

## EXAMINING THE STATE OF SECONDARY AND POST SECONDARY EDUCATION IN DELHI'S SLUMS

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### ABSTRACT

Evidence suggests that a country's economic growth prospects improve if its workforce is well educated and talented. Therefore, it is reasonable to assert that education increases the productivity of both the general populace and the working class, thereby increasing the purchasing power of consumers and stimulating economic growth. Workers with secondary or higher education levels can be easily retrained to meet the changing demands of the global economy. Across all sectors of national productivity, secondary school is now the largest provider of working people. This research looks at the development of secondary and higher education in a Delhi slum and discusses the problems and opportunities now facing Delhi's secondary school system. There is an upward tendency in both the gross enrolment ratio and the total number of students enrolled in secondary and upper secondary institutions. Gender equality has improved, especially at the level of education measured by the GPI. While improvements have been made in secondary and post-secondary education, they have not kept up with the rate at which they are needed.

**Keywords:** Secondary education; higher secondary education; gross enrolment ratio; gender parity index

### INTRODUCTION

India has made significant progress in several key areas. These include food self-sufficiency, a highly educated and technically skilled workforce, and more. This is feasible because of our education system, which, despite its flaws, has shown to be an effective tool of social and economic change and growth. One component of inclusive growth's capabilities dimension that helps guarantee everyone has access to economic opportunities is education [1]. Endogenous growth theory-based studies consistently affirm the substantial and beneficial function of education for development. The level and growth rate of real per capita income have both been found to correlate positively with educational attainment [2-5]. Investment in human capital through high-quality education was also acknowledged as crucial to India's economic growth and development by the Knowledge Commission [6].

For a variety of reasons, secondary education has taken on greater significance in low-income countries. The need for secondary education would rise depending on the rate at which basic education is being universalized in developing countries. The growing need for educated and skilled workers is likely contributing to the popularity of secondary schools worldwide. This is due to the fact that a workforce comprised primarily of people with secondary or higher education levels can be easily adapted to meet

the needs of the global market. Adolescents benefit much from the formal reasoning, problem-solving skills, and critical thinking that secondary school provides, as well as the content's relevance to the workforce. Students in the secondary education system typically range in age from 15 to 18 years old. These are the most formative years of a student's education, as they coincide with the stages of transition and puberty. During this time, not only do students' bodies change rapidly, but they also experience a wide range of emotional changes and mood swings. At this point, students must make the transition from academics to the workforce, and they are given the tools necessary to do so. Traditional ideas and attitudes, societal bias, discrimination, and taboos mandated for females in the society make this transition more challenging for girls. Although secondary education serves many essential purposes, for many years it has been maintained that it must be extended in order to meet rising social demand and to provide a pipeline of students for higher education. Investing in secondary education is essential for national development because of the positive social and economic effects it has [7-10]. In terms of its impact on income inequality, economic growth, and poverty alleviation, secondary education ranks higher than basic education [11,12]. Despite this, in many developing nations, like India, secondary and higher secondary education remain the most underfunded areas of formal education. Many teenagers between the ages of 14 and 18 are able to read basic materials. Their maths skills are below average and don't seem to be improving with time. The Programme for International Student Assessment (PISA) is a good example of a pen-and-paper test that could be useful for gauging students' competencies at this level. Growing enrollment, inadequate facilities, a scarcity of qualified educators, and a decline in overall quality have combined to produce a crisis [13].

A new pedagogical and curricular structure of 5+3+3+4 spanning age group of 3-18 years individual was expected to replace the current 10+2 system in school education by 2020 [14]. Higher levels of national competence and international understanding are fostered through secondary education [15]. The country does not rely entirely on elementary education to boost economic growth. Government investment and the first growth of secondary education in East Asia have been seen to yield substantial returns [16,17]. Therefore, secondary education is likewise crucial to national development. Secondary education is worthwhile because it helps the working-age population develop the mindset and abilities necessary to become contributing members of society [18, 19]. Thus, secondary education produces a trained labour force essential to societal and economic development. The people of a country need to be prepared in four ways—in democratic citizenship, in vocational efficiency, in personality development, and in leadership abilities—and the Secondary Education Commission [20] has mandated that these things be taught in secondary school. Previous literature has reflected on the societal and economic merits of completing secondary education.

An integral part of the system of education that built the interconnection to the higher education system is expected to come from secondary and higher secondary education. All kids should have access to both primary and secondary education, which are seen as "successive phases of a continuing process." This view, that education is a lifelong journey that begins in early childhood and continues into maturity, has gained traction in many parts of the world in recent decades [21]. However, whether or not countries and regions have achieved universal or near-universal elementary enrolment affects the importance attributed to secondary education and the resources available for it. More students enrolling in elementary school means more students enrolling in secondary school, which means more students enrolling in college. It would appear that secondary education has finally arrived at the point where it can be considered a pure public good. Investing in secondary education yields a high marginal rate of

return because of the positive effects it has on health, gender equality, and standard of living, as evidenced by a number of studies. In light of these gains, the nation must push towards the universalization of high-quality secondary and postsecondary education. Observations from the NSS at 75 [23]. For secondary school, the estimated NAR is 43.9 percent for male students, 42.7 percent for female students, and 43.4 percent for all students. For higher secondary school, the NAR is 43.9 percent for male students, 42.7 percent for female students, and 43.4 percent for all students.

## **REVIEW OF LITERATURE**

Tilak [24] explored the role that higher and secondary education have in national development. He discovered that secondary schooling significantly contributes to a country's economic growth through raising individual incomes. He also acknowledged the importance of secondary education in fighting poverty. His key takeaway was that the value of education, especially secondary and higher education, is widely acknowledged and that the country desperately needs comprehensive long-term programmes to advance education.

According to an analysis by Kingdon [25], low rates of secondary school enrollment and secondary school graduation are indicative of low educational quality and a lack of investment in school infrastructure in India. Only 39% of children in the qualifying age group were enrolled in secondary school in 2003-2004, according to research by Rani Geetha P [26], who studied the development of secondary education and found a quantitative increase in enrolment. She also looked for causes of poor academic performance, including as pupils' low socioeconomic level, high tuition fees, distant schools in rural areas, and a lack of suitable facilities.

Biswal [27] made an estimate of the educational institution network, which has grown significantly over the past sixty years. According to his research, between 1950-51 and 2007-08, the expansion of secondary schools lagged well behind that of junior highs and high schools. He has come to the conclusion that it will be very difficult to create an accessible secondary education system in India.

Education may increase women's decision making abilities and effect good change in the society, as noted by Bhavesh Jha [28], who discovered that female attendance in secondary and above class is dropping in India. He also suggested that the other Millennium Development Goals could be accomplished by the set deadline of 2015 with the aid of education.

Kaleem and Jawed [30] compared the educational levels of rural and urban residents through time and found that, on average, more people in urban areas had completed secondary and higher education than their rural counterparts. There has been an uptick in the proportion of the population having a secondary or higher education. In terms of secondary and higher secondary school achievement, the general population is more successful than STs, SCs, and OBCs in both regions.

## **OBJECTIVES OF THE STUDY**

- The purpose of this research is to analyse the development of secondary and higher-level education in Delhi's slums.
- Analysing the most pressing problems facing secondary and postsecondary education.

## **METHODOLOGY AND SOURCES OF DATA**

Secondary data for this study came from a variety of studies and publications covering the same ground as the Department of School Education and Literacy in the Ministry of Education of the

Government of India. This analysis includes data from 2012-2013 to 2018-2019. The purpose of the research is to use appropriate statistics, such as compound annual growth rate (CAGR), to analyse the development of secondary and upper secondary education with regard to enrollment, institution, and infrastructural facilities. The gross enrolment ratio is a useful indicator of student participation at all educational levels. Definition of "Gross Attendance Ratio" (for each class-group): the number of students in a given class divided by the population of people officially classified as being of the same age. Accordingly, the percentages corresponding to the official age brackets of 14-15 and 16-17 were taken for the ninth-tenth and twelfth-thirteenth grades, respectively. The compound annual growth rate (CAGR) is the basis for the analysis of the growth history each year. The rate of increase over time is typically expressed as a compound annual rate of increase (CAGR). Calculating the average annual growth rate from a set of time series data yields a single statistic, the compound annual growth rate (CAGR). The Compound Annual Growth Rate (CAGR) is determined by the following formula and calculations:

$$\text{CAGR} = \left( \frac{X_2}{X_1} \right)^{1/n} - 1 \times 100$$

Where:  $X_2$ =Ending value,  $X_1$ =Beginning value,  $n$ =Number of years

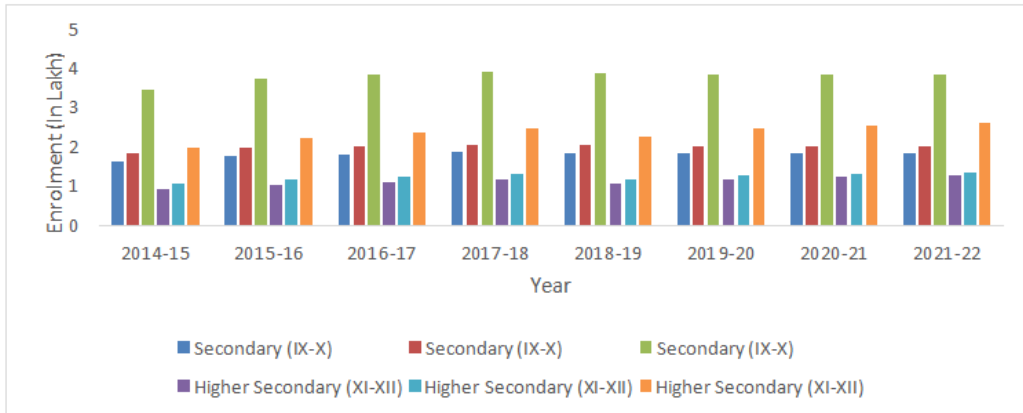
## **RESULTS AND DISCUSSION**

The importance of educating more people is rising in today's society. Accessibility, equality of opportunity, and increased quality of education have been given high importance in both the 11th and 12th Five-Year Plans for India.

Figure 1 displays that in 2014-15, there were 3.46 lakh pupils enrolled in secondary schools, with 1.66 lakh female students and 1.83 lakh male students. From 2014-15 to 2021-22, the compound annual growth rate of secondary school enrollment was 2%, with female students increasing at a rate of 2.0% and male students increasing at a rate of 1%. During this time period, the growth rate of female students was higher than that of male students.

Higher education enrollment rose steadily in 2021-22, with 1.26 lakh female and 1.33 lakh male students enrolled. Male enrollment at this level grew at a slower clip of 3% per year compared to female enrollment, which grew at a rate of 5% per year, and the overall student body grew at a rate of about 4% per year. Female students also outperformed male students during this time period in the upper secondary education sector. Figure 1 demonstrates that the rise in secondary school enrollment rates for both sexes was more pronounced than that seen at the secondary school level. Although we have not yet achieved our aim of universal secondary education, we have seen very promising increases in secondary and higher secondary school enrollment in recent years.

The table reveals that the number of male and female instructors in higher secondary education has increased. Greater secondary education has a greater compound annual growth rate (CAGR) of 8.4 percent for teachers than lower secondary education does (5.7 percent). Female educators have shown faster growth than male educators in both K-12 and higher education over the aforementioned time period. From 2014-15 to 2020-21, the total number of educators at both levels rose.



Source: Department of School Education and Literacy [31] Ministry of Education, GOI.

**Fig. 1: Increases in Secondary and Higher Education Enrolment in Delhi**

**Table 1. Indian Secondary and Higher Education Faculty Size**

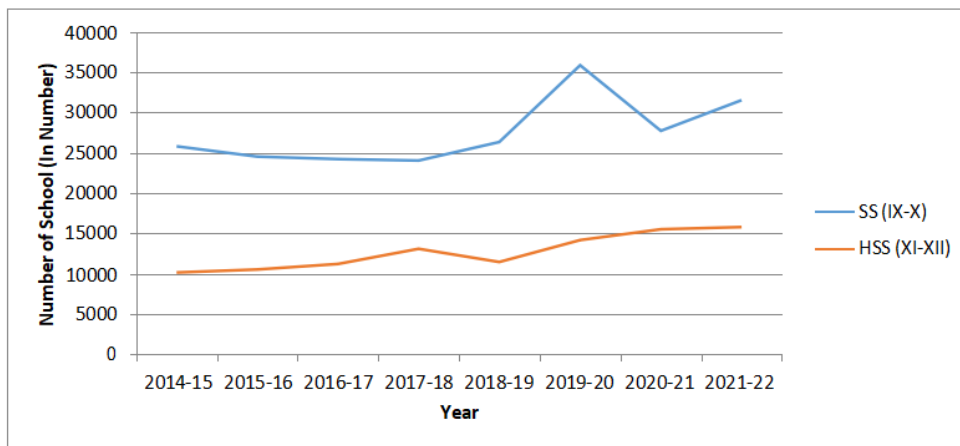
Years	Secondary (IX-X)			Higher Secondary (XI-XII)		
	Female	Male	Total	Female	Male	Total
2014-15	284560	500025	784585	149201	225395	374596
2015-16	477000	708918	1185918	204083	286150	490233
2016-17	529340	759122	1288462	237201	332192	569393
2017-18	559505	781516	1341021	264148	361933	626081
2018-19	571150	785075	1356225	273929	369629	643558
2019-20	577560	771699	1349259	292004	397801	689805
2020-21	493887	638489	1132376	276081	349460	625541
2021-22	520820	636445	1157265	284647	372221	656868
CAGR (Percent)	9.0	3.5	5.7	9.7	7.4	8.4

Source: Department of School Education and Literacy, Ministry of Education, GOI

Table 1 shows that while the number of female instructors in secondary and higher education has increased slightly over the years, it has nonetheless lagged behind the percentage of male teachers. There will be fewer male educators in secondary schools in the coming years and in upper secondary schools. This decline in proportion has been partially offset by an increase in the number of women working in secondary and post secondary education.

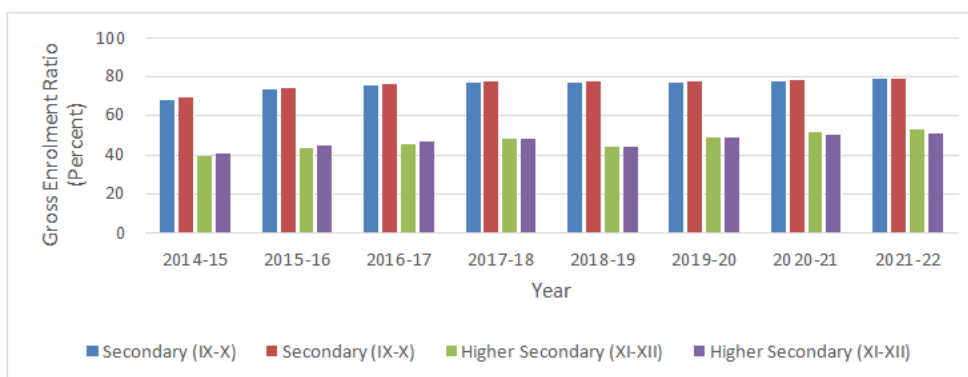
Figure 2 depicts the expansion of Delhi's secondary and higher secondary educational institutions, which are the only ones authorised to teach students of any age. Figure 2 shows that by 2014–15 there were 10166 higher secondary schools and 25829 secondary schools in Delhi. Because enrolment in schools is likely to rise, the government has periodically opened new secondary and higher secondary institutions. There were 31551 thousand secondary schools in use in 2021–22, with an

additional 15816 thousand secondary schools at the upper-level. The projected CAGR for secondary education is 2.9%, whereas the projected CAGR for upper secondary education is 6.5%.



**Fig. 2. Increasing numbers of Delhi's secondary and advanced-level schools**

The GER evaluates the proportion of a population that is of the appropriate age to be enrolled in a given educational level. Figure 3 displays the growth of the gross enrolment ratio from 2014–15 to 2021–22 for both boys and girls in secondary and higher secondary education. Over time, there has been an uptick in GER for both sexes. The gross enrollment ratio (GER) at post secondary institutions is also highlighted; in 2014–15 for boys and girls. Increasing evidence suggests that GER improves with senior year of high school.



**Fig. 3. Gross Enrolment Ratio (GER) by gender at secondary and higher secondary education**

Secondary and higher secondary Pupil-Teacher Ratio (PTR) from 2014–15 to 2021–22. Pupil-Teacher Ratio (PTR) evaluates the availability of adequate teachers for educating students at the relevant level of education. The secondary school PTR has increased from 29.7 in 2014-2015 to 18.5 in 2021-22. The PTR for post secondary education has increased significantly, from 39.2 in 2014-2015 to 26.1 in 2021-2020. PTR has increased significantly during the time period at both levels of schooling under consideration. Since fewer students are assigned to each teacher, the quality of education rises as PTR falls.

**Table 2. Delhi's Secondary and Higher Secondary Pupil-Teacher Ratio**

Pupil-Teacher Ratio		
Year	Secondary (IX-X)	Higher Secondary (XI-XII)
2014-15	29.7	39.2
2015-16	25.5	40.3
2016-17	26.3	38.4
2017-18	26.6	37
2018-19	26.3	33
2019-20	24.5	33.2
2020-21	21	29.6
2021-22	18.5	26.1

### CONCERNS IN UPPER- AND LOWER-LEVEL SECONDARY EDUCATION

Education after elementary school is essential, but it comes with its own set of problems that need to be identified and addressed. Across all sectors of national productivity, secondary school is now the largest provider of working people. The flaws in secondary education have been repeatedly brought to light by a number of Commissions. Many people in India feel that the secondary level of education places too much focus on academics and not enough on helping kids develop the skills they'll need to succeed in the real world and in further school. Many people fail to graduate from high school because they were unable to overcome the many obstacles they faced throughout their time there. Students drop out of middle and high school at alarming rates due to a wide range of factors, and the vast majority of enrolled youngsters never graduate from secondary school. Low secondary school enrollment appears to be related to a lack of convenient secondary schools in the area. One demand-side factor that is likely to inhibit efforts to increase secondary school enrollment is parents' beliefs of the futility of educating females, as many households adhere to traditional gender roles and do not value daughters' participation in the labour market. In India, female students are more likely to quit school than their male counterparts. Girls' attendance at distant secondary schools may also be influenced by conservatism and fears for their personal safety. In educationally deficient states and districts, the dropout rates are dramatically higher. Dropout rates are also greater among students from socially disadvantaged/backwards groups, such as scheduled castes and scheduled tribes.

Children in rural areas and urban slums, for example, have a greater dropout rate than their counterparts in more affluent places. When people don't finish high school, it has consequences for them personally and also exacerbates the country's existing social and economic divides. Recently in Delhi's slum regions, adolescent dropout has been linked not just to poverty and financial restrictions, but also to schools' failure to adequately meet the unique educational requirements of disadvantaged students [33]. The majority of schools in the country, especially public schools, lack sufficient facilities. Inadequate facilities, including classrooms, desks, laboratories, libraries, play areas, urinals, and potable water, contribute to students' difficulties. Low female student enrollment may be attributed, in part, to the lack of clean and safe urinals that female students must use. The kids lost out on the true value of education as a result. Therefore, students' physical and cognitive development may be stunted because of inadequate

facilities. There are often more pupils than there are teachers at several secondary and advanced placement institutions. There wouldn't be enough one-on-one time between the teacher and the students. Due to the size of the class, the instructor is unable to implement new teaching strategies. Unfortunately, many educational institutions have issues with insufficient facilities and buildings, leading to bloated class numbers. Financial limitations, a lack of career assistance, the organisation of the curriculum, and other issues have all been identified as problematic.

## **CONCLUSION**

This paper has made an effort to paint a picture of high school in Delhi's slums. Gross enrolment ratios for both secondary and upper secondary education have been increasing, and so has the overall number of students enrolled in these levels of education. Gender equality has improved, especially at the level of education measured by the GPI. While improvements have been made in secondary and postsecondary education, they have not kept up with the rate at which they are needed. Despite increases in secondary along with upper secondary school enrollments and teachers, the proportion of secondary schools per 100,000 population is still very low, demonstrating that the goal of universalizing secondary schooling is still far off. The transition from a system of elite secondary schools in India to one that serves the masses has been difficult. Overall, it is evident that quality enhancement must be attended to in tandem with quantity growth in secondary education. Demand for secondary and higher secondary education is likely to be strong due to the substantial financial benefits of completing such programmes, suggesting that factors like a lack of secondary schools, household credit constraints, and conservative gender roles are limiting enrollment. Disparities in secondary school access and engagement across regions, across sexes, and across socioeconomic status remain a pressing issue. A change in educational philosophy should lead to a more collaborative and student-focused classroom. Education is valued by those who have a vested interest because of its potential to foster a child's holistic development. Therefore, it is necessary to employ efficient pedagogical strategies and make use of adequate infrastructure resources, both of which may have a positive effect on students' academic outcomes. It's been pointed out that it's not just low-income families who struggle to pay for private school; middle-income families do as well. That's why it's up to policymakers to decide whether or not private schools can charge what they want. We believe that the expansion of secondary and higher secondary education in India has had many beneficial effects. Recent years have seen encouraging increases in enrollment and the quality of instruction, as well as a nearing gender parity index.

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