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# Nepal's Education Paradox: Expanding Access, Limited Completion and Learning

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## Abstract

*Nepal has made substantial progress in the primary and lower-secondary school enrollment in the last two decades. Yet these enrollment expansions have not translated into improvements in school completion, progression, or learning. This paper uses the 2021 administrative data from the Center for Education and Human Resource Development (CEHRD, 2021) to highlight this difference. First, we show high enrollment in the early grades, which falls sharply at the secondary and upper-secondary levels. The decline is steeper in disadvantaged provinces and social settings. Second, we study the associations between student-teacher ratios and key schooling outcomes. These patterns do not establish causality, but they do suggest that access by itself is not enough. A durable improvement in human capital will require greater attention to retention, progression, and the quality of schooling, alongside targeted support for students facing the greatest barriers.*

## 1. Introduction

Standard human capital theories model schooling as an intertemporal investment. Households incur costs for schooling in the form of school fees, uniforms, books, travel, and opportunity cost for children's time for families where children support in farms or for looking after their siblings. These investments are made with an expectation that higher education leads to higher future returns through earnings, better employment opportunities, and improved life chances. Education also has positive externalities. More educated individuals are shown to have better health, participate more strongly in civic duties, and are less engaged in criminal activities. Schooling decisions are often distorted by liquidity constraints, uncertainty about future returns, and imperfect information. As a results households decide to send their children to school later, withdraw early, or

not even send them at all. The less than is socially optimal investment as well as high social returns to education are the reasons why governments should invest in education and subsidize schooling such that it has wider access. Indeed, Goal 2 of the Millennium Development Goal was to "ensure that all boys and girls alike would complete a full course of primary schooling by 2015" (MDG, 2).

In addition to market failures associated with suboptimal investment in education, among students who attend school, they are not necessarily acquiring skills that are useful for their later life and earnings. Recent trends in developing countries show a lot of children are enrolled for school. Despite the rise in enrollment, students do not learn much from their classes mainly due to weak school infrastructure and pedagogy. poor alignment between students' level of preparedness and the curriculum, and limited accountability for teachers as well as parents. These low learning outcomes despite a rise in enrollment are commonly understood as a learning crisis. As a result, Universal Declaration of Human Rights to the Sustainable Development Goals highlighted the need for quality of educated in addition to education access. This is also reflected in the from the Universal Declaration of Human Rights to the Sustainable Development Goals, which wants to "ensure inclusive and equitable quality education and promote lifelong learning opportunities for all" by 2030 (SDG, 4). The emphasis from access to quality reflected in MDG and SDG matter for Nepal as well. The policy question is no longer only whether children enter school, but whether they remain long enough, progress smoothly enough, and learn enough for education to translate into meaningful human capital gains.

## **2. Background**

Nepal's schooling system is divided into Primary education, (Grades 1–5), Basic education (Grades 6–8), Secondary education (Grades 9–10), and Upper-secondary education (Grades 11–12). Nepal is one of the youngest republics in the world. After the establishment of federalism in 2015, education is more and more decentralized, and responsibility for designing curriculum and such has increasingly shifted to federal, provincial, and local governments. This allows local governments to implement grass root strengths in education.

Nepal's education has improved significantly over recent decades. The adult literacy rate (for those aged 15 and above) has steadily risen from 20.6% in 1981 to 71.2% in 2021 (PRISA, 2024). Concurrently, government education spending has grown substantially

from 64 billion rupees in fiscal year 2011/12 to 180 billion rupees in 2021/22 (UNESCO, 2023). This budget is primarily spent on expanding supply-side initiatives, establishing new schools, recruiting more teachers, removing school fees, and offering scholarships. As a result, fewer children are out of school, pupil-teacher ratios have improved in some areas, and the total number of teachers has increased, all of which contribute to enhancing access and participation.

Despite improvements in access and enrollment, children's learning outcomes remain low. High enrollment levels do not ensure children's progression to higher education, school completion, or even the acquisition of key skills. According to a UNICEF (2022) report, only about half of Grade 5 students in Nepal are proficient in basic reading and math. Dropout rates increase sharply at secondary and upper-secondary levels, especially among marginalized groups. This gap—between rising educational participation and stagnant or declining learning outcomes, particularly among disadvantaged populations—highlights the need to prioritize learning quality over access alone. At the same time, enrollment and dropout rates vary greatly across provinces and social groups, with rural, remote, low-income, and historically marginalized communities facing the greatest challenges. Therefore, it is important to understand these educational trends, particularly why increased access has not translated into stronger learning outcomes. By identifying where and why students fall behind or drop out, this study aims to inform policies that shift the focus from expanding enrolment toward improving retention, progression, and the overall effectiveness of schooling. Our study has the following objectives:

1. To study access and participation in education, examine enrollment, dropout, and promotion patterns in primary, basic, secondary and upper-secondary levels.
2. To study equity and inclusion, examine how these patterns differ by province, gender, school type, and the representation of historically marginalized groups.
3. To study the association between access and learning, examine descriptive associations between student-teacher ratios and enrollment and dropout and promotion.

### **3. Data and methods**

We use 2024 administrative education dataset provided by the Center for Education and Human Resource Development (CEHRD), for our analysis. CEHRD provides information on student enrollment, dropouts, promotion, teacher counts, and school type, aggregated at the local level. There are 753 local governments in Nepal.

To study access and participation measures, we show the distribution of enrollment rate, dropout rate, and promotion rate for Grades 1-5, Grades 6-8, Grades 9-10, and Grades 11-12 using bar graphs. The net enrollment rate measures the share of children that are enrolled at one of these 4 schooling levels in Nepal. The dropout rate measures the share of enrolled children that dropout. Similarly, the promotion rate measures or share of enrolled children are promoted to the next grade. These measures are useful to assess both entry and continued participation in schooling. We show the bare graph of net enrollment rate, dropout rate, and promotion rate by province and schooling stage, with separate comparisons for girls and boys where relevant.

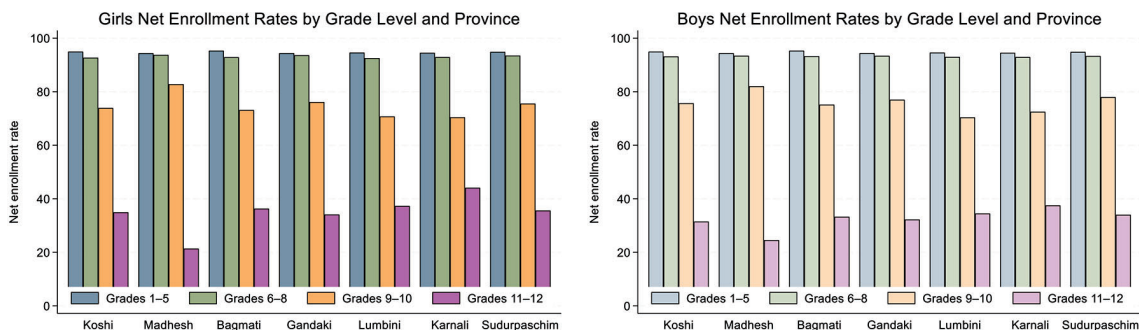
To study equity and inclusion, we again compare the presence of public and private schools across provinces and grade levels using bar graphs. We also examine the gender composition of teachers and students, and the distribution of Dalit and Janajati students across provinces and grade levels. These pattens provide descriptive evidence of the parts of the system where inequality is most visible and highlight areas where the expansion in access has been least likely to produce sustained educational progress.

To study the association between participation and learning, first we use the student-teacher ratio (STR) as a rough proxy for quality. We believe a lower STR reflects smaller classes or greater teacher availability, that may support learning. We use scatter plots between STR and net enrollment, dropout, and promotion at the local level and include fitted lines to summarize the direction of association.

## 4. Results

### 4.1 Access and participation

#### 4.1.1 Net Enrolment Rate



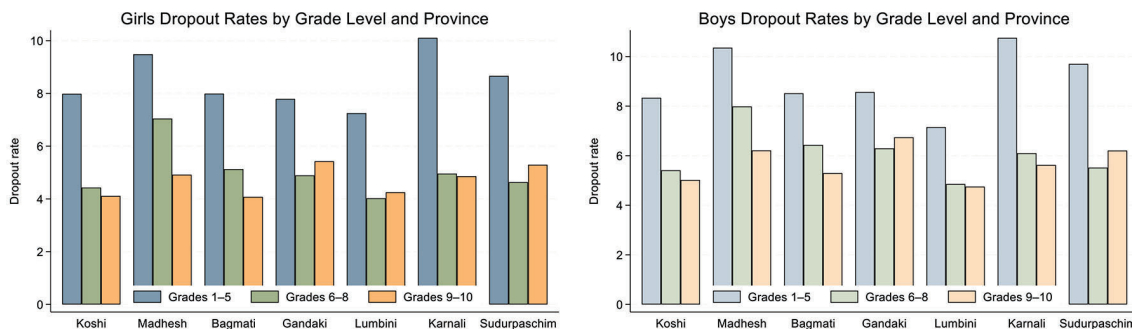
**Source:** Author's calculation using CEHRD 2024 dataset

The first figure shows the distribution of net enrollment rate by grade level and provinces for girls and boys using bar graphs. The results show high enrollment rates of over 90% for grades 1-8. The results highlights that Nepal education system has succeed in getting children into school in the early grades. Furthermore, barriers to entering school seem to be low and participation seems to be high at these levels. This patten is similar across provinces and genders.

The picture changes once students move to higher grades. There is a noticeable fall in enrollment to about 70% at the secondary level and a much sharper fall in upper-secondary level to about 20-40%. The decline in secondary level enrolment is more pronounced in Karnali and Lumbini, and higher secondary enrolment in Terai province. These are also relatively underprivileged provinces in the country, which will be discussed later in equity and inclusion section.

The results highlight that despite expansion in access and participation at the lower level, Nepal's education system as failed to keep children to school until graduation. Our system seems to be much better at bringing children in than at keeping them through completion. The retention of children and transition to higher levels rather than initial enrollment seem to be the main bottleneck.

#### 4.1.2 Dropout Rate

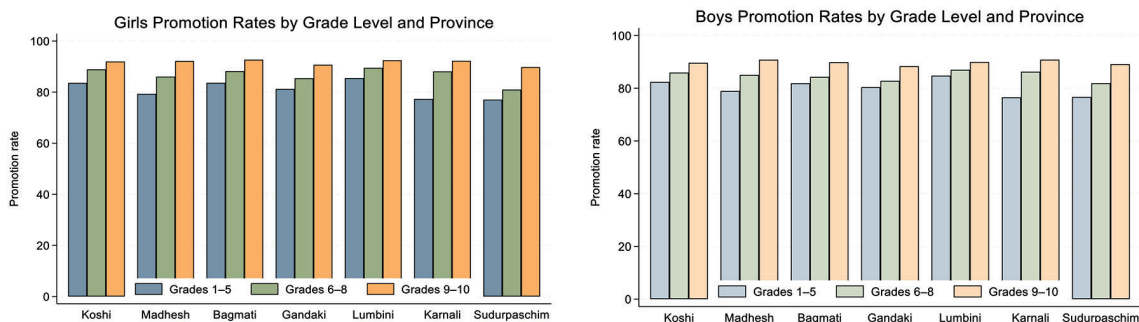


**Source:** Author's calculation using CEHRD 2024 dataset

The figure shows the distribution of dropout rate by grade level and provinces for girls and boys using bar graphs. The results reinforce the findings from net enrollment discussed earlier. Dropout is highest in grades 1-5 (7-10%), followed by grades 6-8, and grades 9-10. The patten is somewhat similar across provinces and genders. The dropout rate is more severe in Karnali and in Madesh. Slightly smaller share of girls tends to drop out than boys.

Early dropout from school might prevent students from building the basic literacy and numeracy skills needed for subsequent learning. The differences across provinces may reveal some deeper inequalities in attitude towards schooling, household conditions, school quality, distance, and the opportunity cost of remaining in school. Children might also engage in farming or helping parents or even getting married early and leave school. If there is a high opportunity cost of staying at school or the direct costs associated with schooling are high, children are more likely to drop out early.

### 4.1.3 Promotion Rate



**Source:** Author's calculation, CEHRD 2024 dataset

The figure shows the distribution of promotion rate by grade level and provinces for girls and boys using bar graphs. Promotion rates reflect the dropout rate story from the opposite lens, although they are not directly complementary. Promotion rate also captures the number of students who fail and are forced to repeat class. Among students who are enrolled more than two thirds of the students are generally promoted. Students seem to be retained more in the earlier grades and become slightly more stable for later grades. Karnali and Sudurpaschim have low promotion rates, like earlier low enrollment and dropout rates in these provinces.

The promotion rate statistics are quite low compared to schools in more advanced economies where almost all students are promoted. Retaining students in the same grade is very costly. At the same time, if students are not prepared or learned enough to progress onto the next level, education system may have no choice but to retain them in the same grade.

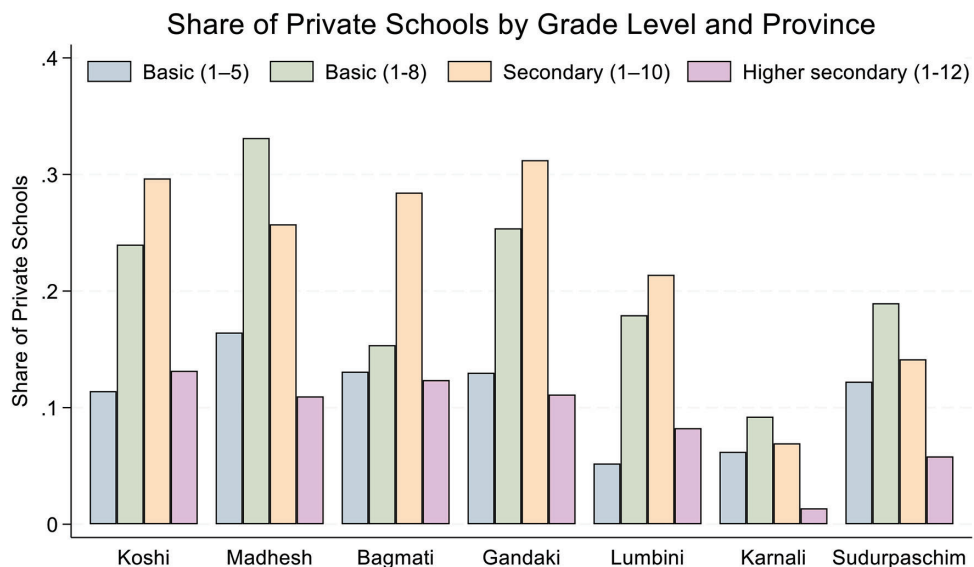
All three results collectively suggest that Nepal's challenge is not simply low participation. In fact, the entry into education is high, but the enrollment declines sharply at higher levels. High dropouts and low promotion rates are partly responsible for this

decline. Furthermore, this challenge is uneven with more severe problems in Karnali, Sudurpashim and Madesh province. To continue to examine this heterogeneity, the next section studies the equity and inclusion in education in Nepal.

## 4.2 Equity and inclusion: gender and caste in Nepal

The low aggregate indicators are further worsened by substantial inequalities within the Nepali education system. School availability and high entry are necessary but not sufficient conditions for better learning. Indeed, a large literature shows schooling outcomes depend on gender and social norms, early marriage, the expected returns to education, and household bargaining. These are distributed very differently across families. Girls and children from socially marginalized communities in Madesh might be forced to marry early. A child from Karnali might need to work on the farm or migrate to support family members. On top, the supply of schools might be limited. Even if these students enroll at school, they might miss out on school for several days. Thus, the heterogeneities associated with equity and inclusion is especially relevant in Nepal, where caste and ethnic hierarchies continue to shape everyday life, despite it is illegal to discriminate against caste. The caste and gender-based discrimination or permeates through Nepal's education system. Some low caste children are forced to use separate seating spaces. Such unequal treatment can reduce the effective return from schooling.

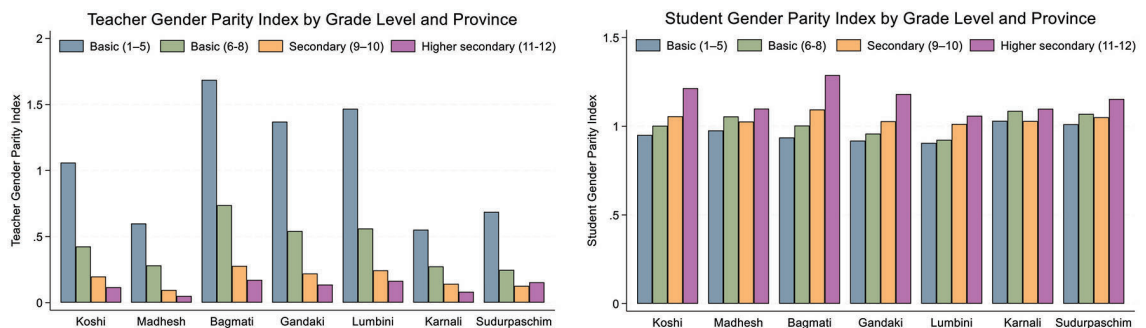
### 4.2.1 Government versus Private Schools



**Source:** Author's calculation using CEHRD 2024 dataset

The figure shows the distribution of government versus private schools by provinces using bar graphs. Private school penetration is quite low in Nepal, with some presence in basic and secondary schooling. However, their presence in primary and higher secondary grades is quite low. Therefore, government schools remain the main provider of education in Nepal and should be prioritized to improve the education quality in Nepal. Provision of education through private school is especially small in Karnali and Sudurpaschim provinces. This might be due to remoteness, and low household income. Private schools are generally concentrated in urban areas and charge costs for school attendance. Their penetration is also determined by the demand. They might be less in demand in Karnali and Sudurpaschim, where the overall education infrastructure seems to be low in the first place. But this seems to be amplified by a lower private alternative for families who might want to take this option.

#### 4.2.2 Male versus Female Teachers and Students

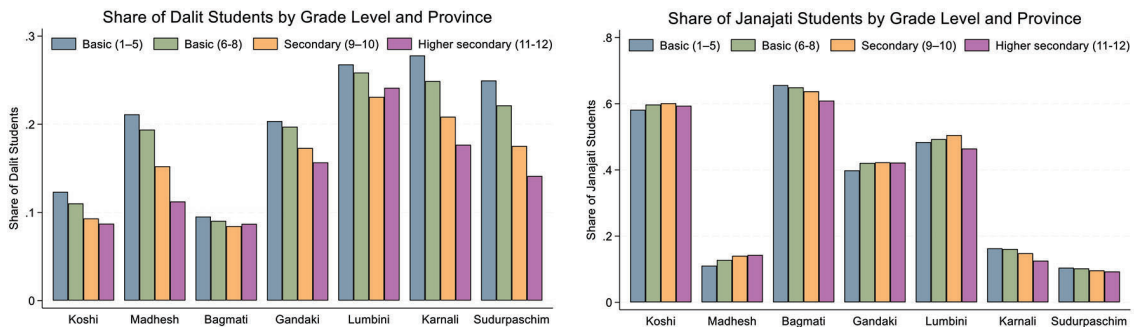


**Source:** Author's calculation using CEHRD 2024 dataset

The figure shows the distribution of teacher gender parity index (left) and student gender parity index (right). These figures reveal two different realities. The gender imbalance among teachers is substantial. Gender gaps among students are much smaller. In some upper grades, more girls are enrolled than boys. This is a great progression compared to Nepal's past when very few girls attended schools. The teacher gender disparity illustrates that female representation is highest at lower level that falls sharply at the higher levels, with sharp disparities in Karnali, Sudurpaschim, and Madhesh, the same provinces where broader more restrictive gender norms are practiced. Female students might look up to female teachers as their role models, which might inspire them to work harder at school and perform better. This is somewhat restricted to the current system. However, if teachers are any reflection of intergenerational distribution, then a lot fewer girls seem

to have gotten quality education, which is reversed now. And in that regard, Nepal has made a significant progress.

### 4.2.3 Dalit and Janajati Students



**Source:** Author's calculation using CEHRD 2024 dataset

The figure shows the distribution of Dalit and Janajati students. While Dalit students are largely discriminated, in some areas Janajati groups are also not treated at the same level as the so-called upper caste Brahmin and Chhetri students. Share of Dalit students are highest in the Lumbini, Karnali, and Sudurpaschim provinces. Likewise, Share of Janajati students are highest in the Koshi and Bagmati. However, this heterogeneity may largely reflect the concentration of these castes in different provinces.

The more interesting pattern to look for representation changes across grade levels. The figure shows that the share of Dalit students falls sharply as grade level rises. The results point to the fact that Dalit children, who are structurally discriminated are less likely to stay in the system through higher levels of education. This finding is especially troubling as it points to the perpetuation of inequality in human capital over time. Dalit and so-called low caste children do not only have unequal access at entry, but they may have bad experiences in school due to discriminatory practices, and they may not survive through school and dropout faster.

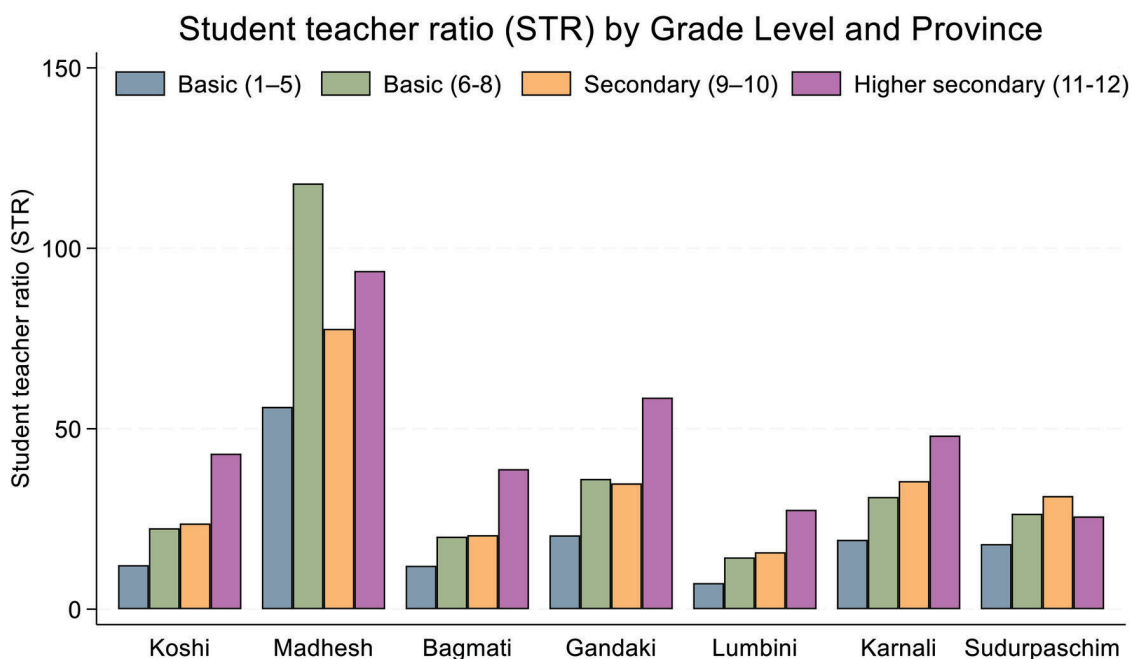
### 4.3 Education quality: why schooling does not equal learning

The first two sections examined schooling access and within inequalities in the system. High entry at lower levels were followed by sharp declines. These were also reflected in high dropouts and low promotion rates. These effects varied by provinces, gender, and caste, often the underprivileged ones suffering the highest decline. So far, the

investigation was about access and participation. Next, we want to look at education quality and use student teacher ration as a rough proxy of quality. The goal is to understand why learning can remain low despite some progress in access. Low quality schools may fail to translate access or participation to useful outcomes. Students may not learn as much from school to be able to become better citizens and earn more in their later life.

If students are not taught at the right level, if teachers are weak and absent, going through schooling system may not yield required skill accumulation. We use Student teacher ratio (STR) to also proxy other measures of school quality, including infrastructure. Schools with low STR are also likely to have better infrastructure and can offer better quality education, as they can monitor students more closely, track their progress and weaknesses, and guide them whenever necessary. The next figures show the associations between STR and enrollment, dropout and promotion rates.

#### 4.3.1 Student teacher ratio (STR)

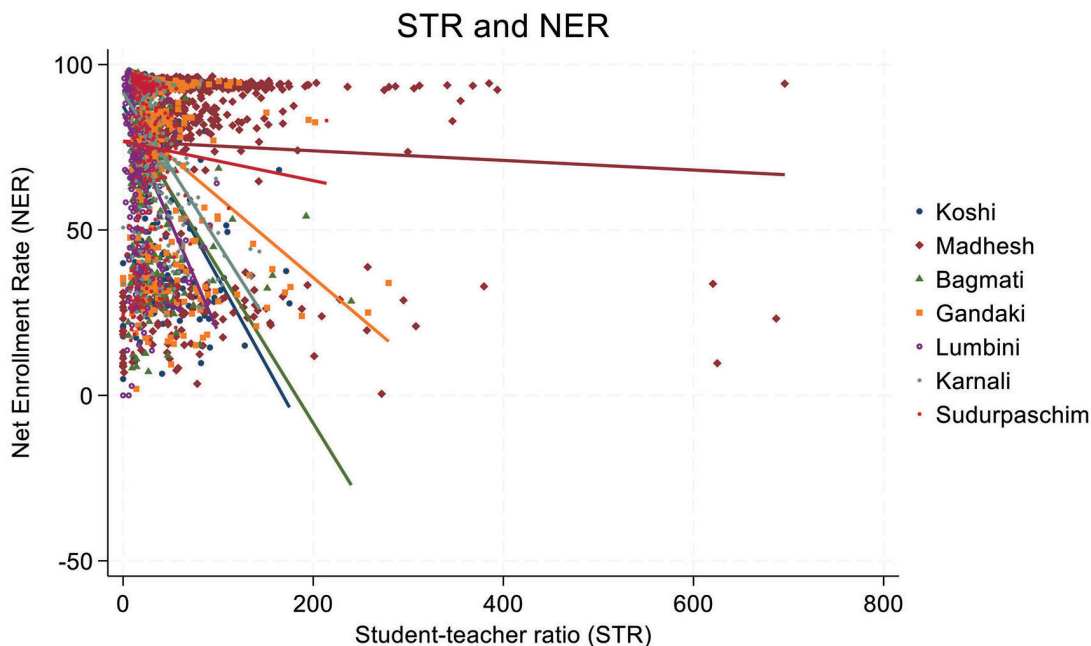


**Source:** Author's calculation using CEHRD 2024 dataset

The figure shows the distribution of STR by grade levels and provinces. The figure shows that STR rises with grade levels, with a steep rise for Madhesh. Students in higher

grades and especially from Madesh are supposed to be in large classes, and hence the quality of pedagogy might be lower. High STR signals pressure on the system that may strain classroom management, reduce individual attention, and limit the effectiveness of instruction.

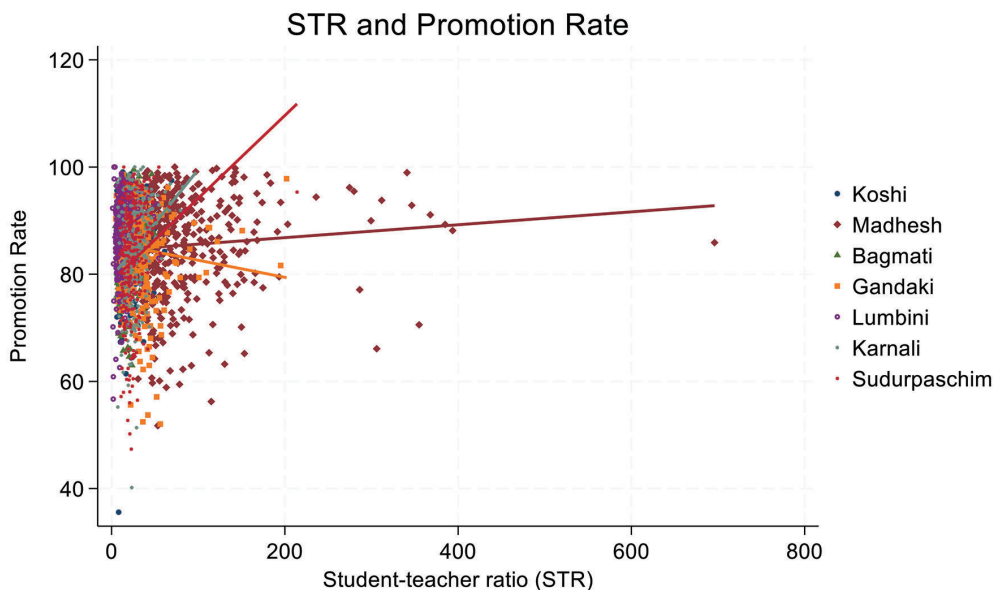
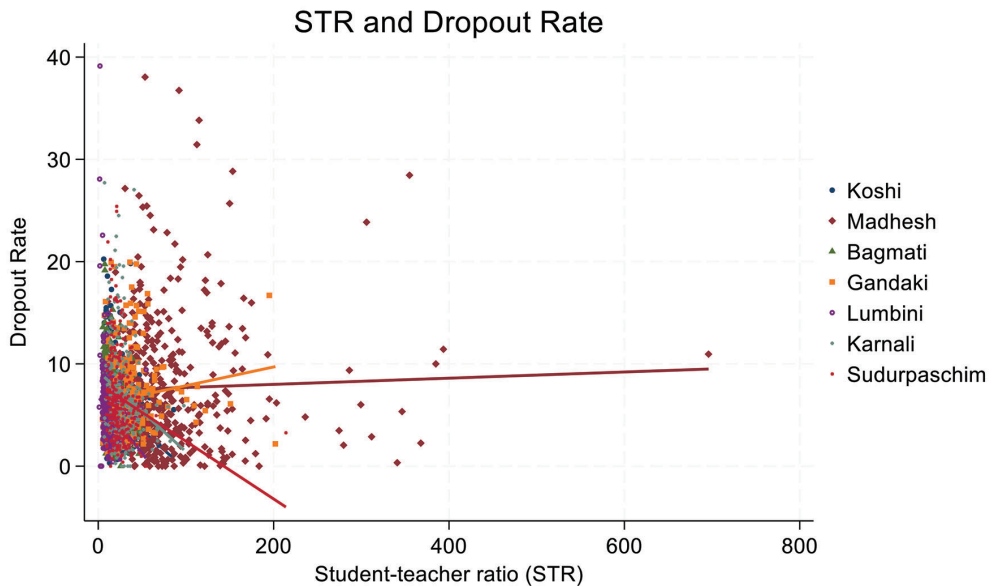
#### 4.3.2 Correlation between STR and NER



**Source:** Author's calculation using CEHRD 2024 dataset

The figure shows the negative association between STR and net enrollment, with slight heterogeneities across provinces. The line fit is steepest for Bagmati followed by Koshi and is least steep for Madesh and Sudurpaschim. The result reflects that larger class sizes are associated with weaker enrollment outcomes. Schools in Bagmati and Koshi are generally considered better and achieve higher outcomes relative to schools in Madesh and Sudurpaschim. In this regard, teacher availability seems to be reflective of one such quality constraint.

### 4.3.3 Correlation between STR and Dropout Rate and STR and Promotion Rate



The scatter plots showing the association between STR and dropout and promotion rates reinforce the previous finding, although this association is not as clear cut. This

relationship is generally weak but positive and not uniform across provinces. Low STR are somewhat associated with low dropout, which is sensible. The association on promotion is slightly intriguing, but this might also reflect that school with large STR might promote more students as they would otherwise overburden the already populated classrooms by retaining students. However, this evidence is weak. Overall, the association results point out the fact that hiring more teachers or reducing class size will contribute to more enrollment and low dropout but do not automatically solve the deeper problems of persistence and learning.

### **5. Policy implications and recommendations for Nepal**

Our findings suggest that Nepal's education policy should move from an access-centered framework to a progression-and-learning framework. Nepal has achieved enrollment expansion, especially at the lower level. The policy goal should be to retain them and ensure they acquire foundational skills, progress grades on time, and remain in school through the end of the cycle. Retaining students in class unnecessarily may hurt students' confidence while burdening the education system, while promoting weak students may reduce the overall class quality. Weak and marginalized students should be supported outside school via mentoring and remedial programs. Policy should also invest in teacher effectiveness, classroom support, and early interventions.

A second implication is the issue of equity and inclusion. Policies should target provinces with high dropouts, weak upper-level enrollment, and large social disparities. High quality teachers should be deployed in these areas and provided with additional allowances if needed. Government should also invest in school infrastructure but also try to raise awareness among households and communities about the importance of education. Programs that support girls' and low caste students' continued participation in school are critical.

### **6. Conclusion**

Our descriptive investigation of various schooling outcome indicators, underlying heterogeneities and their association with the STR reveal that Nepal's education system has largely achieved expansion in access in primary and basic and basic levels. Enrollment rates are high. However, our system remains weak in terms of progression, completion, and learning. Enrollment falls sharply at higher levels, while dropout rates remain high and promotion rates remain low. Socially disadvantaged groups much less represented at higher levels of schooling. Our schools have succeeded in

opening the door to all students but are still unable to carry most of them, especially the disadvantaged ones, through it.

Next, the schooling system should focus on how to convert access and participation into sustained skill formation and more equal life chances. Otherwise, increased access will continue to yield diminishing returns and leave the underlying distribution of educational opportunities largely unchanged. The policy should focus on student retention, improve instructional quality, address regional and social disparities, and evaluate progress using learning and progression outcomes rather than enrollment alone. This will ensure improvements in access to higher learning outcomes as well.

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