early, but human support and multi-component responses are essential to convert risk signals into re-engagement and persistence. A social work–led model that blends case management, family outreach, school-based supports, and pragmatic academic pathways aligns with this evidence base and the realities of Gujarat’s secondary schooling landscape.

Statement of the Problem

The Covid-19 pandemic disrupted schooling systems worldwide, exacerbating risks of student dropout, particularly among vulnerable groups. In Gujarat, while the primary enrolment system has shown resilience, the higher grades continue to experience elevated dropout rates. This issue poses a barrier to achieving the vision of universal school participation outlined in the National Education Policy (NEP) 2020.

Objectives of the Study

1. To analyze enrolment and retention trends across primary, secondary, and higher secondary levels.
2. To examine the impact of post-Covid recovery on school participation.
3. To provide policy recommendations for addressing persistent dropout challenges.

Literature Review

The COVID-19 pandemic precipitated a global public health disaster that significantly disrupted educational systems worldwide, bringing to light pre-existing injustices in learning provision. The widespread implementation of school closures necessitated a rapid shift to distance learning, which, while a necessary adaptation, resulted in a notable 'regression in learning' for over 1.5 billion children. This regression was not uniform; although it affected students across all socioeconomic strata, its impact was disproportionately severe on disadvantaged populations, exacerbating existing educational inequalities. Consequently, the schooling gap and the learning loss incurred during the pandemic are projected to have profound and lasting implications, potentially affecting an entire generation of students. Addressing these challenges requires a comprehensive understanding of the multifaceted impacts and a focus on effective remedial strategies (Singh & Patawari, 2023). The COVID-19 pandemic has instigated a profound transformation within the global educational landscape, particularly

evident in its long-term ramifications for learning systems in India. Research has highlighted the enduring effects of this period, demonstrating how traditional educational methodologies have been reshaped through the rapid integration of digital technologies and the redefinition of pedagogical approaches within the Indian education system. Comprehensive assessments, often employing surveys to gather qualitative insights from a substantial number of respondents, have been crucial in evaluating the multifaceted dimensions of adaptation. Such studies frequently identify significant disparities, including gender-based differences, in perceptions and experiences related to the consequences of the pandemic on teachers, students, and teaching, as well as the broader impact on the education system's responses. Furthermore, analyses often explore the significance of policies and strategies implemented during the crisis, along with potential solutions, for their practical application and the role of online participation in shaping awareness factors. These investigations are instrumental in informing policy decisions, refining educational practices, and establishing a robust foundation for future research aimed at fostering a resilient, equitable, and innovative educational future (Khan et al., 2024).

The COVID-19 pandemic led to the closure of schools and colleges in early 2020 and impacting millions of students globally. This crisis affected more than 200 nations, marking it as the most significant interruption to education in human history. Approximately 94% of the world's student population experienced the closure of learning venues. The swift transition to online learning models presented numerous challenges, including a lack of necessary resources and infrastructure, resistance to adopting new methods, and increased distractions within home environments. These difficulties underscore a critical need for substantial investment in technology and comprehensive training for both educators and students to ensure the effectiveness of online education. The pandemic's effects were particularly profound in regions like India, where government-mandated school closures on March 25, 2020, impacted around 320 million students and 63 million educators. This global shift highlighted both the vulnerabilities and the potential for innovation within educational frameworks, necessitating the development and implementation of new teaching and assessment approaches to mitigate concerns over potential learning loss (Kaur, 2023).

school closure, which averaged 5.5 months (22 weeks) worldwide, resulted in significant learning losses, particularly in mathematics and science. While some countries with prior remote learning experience managed better, many were ill-prepared, leading to increased dropout risks and lower test scores. Studies have shown a global average decline of 0.11 standard deviations in student achievement, with longer closure durations correlating with more severe losses. Disproportionate impacts were observed among low performers, girls, and linguistic minorities, who experienced losses up to 0.22 standard deviations. This highlights the lasting negative effects of school closures and the exacerbation of educational inequalities, emphasizing the need for targeted recovery strategies and international collaboration to ensure equitable educational outcomes post-pandemic.(Gajderowicz et al., 2025b)

Classic dropout frameworks—Tinto's academic/social integration and later extensions to non-traditional and distance learners—emphasize how individual background, prior achievement, and the learning environment interact dynamically to shape persistence decisions. In e- and distance-learning contexts, models by Kember, Bean & Metzner, Rovai, and Park integrate external constraints (work, finances, family duties) with internal integration (achievement, belonging, self-efficacy). Although developed largely for older learners, these frameworks illuminate adolescent schooling too: shocks to academic

progress, weak school connectedness, and external pressures (household income shocks, care work, early marriage) can tip the balance toward exit unless countered by timely support(Desai et al., 2017). Indian studies reinforce the multi-causal picture. Qualitative work in northern Karnataka links girls' absenteeism and dropout to poverty, early marriage, and limited community support, highlighting how social norms intersect with school quality and safety. While these findings are from a neighboring state, the mechanisms—gendered expectations, household labor, and cost constraints—are widely observed across western India and are consistent with Gujarat's own concerns about adolescent girls' retention(Desai et al., 2017).

Analyses of pandemic-era remote learning in India found that what mattered was not merely device ownership but how modalities were used and supported. Across six states, adolescents' perceived learning varied by modality (e.g., live video classes were most strongly associated with higher perceived learning), by gender (girls reporting lower perceived learning), and by school type (government school students reporting lower perceived learning than private school peers), even when controlling for covariates. The work also emphasizes that low-tech channels (SMS, print) can still be consequential when integrated thoughtfully, suggesting “bundled” approaches for re-engagement. These insights align with national guidance that advocated diversified, context-appropriate modalities and teacher support rather than a one-size-fits-all digital solution. For Gujarat's post-COVID recovery, this implies that outreach and re-enrollment programs should mirror local access realities, leveraging no-, low-, and high-tech touchpoints with active educator contact(Paritala, 2024).

There is a consistent international record showing that predictive models can identify students at risk of dropout reasonably well using administrative and engagement data (e.g., decision trees, ensembles, Bayesian methods). This has direct relevance for secondary schools: simplified early-warning indicators (attendance dips, assessment flags, sudden disengagement) can feed school social work case management to prevent withdrawal or expedite re-entry(Tan & Shao, 2015).

Practice-oriented guidance for school counselors and allied professionals emphasizes multi-tiered strategies: universal climate and connection-building; targeted monitoring and mentoring for at-risk students; and intensive, individualized case management addressing family stressors, transportation, health, and safety needs. This playbook maps well onto Gujarat's needs, where secondary-stage attrition remains the primary challenge and gendered risks vary by level. Effective recovery thus requires systematic identification plus coordinated wraparound services that engage families and link to entitlements (scholarships, bicycles, hostel access, remedial instruction(Kelly et al., 2010).

Gujarat in the UDISE+ window (2022–23 to 2023–24)

Because 2022–23 and 2023–24 are methodologically comparable, they offer a reliable “post-shock” window to judge movement in dropout. Gujarat's profile—negligible dropout in primary, higher attrition in secondary—remains intact across the two years, with gender differences by stage (girls relatively more vulnerable in upper-primary, boys more so in secondary). This pattern underlines where recovery resources should be concentrated: the transition into and through secondary, when adolescents face rising opportunity costs and social pressures.

Methodology

This study is based on secondary data analysis using the Unified District Information System for Education Plus (UDISE+) reports for Gujarat (2022–23 and 2023–24). A comparative approach was adopted to identify changes in dropout rates, enrolment patterns, and retention. Data were extracted from the official UDISE+ tables specific to Gujarat's schools, students, and teachers. Descriptive statistics and trend analysis were employed.

Sampling

As the study utilizes UDISE+ data, which is a complete enumeration of recognized schools in Gujarat, no sampling was required. Data represent all government, aided, and private recognized schools in the state.

Instrument

The data collection instrument is the standardized Data Capture Format (DCF) used under the UDISE+ system. It records detailed school-wise, teacher-wise, and student-wise information, including enrolment, retention, promotion, repetition, and dropout rates.

Procedure

The study followed a stepwise procedure:

- Extraction of Gujarat-specific data from UDISE+ reports
- Comparison of key indicators (dropout, retention, enrolment) for 2022–23 and 2023–24.
- Visualization of results through charts and tables.
- Interpretation of trends in the context of post-Covid recovery.

Data Analysis

The analysis focused on dropout, retention, and enrolment rates across levels of education. Particular attention was given to changes between 2022–23 and 2023–24. Key results include:

- Primary dropout reduced from 0.9% (2022–23) to 0.7% (2023–24).
- Secondary dropout decreased from 12.6% to 11.9%.
- Higher secondary dropout, while slightly reduced, remains high at over 17%.

These results suggest recovery in lower grades but continuing challenges in higher education transitions.

Limitations

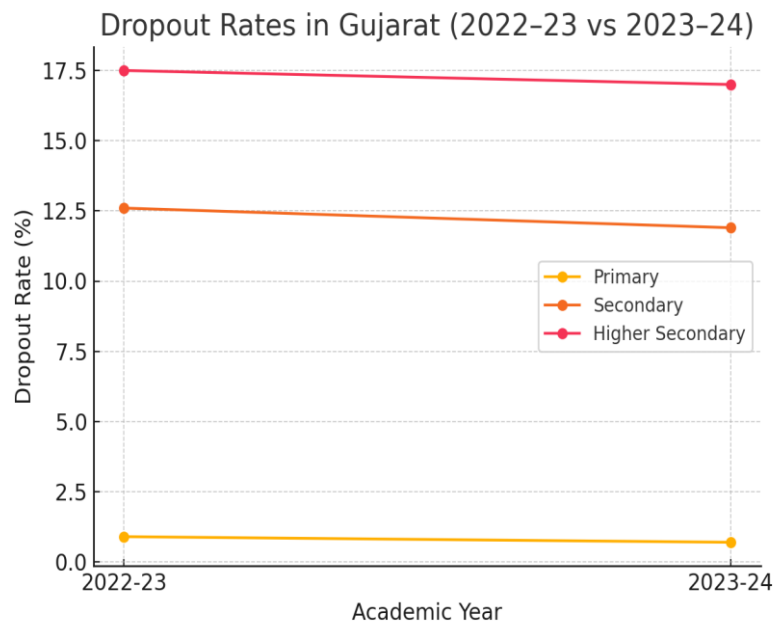
- The study relies solely on UDISE+ data; no field-based validation was conducted.
- The analysis covers only two academic years; longer-term trends require multi-year comparison.
- Data do not capture qualitative reasons for dropout, such as socio-economic or cultural factors.
- Findings are specific to Gujarat and may not generalize to other Indian states.

Results & Findings

The comparative analysis of Gujarat's dropout trends shows:

- Strengthened retention at the primary level, with dropout almost negligible.
- Steady improvements in secondary schooling, though dropout remains a concern.
- Persistent crisis at higher secondary, where nearly 1 in 5 students leave school before completion.

This indicates that while Gujarat has achieved near-universal primary schooling, structural challenges exist in sustaining adolescents' education.



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Success at the bottom → fragility at the top.

Gujarat is doing very well in primary, better in secondary, but still struggling badly at higher secondary.

The reduction from 0.9% → 0.7% (primary) is a great achievement.

But persistent dropout around 17% in higher secondary shows that policies must focus on adolescents and transitions to higher education/vocational training.

Discussion

The results demonstrate a mixed picture of Gujarat's educational recovery after Covid-19. Primary-level schooling has reached stability, benefiting from near-universal enrolment drives and strengthened infrastructure. However, secondary and higher secondary dropout indicate socio-economic pressures, early marriages, work responsibilities, and limited alignment between schooling and vocational

opportunities. The data suggests that while foundational education is resilient, systemic reforms are needed at higher levels.

Conclusion & Recommendations

The study concludes that Gujarat has largely overcome post-COVID disruptions at the primary level, but secondary and higher secondary schooling remain vulnerable to dropout.

Key recommendations include:

1. Strengthening bridge programs and remedial classes for adolescents at risk of dropout.
 2. Expanding vocational and skill-based pathways at the secondary stage to retain students.
 3. Enhancing financial and social support mechanisms for families of at-risk students.
 4. Promoting gender-sensitive strategies to reduce adolescent girls' dropout.
 5. Scaling up digital infrastructure and learning support for higher classes.
- Addressing these areas will help Gujarat move closer to the NEP 2020 goal of universal school participation.

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