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SECONDARY TEACHER WORKFORCE MANAGEMENT IN BHUTAN

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ABOUT THE LEARNING CYCLE ON INCREASING WOMEN'S REPRESENTATION IN SCHOOL LEADERSHIP

This case study is a result of the KIX EMAP Learning Cycle "Increasing Women's Representation in School Leadership". Facilitated by Dr Fenot Aklog and Dr Cathryn Magno, this Learning Cycle ran from 18 September 2024 to 28 February 2025. The course equipped participants with the conceptual and analytical tools for understanding conditions that promote and serve as barriers to the recruitment, development, and retention of women in school leadership roles. Sixteen national teams took part in this Learning Cycle, including Albania, Bangladesh, Bhutan, Indonesia, Kyrgyz Republic, Maldives, Moldova, Nepal, Pakistan (Punjab), Pakistan (Sindh), Philippines, Sri Lanka, Timor Leste, Ukraine, Uzbekistan and Vietnam.

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LIST OF ACRONYMS AND ABBREVIATIONS

B.Ed	Bachelor's of Education
EMAP	Europe, Middle East and North Africa, Asia and Pacific
EUR	Effective Utilisation Rate
GPE KIX	Global Partnership for Education Knowledge and Innovation Exchange
HRD	Human Resource Division
HSS	Higher Secondary School
ICT	Information and Communications Technology
IIEP-UNESCO	UNESCO International Institute for Educational Planning
LCR	Learning Coverage Rate
MoESD	Ministry of Education and Skills Development
NGO	Non-Government Organisation
NSB	National Statistics Bureau
OUUR	Operational Underutilisation Rate
PG	Pedagogical Group
PGDE	Post Graduate Degree in Education
STEM	Science, Technology, Engineering and Mathematics
SUUR	Structural Underutilisation Rate
TUUR	Total Underutilisation Rate

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Lastly, we thank the GPE KIX Country Coordinator for facilitating our participation in the IIEP-UNESCO course on analysing secondary teacher workforce management and for creating such meaningful opportunities for engagement.

EXECUTIVE SUMMARY

This knowledge report, developed as part of the GPE KIX EMAP Learning Cycle and supported by IIEP-UNESCO, presents a comprehensive analysis of secondary teacher workforce management in Bhutan. The study spans recruitment, deployment, utilisation and policy strategies, addressing challenges and forecasting Bhutan's teacher requirements from 2025 to 2029.

Bhutan's education system, grounded in the country's constitutional commitment to free education, comprises over 524 schools and serves approximately 156,184 students, with a teaching force of about 10,158. Teachers are primarily trained at two national colleges, yet persistent staffing shortages – especially in science, technology, engineering and mathematics (STEM) subjects – have led to international teacher recruitment, notably from India. Teacher deployment is guided by the Ministry of Education and Skills Development (MoESD) and adheres to a standard student-teacher ratio policy, although disparities exist, particularly between urban and rural regions.

One key contributor to Bhutan's teacher shortages is the declining interest in the teaching profession, despite it being one of the highest-paid careers in Bhutan. This, coupled with excessive workloads, high teacher attrition – especially to overseas opportunities – and a reluctance to serve in rural areas, has created imbalances in teacher distribution. Additionally, schools report both under- and overutilisation of staff, with learning coverage rates (LCRs) varying significantly by district.

This study offers projections of Bhutan's teacher requirements based on curriculum timing, pedagogical groups (PGs) and student transition rates across classes VII–XII. These projections closely align with actual needs, reinforcing the reliability of current planning models. However, the analysis also reveals operational inefficiencies such as poor timetable management and scheduling discrepancies, which contribute more significantly to teacher underutilisation than structural issues.

Effective teacher management in Bhutan is essential for addressing current challenges and improving educational outcomes. This report provides policies and strategies to address systemic challenges, optimise resources and foster professional development to ensure an equitable and high-quality education system.

1. INTRODUCTION

The Kingdom of Bhutan is a small, landlocked Himalayan country situated between India and the People's Republic of China, with a land area of 38,394 square kilometres, as seen in Figure 1. As per the National Statistics Bureau (NSB) of Bhutan, the country's total population was about 777,224 in 2024.

Figure 1. Map of Bhutan

Source: Google Maps

The Constitution of the Kingdom of Bhutan states that education and healthcare services must be provided for free for all time to come. Therefore, it is the mandate of the government to provide free education to the people. There are currently 524 schools, ranging from primary to higher secondary levels, with 156,184 students and 10,158 teachers (NSB, 2023). Table 1 outlines the full categorisation of Bhutan's school system.

Table 1. School Categorisation in Bhutan

School Type	Classes Offered
Primary schools	Classes I- VI
Lower secondary schools	Classes VII- VIII
Middle secondary schools	Classes VIIII- X
Higher secondary schools	Classes XI- XII

Teachers are primarily sourced from the two teacher training colleges in the country, Paro College of Education and Samtse College, with the exceptions of teachers recruited on contract and for substitution. As shown in Table 2, the Paro College of Education is mandated to train primary teachers and can train 170 teachers yearly, where they receive their Bachelor's of Education (B.Ed). In turn, Samtse College, which trains secondary school teachers, has the capacity for about 520 teachers, where they receive their B.Ed or Post Graduate Degree in Education (PGDE). All B.Ed. teachers are subject to selection upon passing the Bhutan Civil Service Examination.

Table 2. Teacher Training Institutions in Bhutan

Institute	Yearly Intake Capacity	Training Duration by Degree
Paro College of Education	170	B.Ed. Primary, 4 years
Samtse College of Education	240	B.Ed. Secondary, 4 years
	280	PGDE, 2 years
Total	**690**	

Source: Royal University of Bhutan

There are mainly three categories of teachers in Bhutan: (1) primary B.Ed. teachers, who teach general subjects except for Dzongkha (the national language); (2) secondary B.Ed. teachers; and (3) PGDE teachers, who teach subject specialisations in higher secondary schools. However, to fill staffing shortages, the MoESD recruits teachers on contract, both from within and outside the country (mainly from India). In 2024, the MoESD recruited about 100 Indian teachers to fill the dearth of STEM subject teachers specifically (Dema, 2024).

2. TEACHER MANAGEMENT AND TEACHER REQUIREMENT POLICY IN BHUTAN

In Bhutan, the management of teachers falls under the MoESD, which is responsible for overall education policies, teacher training, recruitment and professional development. Bhutan places a strong emphasis on high-quality education that aligns with its Gross National Happiness philosophy, focusing on holistic development and well-being alongside academic learning.

The teacher requirement guidelines state that (Human Resource Division [HRD], 2023):

1. Teacher deployment shall be based on the number of subjects/domains and sections, with an ideal classroom size of 24 students in primary and 30 students in other levels of schools. However, exceptions shall be made for identified schools and ensure the deployment of at least one teacher for each section and main subject.

2. Schools with 150 students or below shall be provided with at least one teacher for each section. The deployment should consider allotting one teacher each for English, Dzongkha and Mathematics.

Table 3. Total Number of Teachers Teaching in the Higher Secondary Schools of Bhutan by Subject in 2023 and 2024

Subject	2023	2024
Accountancy	61	60
Arts & Crafts	8	11
Biology	215	208
Business Mathematics	58	34
Chemistry	204	206
Commerce	65	60
Dzongkha	2,025	2,031
Economics	188	194
English	640	593
Environmental Science	17	7
Geography	329	317
Health and Physical Education	8	5
History/Civics	336	324
Information and Communications Technology (ICT)	237	238
Maths	497	489
Physics	207	197
Science	299	284
Total	**5,394**	**5,258**

Table 4. Number of Students Studying in Higher Secondary Schools in Bhutan by Class and Gender in 2023 and 2024

Class	2023			2024		
	Female	Male	Total	Female	Male	Total
VII	6,868	6,448	13,316	5,463	5,230	10,693
VIII	8,359	6,856	15,215	7,145	6,231	13,376
IX	4,380	4,279	8,659	7,151	6,030	13,181
X	5,877	4,954	10,831	4,992	4,584	9,576
XI	4,195	3,719	7,914	4,508	3,890	8,398
XII	5,523	4,823	10,346	4,958	4,331	9,289
Total	**35,202**	**31,079**	**66,281**	**34,217**	**30,296**	**64,513**

3. CHALLENGES OF SECONDARY TEACHER MANAGEMENT

Mindset Towards the Teaching Profession

Although teaching is one of the highest-paying jobs in Bhutan, it is often seen as a last-resort career option. Many graduates prefer other fields, making it challenging to attract talented and passionate individuals to the teaching profession. This may further impact the overall quality of education in the country (Kuensel, 2022).

Teacher Workload

Teaching in Bhutan is a multifaceted job. Beyond their core teaching responsibilities, teachers are also expected to manage various school programmes, leading to high levels of burnout and fatigue. This additional workload often contributes to teacher attrition.

Challenges with Student-Teacher Ratios

Teacher allocation in higher secondary schools is subject-specific, making it difficult to implement the official student-teacher ratio policy. Rural schools often have fewer students, while urban schools are more crowded, which complicates equitable teacher distribution as well.

Reluctance to Serve in Rural Areas

Teachers, like most people, are inclined to seek comfortable living conditions and better amenities. Despite government incentives and efforts to prioritise rural placements, teachers often request transfers to cities once they meet the minimum service requirements in rural areas. This trend leaves students in rural Bhutan with less access to experienced teachers, which can affect the quality of education in these regions (Kuensel, 2024).

4. CURRICULA COVERAGE TIME

The Centre for School Curriculum Development, under the Department of School Education within the MoESD, is responsible for tasks related to school curricula in Bhutan. This agency determines instructional time for various subjects. In Bhutan, the total instructional time for one year is set at 150 days, excluding examination days, with the academic year comprising 180 days.

According to the Teacher Requirement Guidelines 2024, all teachers must dedicate a minimum of 13 hours per week to classroom instruction and an additional 13 hours to assessment-related tasks, as outlined in the weekly teaching timetable. This results in a total of 26 hours of dedicated teaching service per week (HRD, 2023). Details of the curriculum timings for different classes and subjects are provided in Tables 5, 6 and 7.

Table 5. Curriculum Timings for Classes VII and VIII by Subject

Subject	VII		VIII	
	Minutes/Week	Hours/Week	Minutes/Week	Hours/Week
Dzongkha	480	8	480	8
English	480	8	480	8
Mathematics	480	8	480	8
Science	560	9.3	560	9.3
History	320	5.3	320	5.3
Geography	320	5.3	320	5.3
ICT	160	2.7	160	2.7

Table 6. Curriculum Timings for Classes IX and X by Subject

Subject	IX		X	
	Minutes/Week	Hours/Week	Minutes/Week	Hours/Week
Dzongkha	400	6.7	400	6.7
English	400	6.7	400	6.7
Mathematics	400	6.7	400	6.7
Physics	240	4	240	4
Chemistry	240	4	240	4
Biology	240	4	240	4
History	240	4	240	4
Geography	240	4	240	4
ICT	160	2.7	160	2.7
Economics	240	4	240	4

Table 7. Curriculum Timings for Classes XI and XII by Subject

Subject	XI		XII	
	Minutes/Week	Hours/Week	Minutes/Week	Hours/Week
Dzongkha	480	8	480	8
English	480	8	480	8
Business Maths	480	8	480	8
Mathematics	480	8	480	8
Physics	480	8	480	8
Chemistry	480	8	480	8
Biology	480	8	480	8
History	480	8	480	8
Geography	480	8	480	8
ICT	160	2.7	160	2.7
Economics	480	8	480	8
Accountancy	480	8	480	8
Business Entrepreneurship	480	8	480	8

5. ESTABLISHING DEMAND FOR SECONDARY SCHOOL TEACHERS

5.1 Pedagogical Groups

In Bhutan, teachers are deployed based on a class size of 30 students in higher secondary schools (HRD, 2023). Pedagogical group (PG) and teacher requirements are ascertained based on the curriculum timings given for classes VII and VIII (Table 5), as presented in Table 8.

Table 8. Calculation of Pedagogical Group and Teacher Requirements in Classes VII and VIII by Subject

Subject	Number of Students	PGs	PG × Curriculum Time	26 Hours/Week	Teachers Needed
Dzongkha	24,069	802.3	6,418.4	246.9	247
English	24,069	802.3	6,418.4	246.9	247
Geography	24,069	802.3	4,278.9	164.6	165
History/Civics	24,069	802.3	4,278.9	164.6	165
ICT	24,069	802.3	2,139.5	82.3	83
Mathematics	24,069	802.3	6,418.4	246.9	247
Science	24,069	802.3	7,488.1	288.0	288
			Total teachers required		**1,442**

Based on the curriculum timings presented in Table 6, the PGs and teacher requirements for classes IX and X are presented in Table 9.

Table 9. Calculation of Pedagogical Group and Teacher Requirements in Classes IX and X by Subject

Subject	Number of Students	PGs	PG × Curricula Time	26 Hours/Week	Teachers Needed
Dzongkha	22,757	758.6	5,057.1	194.5	195
English	22,757	758.6	5,057.1	194.5	195
Geography	22,757	758.6	3,034.3	116.7	117
History/Civics	22,757	758.6	3,034.3	116.7	117
ICT	22,757	758.6	2,022.8	77.8	78
Mathematics	22,757	758.6	5,057.1	194.5	195
Chemistry	22,757	758.6	3,034.3	116.7	117
Biology	22,757	758.6	3,034.3	116.7	117
Physics	22,757	758.6	3,034.3	116.7	117
Economics	22,757	758.6	3,034.3	116.7	117
			Total teachers required		**1,365**

Based on the curriculum timings presented in Table 7, the PGs and teacher requirements for classes XI and XII are presented in Table 10.

Table 10. Calculation of Pedagogical Group and Teacher Requirements in Classes XI and XII by Subject

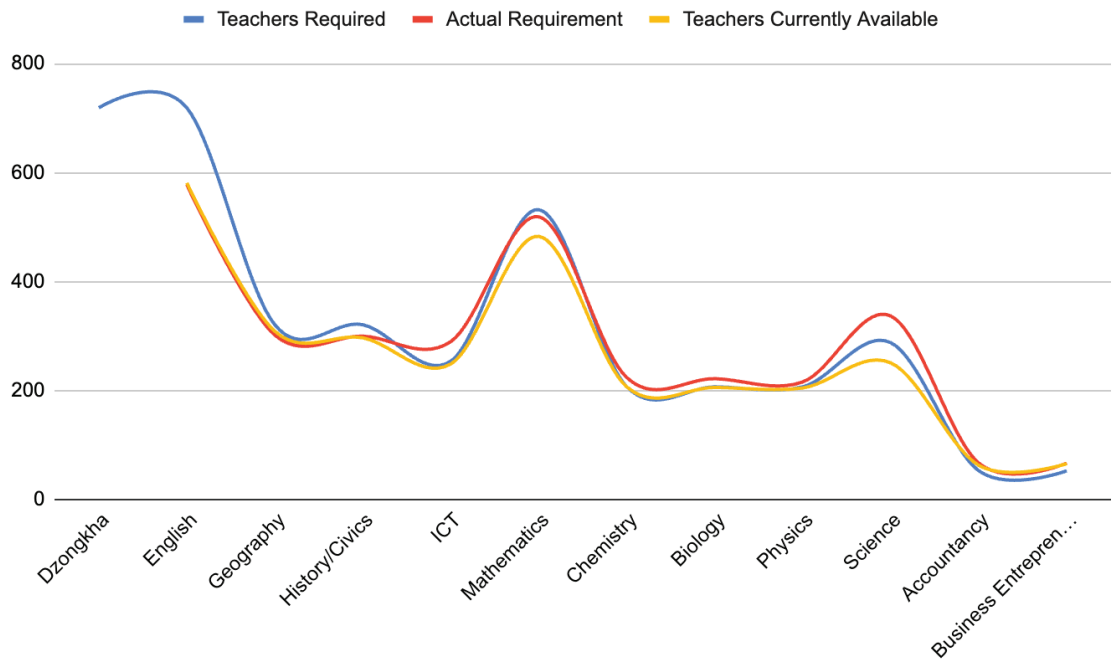
Subject	Number of Students	PGs	PG × Curricula Time	26 Hours/Week	Teachers Needed
Dzongkha	26,945	898.2	7,185.3	276.4	277
English	26,945	898.2	7,185.3	276.4	277
Geography	3,730	124.3	994.7	38.3	39
History/Civics	3,730	124.3	994.7	38.3	39
ICT	26,945	898.2	2,395.1	92.1	93
Mathematics	8,764	292.1	2,337.1	89.9	90
Chemistry	8,764	292.1	2,337.1	89.9	90
Biology	8,764	292.1	2,337.1	89.9	90
Physics	8,764	292.1	2,337.1	89.9	90
Accountancy	5,162	172.1	1,376.5	52.9	53
Business Entrepreneurship	5,162	172.1	1,376.5	52.9	53
Business Mathematics	8,892	296.4	2,371.2	91.2	92
Economics	8,892	296.4	2,371.2	91.2	92
			Total teachers required		**1,375**

5.2 Comparison Between Projected and Actual Teacher Requirements in Bhutanese Schools

A comparative study, the results of which are presented in Figure 2, was done to understand how close the projected teacher requirement is to actual teacher need in Bhutan. This will help us to understand the reliability of the projection model in our context, although it is well-researched.

Towards the end of each academic year, schools are required to project their teacher requirements based on their projected student enrolment. The HRD collects the actual requirements of teachers in consultation with schools. Based on the 2024 data available from the HRD, the projected teacher need is very close to the actual need. Notably, the projection results move in the same direction as those of the actual teacher needs.

Figure 2. Teacher Need Projections in Bhutan in 2024



5.3 Attrition Rate

Despite the teaching profession being the highest-paid job in the country, the Bhutanese education system is not able to retain teachers, especially younger and competent ones. Stricter visa regulations and immigration changes in Australia, for instance, have not significantly deterred the emigration of Bhutanese teachers, who continue to find overseas opportunities appealing due to better pay, professional development and a different work environment (Sharma, 2024). Teacher movement from 2022 to 2024, in terms of the number of teachers recruited and leaving the Bhutanese education system, is presented in Table 11.

Table 11. Teacher Movement in Bhutan from 2022 to 2024

	Total
Number of teachers who left in 2022–2023	643
Number of teachers who left in 2023–2024	242
Number of teachers recruited in 2022–2023	558
Number of teachers recruited in 2023–2024	228
Total teachers in 2023	**5,361**
Total teachers in 2024	**5,235**

Based on these data, the attrition rate is calculated using the following formula:

$$\frac{(Number\ of\ teachers\ in\ 2023 + Recruitment\ in\ 2023/2024) - Number\ of\ teachers\ in\ 2024}{(Number\ of\ teachers\ in\ 2023) + (Recruitment\ in\ 2023/2024)}$$

$$\frac{(5361 + 228) - 5235}{5361 + 228} \times 100 = \frac{354}{5589} \times 100 = 6.33\%$$

5.4 Projection of Teacher Requirements Based on Existing Practices

Teacher requirement projections are carried out by the HRD, including the continuous deployment and transfer of teachers. This is commonly referred to as the Teacher Requirement Exercise, which is calculated as follows:

$$\frac{\textbf{\textit{Curriculum time}} \times \textbf{\textit{Sections}}}{\textbf{\textit{Statutory teaching time per week}}}$$

This formula determines the number of teachers required for each subject in schools across Bhutan. However, an exception applies to schools with a total enrolment of 150 or fewer students. In such cases, the number of teachers assigned is matched with the number of sections, with mandatory deployment of teachers for English, Dzongkha and Mathematics (HRD, 2023).

5.5 Computation of Students' Growth Rate

Due to the unpredictable movement of students across different classes, a crude transition rate was computed to project the number of students in different classes. Crude transition is an assumption that the same proportion of students will transition to the next class the following year. It is calculated as enrolment in one class divided by the enrolment in the class in the year before. For instance, between 2023 and 2024, of the 11,066 students in class VI, 10,693 reached class VII (in practice, they may not be the same students, as some may have repeated), so the crude transition rate would be 10,693/11,066 = 97%, as seen in Table 12.

Table 12. Calculated Student Growth Rate and Crude Transition Rate in Bhutan by Class

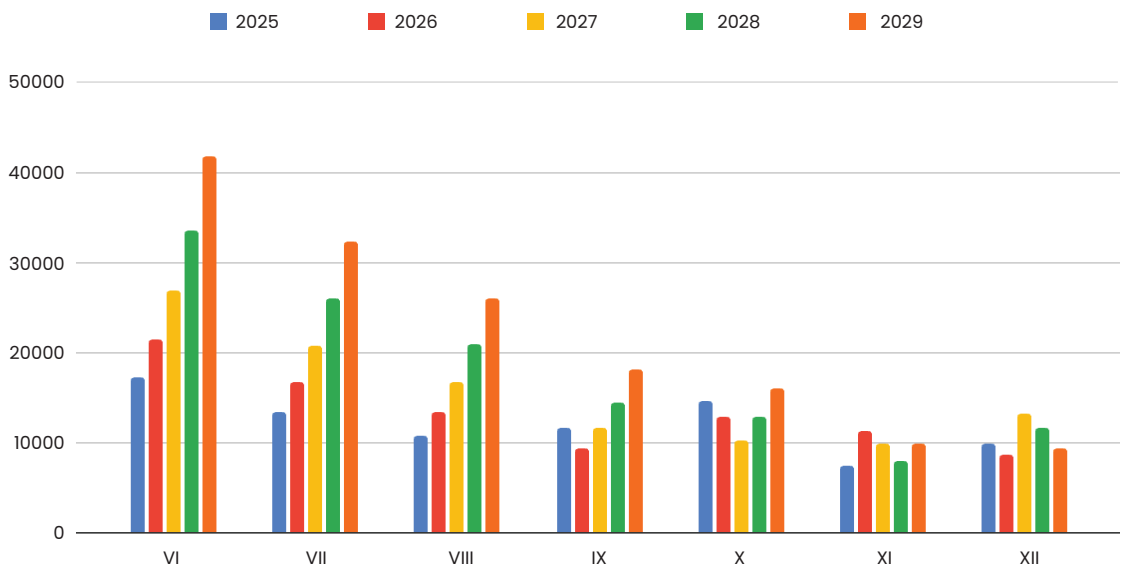
Class	2023	2024	Increase/Decrease	Growth Rate	Crude Transition Rate
VI	11,066	13,808	2,742	24.78%	24.78%
VII	13,316	10,693	-2,623	-19.70%	96.63%
VIII	15,215	13,376	-1,839	-12.09%	100.45%
IX	8,659	13,181	4,522	52.22%	86.63%
X	10,831	9,576	-1,255	-11.59%	110.59%

Class	2023	2024	Increase/Decrease	Growth Rate	Crude Transition Rate
XI	7,915	8,367	452	5.71%	77.25%
XII	11,980	9,289	-2,691	-22.46%	117.36%
Total	**78,982**	**78,290**			

5.6. Student Projection

There are different ways to project students' growth rates. Considering the substantial fluctuation between different classes, crude transition rate (Table 12) was used to project the number of students from 2025 to 2029, as seen in Figure 3.

Figure 3. Student Projection in Bhutan from 2025 to 2029



5.7 Teacher Projection

Based on the projected student growth rates and enrolment for 2025–2029, teacher requirements are in turn calculated by considering class sizes, PGs and curriculum time. To account for variations in curriculum timings across different class levels, separate projections are made for the key stages of classes VII and VIII, IX and X, and XI and XII. In Bhutan, curriculum timing remains consistent within the same key stage. For instance, classes VII and VIII are grouped as one key stage, as they have the same duration. The teacher projections for 2025 to 2029 are presented in Figures 4–6. Table 13 presents the total teacher requirement in all subjects, which helps to understand the total teacher requirement in Bhutan.

Figure 4. Teacher Projections for Classes VII and VIII in 2025–2029 by Subject

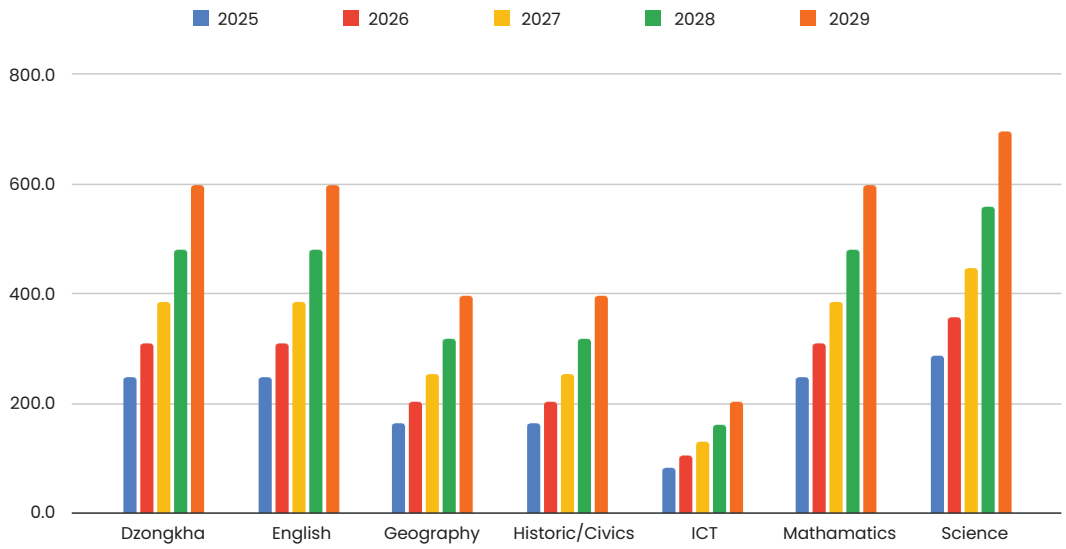


Figure 5. **Teacher Projections for Classes IX and X in 2025–2029 by Subject**

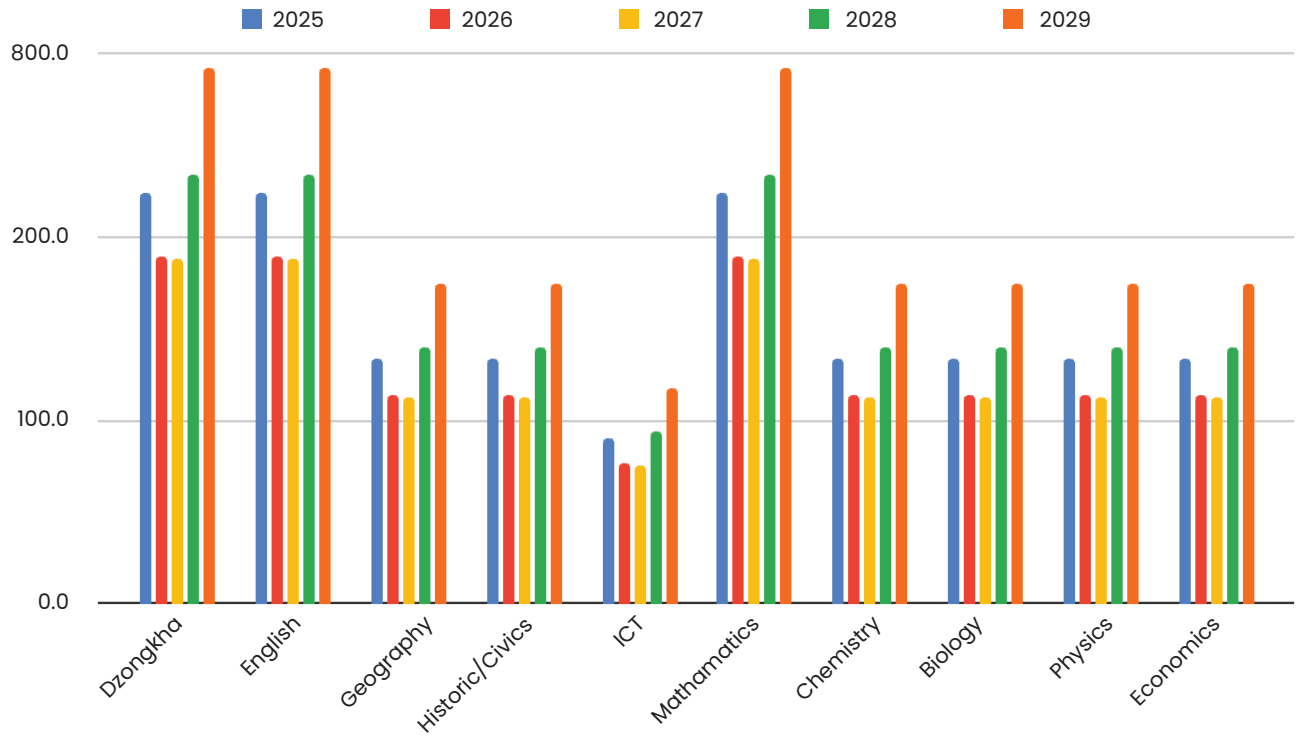


Figure 6. **Teacher Projections for Classes XI and XII in 2025–2029 by Subject**

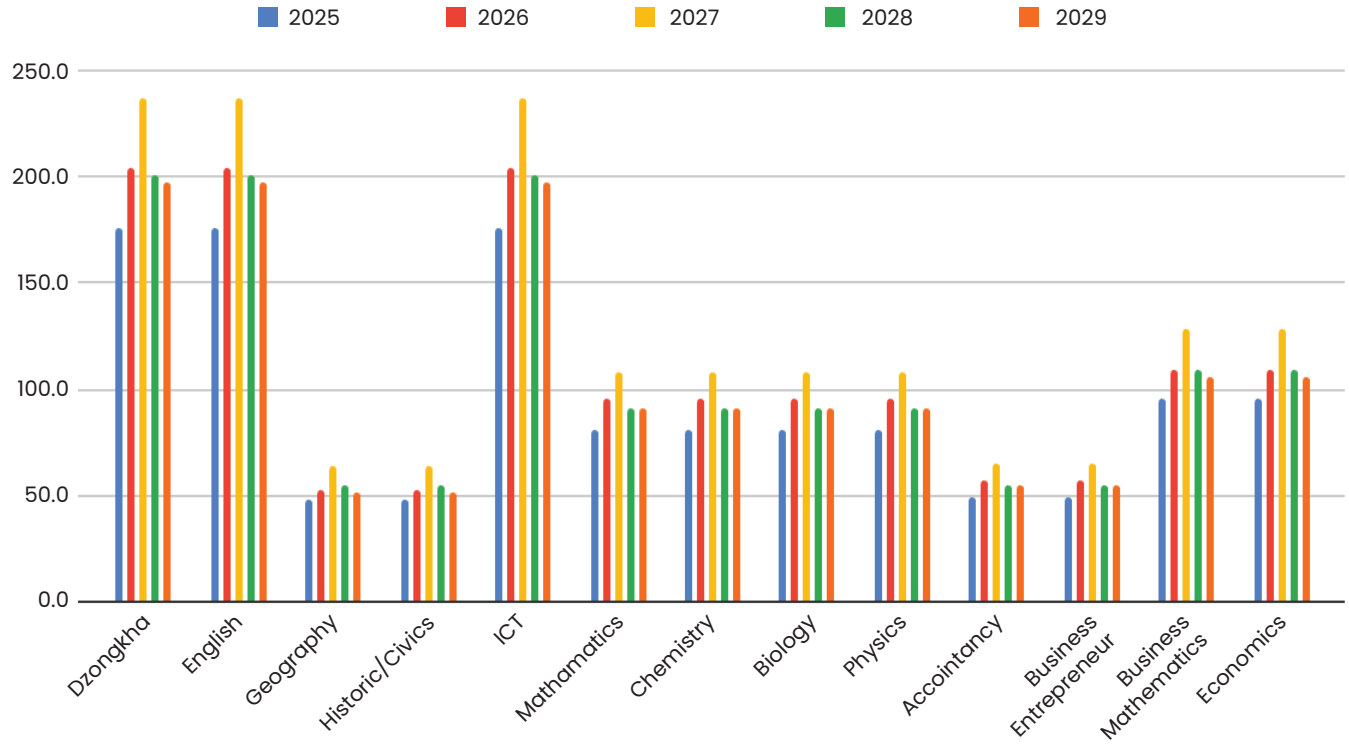


Table 13. Total Projections of Required Teachers for Higher Secondary School for 2025–2029 by Subject

Subjects	2025	2026	2027	2028	2029
Dzongkha	648	703	810	915	1089
English	648	703	810	915	1089
Geography	345	370	431	512	623
History/Civics	345	370	431	512	623
ICT	351	385	443	457	518
Mathematics	552	594	681	806	983
Science	502	567	668	789	962
Chemistry	215	209	221	231	266
Biology	215	209	221	231	266
Physics	407	360	366	430	522
Accountancy	273	247	253	290	347
Business Entrepreneurship	407	427	478	450	478
Business Mathematics	407	427	478	450	478
Economics	138	129	140	149	170

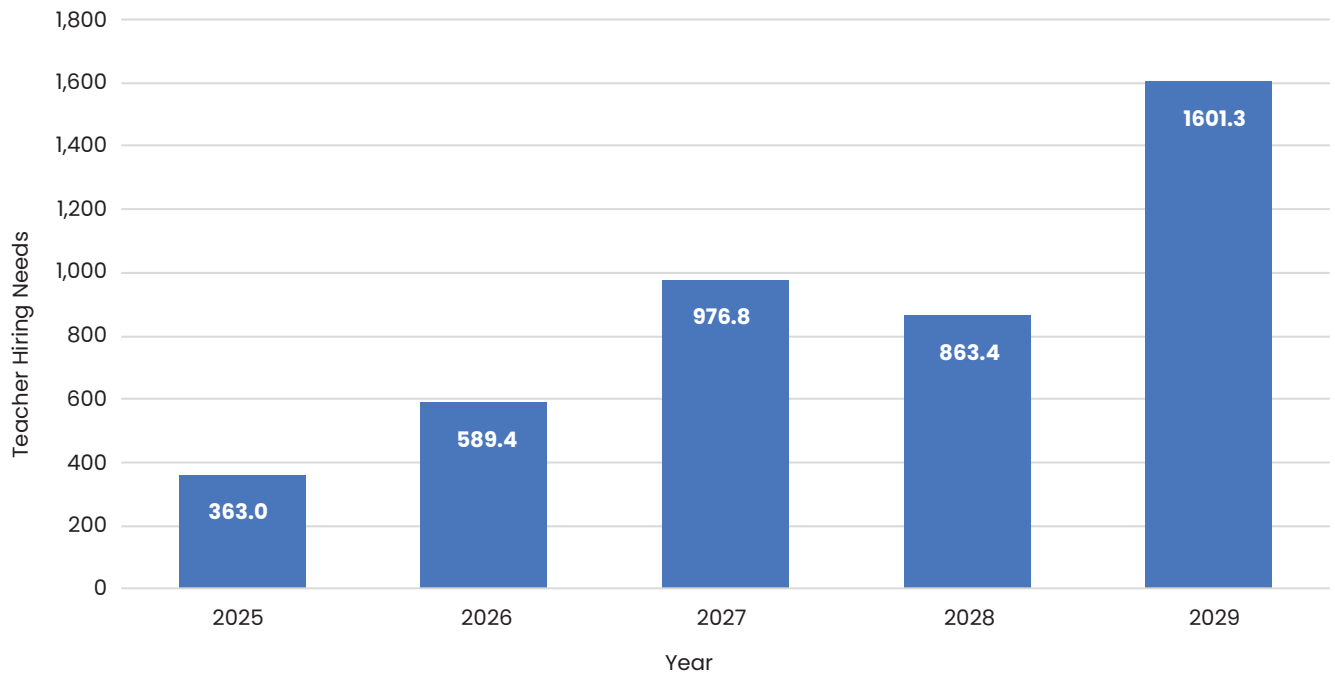
5.8 Projecting Future Teacher Hiring Needs

The future hiring needs of teachers is the difference between the current number of teachers and future projected teachers, plus the teacher attrition rate. For example, Bhutan's projected science teacher need in 2025 is 504. In 2024, there were 495 science teachers in the system. Considering an attrition rate of 6.33% (32 leaving the system), the required number of future teachers is (504 – 495) + 32 = 41. As such, in 2025, the HRD needs to train or arrange for 41 science teachers or derive the correct number using the following formula:

$$Future\ Hiring\ Needs = Future\ Needs - (Current\ Stock\ of\ Teacher \times (1 - Attrition\ Rate)^n)$$

Teacher hiring needs for Bhutan in the next five years, under normal circumstances, are presented in Figure 7.

Figure 7. Teacher Hiring Needs in Bhutan for 2025–2029



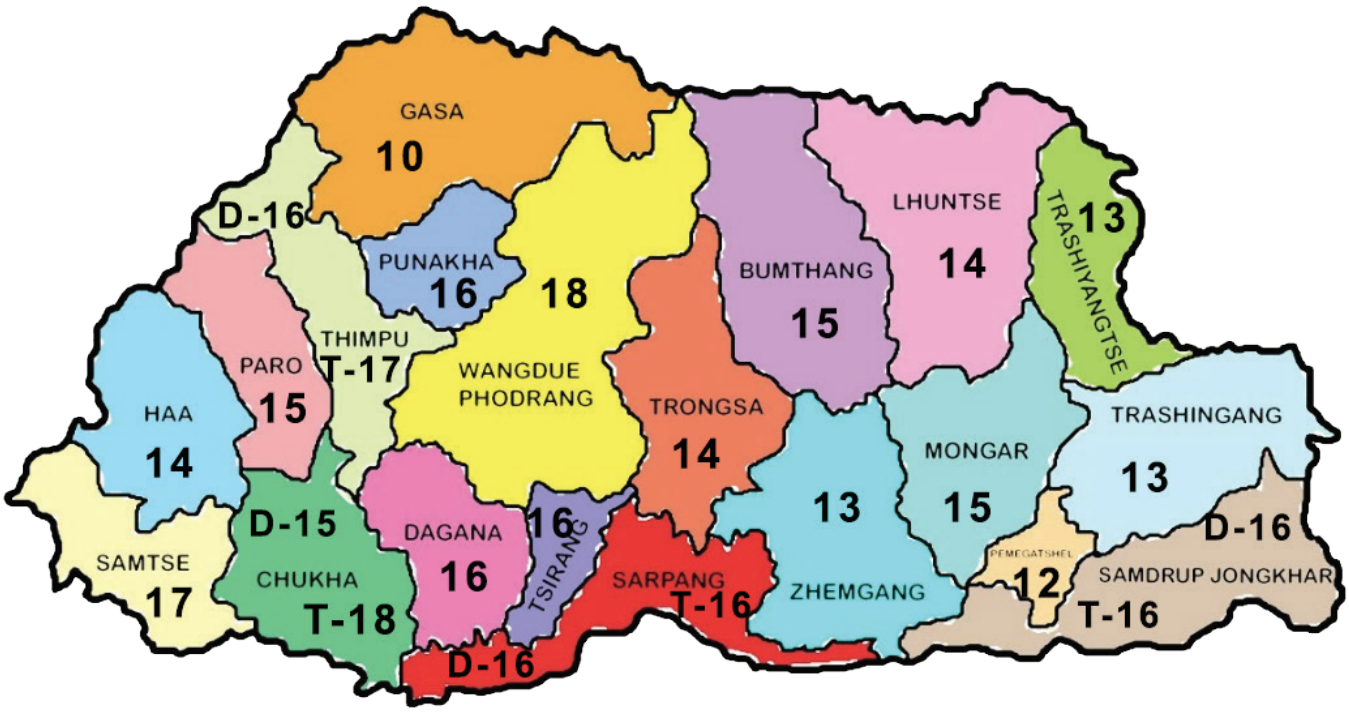
6. DIAGNOSING SECONDARY TEACHER ALLOCATION

The Bhutan Civil Service Rule prescribes rules for civil servants, including teachers, to serve a minimum number of years in the same position to be eligible for transfer. The HRD manages the placement and transfer of teachers in the country accordingly.

6.1. Student-Teacher Ratio

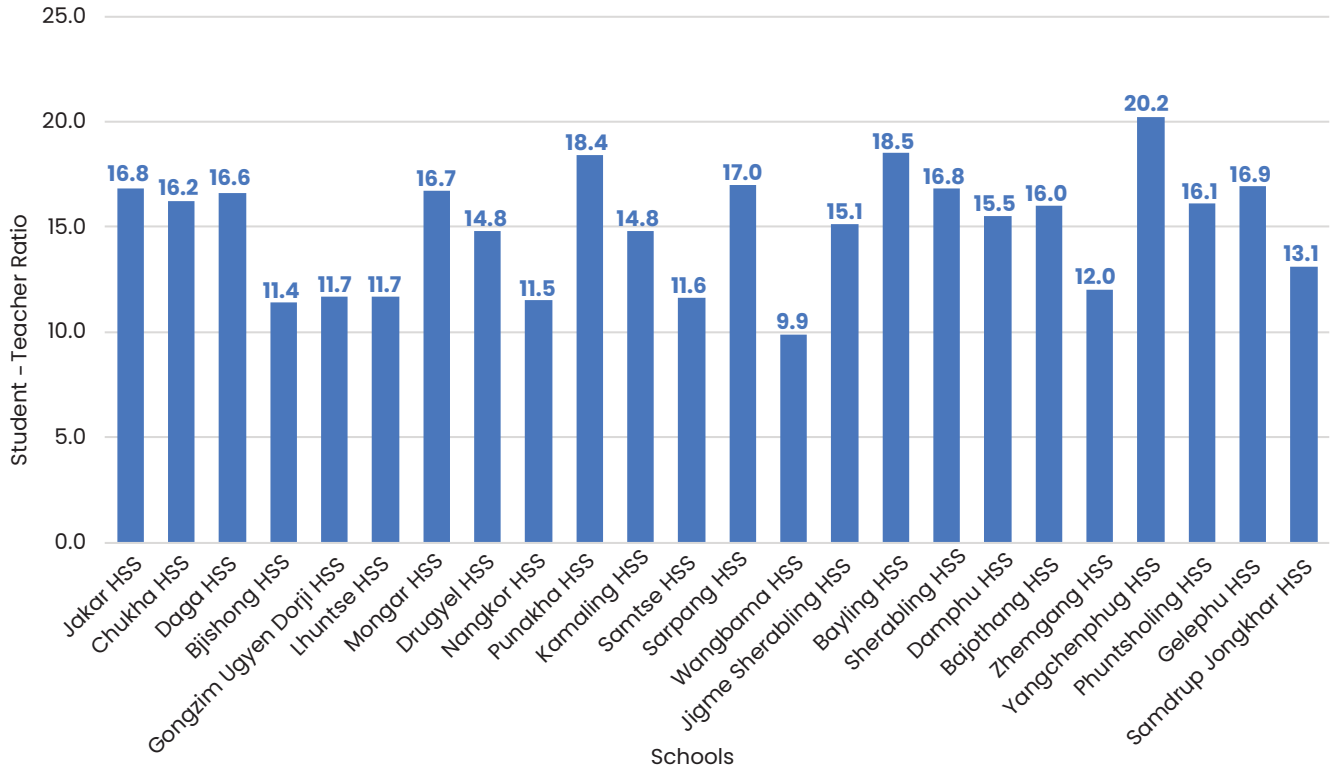
While the standard class size for higher secondary schools is 30, the student-teacher ratio is much lower, as presented in Figure 8. There are more students in urban centres, as indicated by "T", and the ratio is also a bit higher in these areas. The highest ratio is observed in the municipality of Phuntsholing Thromde with 18, while the lowest is in the Gasa district with 10.

Figure 8. Student-Teacher Ratios in Different Districts of Bhutan



To better understand the student-teacher ratio at the school level, two schools from every district and municipality in Bhutan were chosen for analysis. The results are presented in Figure 9.

Figure 9. Student-Teacher Ratios in Select Representative Schools in Bhutan



Note: Higher Secondary School (HSS)

Yangchenphu Higher Secondary School, located in the heart of Bhutan's capital, Thimphu, has the highest student-teacher ratio among schools in the district with 20.2 students to one teacher. In contrast, Wangbama Higher Secondary School, also situated in the district of Thimphu, has the lowest student-teacher ratio of 9.9. The ratios across other schools show relatively minor variations, ranging from 11.4 to 18.5.

6.2 Learning Coverage Rate

Learning coverage rate (LCR) examines whether the teaching hours available to teachers are enough to cover the full curriculum. LCR is ascertained using the following formula:

$$Learning\ Coverage\ Rate = \frac{Number\ of\ teachers\ \ x\ \ Statutory\ teaching\ time}{Number\ of\ PG\ \ x\ \ Nb\ periods\ in\ curriculum}$$

Source: IIEP-UNESCO, 2024

The LCRs of sample schools in Bhutan are presented in Table 14. One school per the 20 districts and 4 municipalities was studied. While in some schools the LCR is as low as 49%, many schools have LCRs of more than 100%, indicating high teacher underutilisation.

Table 14. Learning Coverage Rate for English and Dzongkha at Representative Schools in Bhutan's Districts

District	School	English	Dzongkha
Bumthang	Jakar HSS	88.2%	105.8%
Chukha	Chukha HSS	92.9%	92.9%
Dagana	Daga HSS	117.2%	97.7%
Gasa	Bjishong HSS	103.4%	129.3%
Haa	Gongzim UD HSS	73.7%	122.8%
Lhuntse	Lhuntse HSS	67.6%	112.6%
Mongar	Mongar HSS	94.1%	94.1%
Paro	Drugyel HSS	87.3%	112.2%

District	School	English	Dzongkha
Pemagatsel	Nangkor HSS	124.4%	99.5%
Punakha	Punakha HSS	73.4%	73.4%
Samdrup Jongkhar	Karmaling HSS	60.0%	120.0%
Samtse	Samtse HSS	124.2%	155.3%
Sarpang	Sarpang HSS	81.9%	122.9%
Thimphu	Wangbama HSS	140.1%	168.1%
Trashigang	Jigme Sherabling HSS	49.7%	99.5%
Trashiyangtse	Bayling HSS	85.3%	85.3%
Trongsa	Sherabling HSS	86.1%	86.1%
Tsirang	Damphu HSS	89.6%	104.5%
Wangduephodrang	Bajothang HSS	68.8%	114.7%
Zhemgang	Zhemgang HSS	86.8%	144.7%
Thimphu Thromde	Yangchenphug HSS	82.6%	63.5%
Phuntsholing Thromde	Phuntsholing HSS	84.3%	98.3%
Gelephu Thromde	Gelephu HSS	100.5%	88.0%
SJongkhar Thromde	Samdrup Jongkhar HSS	124.2%	155.3%

Note: Higher Secondary School (HSS)

6.3 Adjusted Student-Teacher Ratio

The adjusted student-teacher ratio compares the total number of hours due to all students to the total number of hours available from teachers. It is determined using the formula:

$$Adjusted\ Pupil\text{-}Teacher\ Ratio = \frac{Number\ of\ students\ \ x\ \ Nb\ periods\ in\ curriculum}{Number\ of\ teachers\ \ x\ \ Statutory\ teaching\ time}$$

Source: IIEP-UNESCO, 2024

Table 15. Adjusted Student-Teacher Ratio at Representative Schools in Bhutan's Districts

District	School	Total Students	PGs	Total Teachers	Number of Periods in Curriculum	Statutory Teaching Time	Adjusted Student-Teacher Ratio
Bumthang	Jakar HSS	3,953	132	265	8	26	4.6
Chukha	Chukha HSS	8,652	288	595	8	26	4.5
Dagana	Daga HSS	5,459	182	348	8	26	4.8
Gasa	Bjishong HSS	744	25	78	8	26	2.9
Haa	Gongzim UD HSS	2,922	97	203	8	26	4.4
Lhuntse	Lhuntse HSS	3,007	100	222	8	26	4.2
Mongar	Mongar HSS	8,231	274	539	8	26	4.7
Paro	Drugyel HSS	10,860	362	729	8	26	4.6
Pemagatsel	Nangkor HSS	4,754	158	384	8	26	3.8
Punakha	Punakha HSS	7,346	245	465	8	26	4.9
Samdrup Jongkhar	Karmaling HSS	5,405	180	347	8	26	4.8
Samtse	Samtse HSS	13,219	441	801	8	26	5.1
Sarpang	Sarpang HSS	7,516	251	468	8	26	4.9
Thimphu	Wangbama HSS	4,576	153	290	8	26	4.9
Trashigang	Jigme Sherabling HSS	9,041	301	706	8	26	3.9

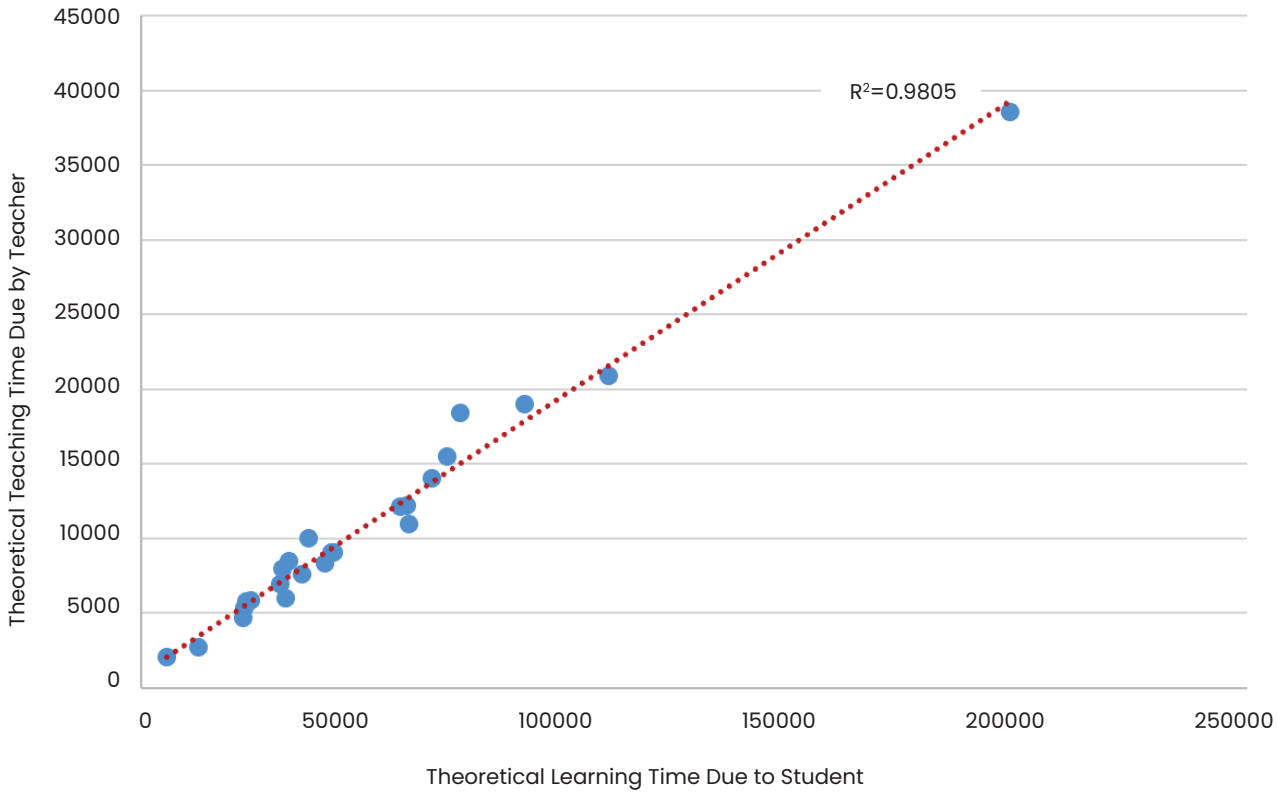
District	School	Total Students	PGs	Total Teachers	Number of Periods in Curriculum	Statutory Teaching Time	Adjusted Student-Teacher Ratio
Trashiyangtse	Bayling HSS	4,199	140	324	8	26	4.0
Trongsa	Sherabling HSS	3,128	104	225	8	26	4.3
Tsirang	Damphu HSS	5,203	173	319	8	26	5.0
Wangduephodrang	Bajothang HSS	7,574	252	419	8	26	5.6
Zhemgang	Zhemgang HSS	4,008	134	304	8	26	4.1
Thimphu Thromde	Yangchenphug HSS	24,537	818	1,480	8	26	5.1
Phuntsholing Thromde	Phuntsholing HSS	4,095	137	229	8	26	5.5
Gelephu Thromde	Gelephu HSS	2,912	97	180	8	26	5.0
SJongkhar Thromde	Samdrup Jongkhar HSS	1,650	55	104	8	26	4.9

Note: Higher Secondary School (HSS)

6.4. Teacher Allocation Consistency

The sample indicates that teachers are consistently allocated. With values closer to 1, as shown in Figure 10, teacher allocation is strongly influenced by the variation in student enrolment.

Figure 10. Teacher Allocation Consistency in Bhutan



7. DIAGNOSING SECONDARY TEACHER UTILISATION

This section examines how effectively Bhutanese teachers are utilised. It helps us to understand teachers' workload and, in turn, to make policy decisions. The sample analysis is presented in three layers: national, district, and school in Bhutan.

7.1 Average Teacher Utilisation Rate (National Level)

The average teacher utilisation rate represents the proportion of teaching hours needed to teach students and cover a given curriculum, and indicates how fully teachers are utilised. If the average utilisation rate is more than 100%, it indicates a shortage of teachers. It is determined using the formula:

$$\textit{Adjusted Utilisation Rate} = \frac{\textit{Number of PG} \times \textit{Nb periods in curriculum}}{\textit{Number of teachers} \times \textit{Statutory teaching time}}$$

Source: IIEP-UNESCO, 2024

In general, as presented in Table 16, there is a serious issue of teacher allocation in Bhutan. While some schools have excess teachers, others have an acute shortage of teachers, as indicated by LCR and average utilisation rate. For example, at Jigme Sherabling Higher Secondary School, in the Bhutanese district of Trashigang, the English subject has an LCR of only 49.7% (Table 14), indicating that the curriculum still needs to be fully covered. The school's average utilisation rate for English is 201.03%, however, indicating an excess of 101.03%. This indicates that teachers at this school have worked more by that percentage of time.

Table 16. Average Utilisation Rate for English and Dzongkha at Representative Schools in Bhutan's Districts

District	School	English	Dzongkha
Bumthang	Jakar HSS	113.44%	94.53%
Chukha	Chukha HSS	107.69%	107.69%
Dagana	Daga HSS	85.30%	102.36%
Gasa	Bjishong HSS	96.67%	77.33%
Haa	Gongzim UD HSS	135.73%	81.44%
Lhuntse	Lhuntse HSS	148.03%	88.82%
Mongar	Mongar HSS	106.26%	106.26%
Paro	Drugyel HSS	114.58%	89.12%
Pemagatsel	Nangkor HSS	80.41%	100.51%
Punakha	Punakha HSS	136.21%	136.21%
Samdrup Jongkhar	Karmaling HSS	166.67%	83.33%
Samtse	Samtse HSS	80.51%	64.41%
Sarpang	Sarpang HSS	122.05%	81.37%
Thimphu	Wangbama HSS	71.38%	59.49%
Trashigang	Jigme Sherabling HSS	201.03%	100.51%
Trashiyangtse	Bayling HSS	117.26%	117.26%
Trongsa	Sherabling HSS	116.15%	116.15%
Tsirang	Damphu HSS	111.62%	95.68%
Wangduephodrang	Bajothang HSS	145.30%	87.18%
Zhemgang	Zhemgang HSS	115.21%	69.13%

District	School	English	Dzongkha
Thimphu Thromde	Yangchenphug HSS	121.10%	157.44%
Phuntsholing Thromde	Phuntsholing HSS	118.63%	101.68%
Gelephu Thromde	Gelephu HSS	99.49%	113.70%
SJongkhar Thromde	Samdrup Jongkhar HSS	80.51%	64.41%

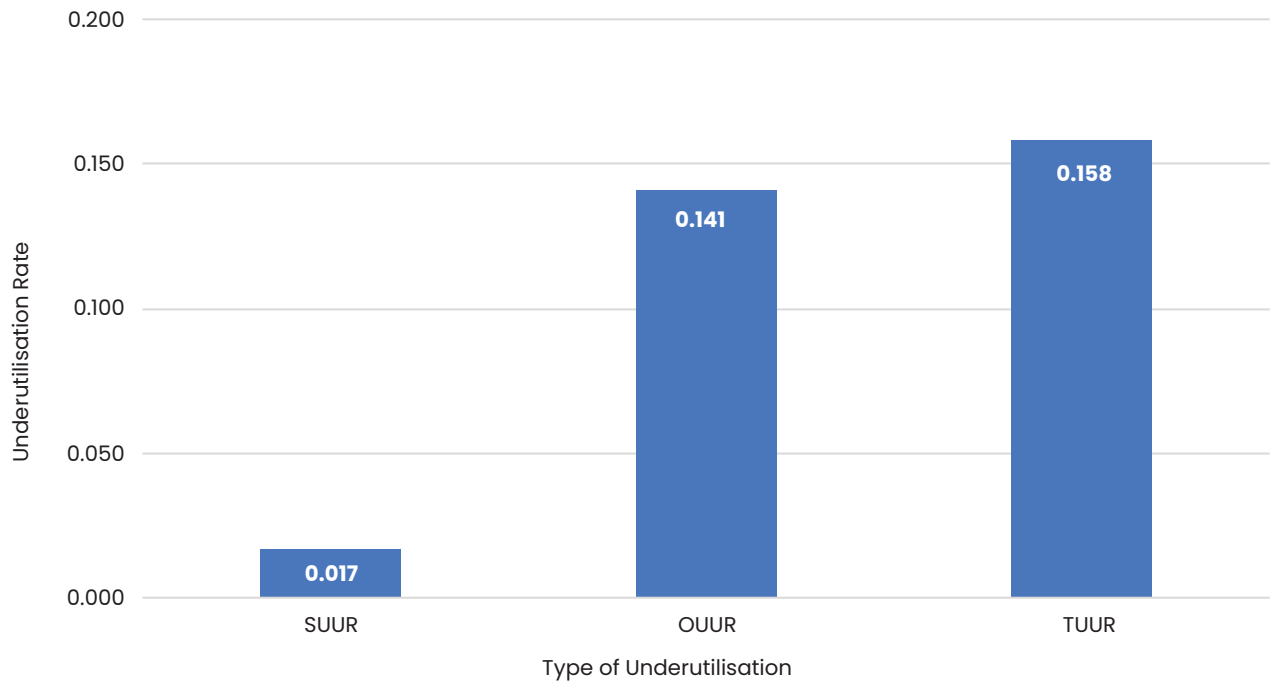
Note: Higher Secondary School (HSS)

7.2 Underutilisation Rate (District Level, Rural School)

As presented in Figure 11, the structural underutilisation rate (SUUR) amounts to 0.017, indicating that 1.7% of teacher underutilisation is due to systemic issues such as excess teacher staffing for certain subjects, mismatches between student enrolment and subject-specific teacher availability, and design flaws in the curriculum or staffing policies. However, these structural inefficiencies are relatively minor, suggesting that staffing and curriculum design align with needs, though there is still room for optimisation.

In contrast, the operational underutilisation rate (OUUR) is 0.14 (14%), which accounts for the majority of the total underutilisation rate (TUUR) of 0.158 (15.8%). Possible reasons for this result could be poor timetable management or scheduling, inefficiencies in allocating teaching tasks or gaps in administrative planning or execution.

Figure 11. Underutilisation of Teachers in Bhutanese Districts



7.3 Effective Utilisation Rate (School Level)

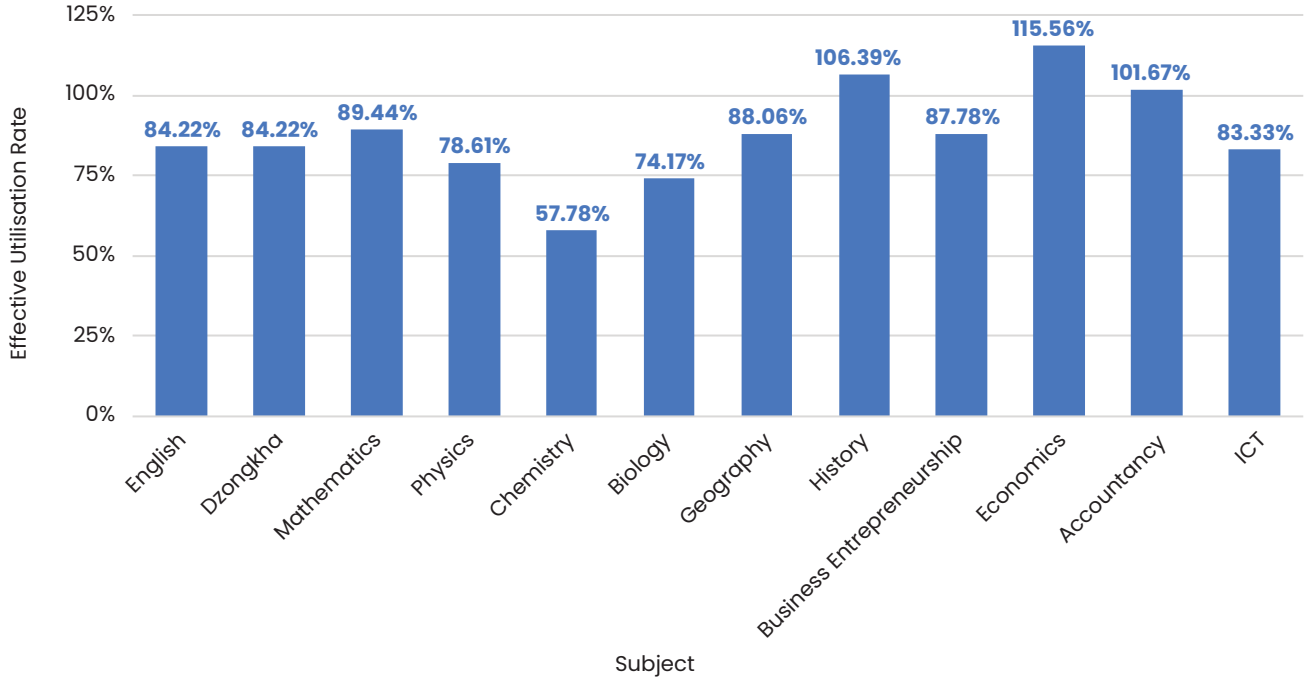
The effective utilisation rate (EUR) for teachers measures how effectively available working hours are utilised for teaching or delivery of a curriculum. It supplements the deeper understanding of teachers' total utilisation rate. EUR analyses are done mainly at the school level. EUR is computed using the following formula:

$$Effective\ Utilisation\ Rate = \frac{Total\ number\ of\ hours\ in\ teachers'timetables}{Number\ of\ teachers\ \ x\ \ Statutory\ teaching\ time}$$

Source: IIEP-UNESCO, 2024

A sample analysis was done at Babesa Higher Secondary School, Thimphu, due to the availability of data, i.e. the timetable for each teacher. The analysis revealed that, based on school subject, EUR ranges from 57% to 115%, indicating a large gap in effective teacher utilisation in Babesa Higher Secondary School, as presented in Figure 12. However, the lower rates are due to allocating subjects to three trainee teachers for teaching practice at the school. In turn, subjects such as Economics, Accountancy and Business Entrepreneurship have just one teacher, exacerbating the EURs.

Figure 12. **Effective Utilisation Rates Across Subjects at One Sample School in Thimphu**



8. SECONDARY TEACHER MANAGEMENT POLICIES AND STRATEGIES

Improving teacher management in Bhutan involves addressing systemic challenges, optimising resources and fostering professional development. Here are some strategies for Bhutan to implement:

Address Teacher Allocation and Deployment

- Balanced teacher-student ratios: Ensure an equitable distribution of teachers across rural and urban schools to prevent over- or understaffing.
- Subject-specific teachers: Deploy teachers based on subject expertise to improve instructional quality.
- Incentives for rural teachers: Provide additional benefits like housing, allowances or career development opportunities to encourage service in remote areas.

Enhance Professional Development

- Continuous training programmes: Conduct regular workshops on modern pedagogical methods, technology integration and classroom management. This can be organised within as well as create opportunities for training by international experts.
- Collaboration platforms: Create teacher networks to share best practices and resources.
- Recognition and motivation: Implement reward systems for outstanding teachers to boost morale and motivation.

Optimise Scheduling and Workloads

- Efficient timetabling: Use technology to develop optimised schedules, minimising idle teacher hours and maximising effective utilisation.
- Flexible work assignments: Rotate responsibilities to avoid teacher burnout and enhance skill variety.

Leverage Technology

- Digital management tools: Use systems to track teacher availability, performance and schedules.
- Online learning: Train teachers to use online platforms for blended learning, especially in rural areas.
- Data-driven decisions: Use data to assess teacher needs, workload distribution and student outcomes.

Strengthen Policy and Governance

- Clear guidelines: Develop policies and guidelines for teacher projection, recruitment, professional conduct and performance evaluations. Instead of reprimanding teachers, the evaluation system should reward performing teachers.
- Feedback mechanisms: Establish channels for teachers to provide input on policies and challenges.
- Monitoring and evaluation: Regularly assess teacher performance, identify areas for improvement and provide support.

Foster Teacher Wellbeing

- Mental health support: Offer counselling and stress management programmes.
- Work-life balance: Ensure realistic workloads and encourage breaks to prevent burnout.

Promote Accountability

- Transparent evaluations: Use student outcomes, peer reviews and self-assessments for fair evaluations.
- Performance-based incentives: Reward teachers based on measurable achievements and dedication.

Collaborate with Stakeholders

- Parental involvement: Engage parents in understanding and supporting the education system.
- Government and Non-Government Organisations (NGOs): Partner with organisations for resources, training and infrastructure improvements.

9. CONCLUSION AND RECOMMENDATIONS

Effective teacher management in Bhutan is essential for improving educational outcomes and addressing current challenges. This analysis highlights key issues such as the underutilisation of teachers due to operational inefficiencies, unequal teacher allocation between rural and urban schools, and challenges in retaining teachers. Despite structural inefficiencies being minimal, significant operational issues such as poor scheduling and workload distribution need immediate attention. Additionally, perceptions of the teaching profession and lack of motivation among teachers pose further challenges to management.

By addressing these issues through strategic policy reforms, Bhutan can ensure an equitable and high-quality education system that aligns with its Gross National Happiness philosophy.

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