

Administrative Workload Caps: Early-Career Teacher Retention Rates and Annual Absenteeism in Balochistan Public Schools

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Abstract

Administrative workload caps are proposed as a means of protecting early-career teachers, but causal evidence on retention and annual absence in Balochistan is not publicly linked. This study joins two separately analysed observational layers: World Bank Global Education Policy Dashboard indicators for five Pakistani jurisdictions, and official 2023–24 teacher–school ratios for 36 Balochistan districts. The published Balochistan figures indicate that 23.2% of surveyed teachers reported missing class for administrative processes in the preceding academic year; 87.9% were observed present at school and 82.2% in a scheduled classroom. Across five jurisdictions, the correlation between administrative-process reports and school presence was negative but imprecise (Pearson $r = -.382$; exact permutation $p = .500$), reversing sign under one leave-one-out check. Within Balochistan, district-wide teacher–school ratios varied from 1.39 to 10.37. Girls'-school ratios exceeded boys'-school ratios in 31 of 36 districts (mean paired difference 0.936 teachers per school; Wilcoxon $p = .000025$), a category-level staffing contrast rather than a teacher-sex comparison. These district patterns highlight unequal implementation capacity, not the effects of administrative caps. Because no public series links cap assignment to employment cohorts or annual absence days, retention and policy impacts cannot be estimated. An auditable Excel dataset, alternative inferential checks, and a preregisterable linked teacher-year evaluation design are provided. Conclusions concern baseline conditions and feasible measurement, not causal gains in retention.



Keywords: administrative workload, Balochistan, teacher presence, staffing inequality, early-career teacher retention, school absenteeism, policy evaluation

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1. INTRODUCTION

Teachers are expected to take on administrative tasks in addition to teaching. While record keeping and parent contact is required, and report writing for institutions is important, too much record keeping, over-inspection and tasks assigned by the district office may decrease classroom time and add to the worker's stress. These pressures can be especially difficult for the early career teacher who is still learning professional skills and adapting to the school context. Geographical dispersion, imbalance in teachers and restricted administrative resources, add to these responsibilities in Balochistan. Balochistan Education Sector Plan 2020-2025 reveals that teacher attrition and absenteeism are ongoing issues in educational delivery (School Education Department [SED], 2020, 2024). Previous studies have shown a relationship between working conditions, teacher burnout, and the desire to leave teaching (Nguyen et al., 2020; Madigan & Kim, 2021). But turnovers do not necessarily equal actual separations. Similarly, any administrative absence reported by teachers and any classroom absence observed during school visits cannot be directly related to the annual absenteeism rate.

The current study looks at administrative workload, teacher presence, and staff positions in the public educational system of Pakistan and especially at the condition of staffing in the province of Balochistan in this context. The study builds on the World Bank Global Education Policy Dashboard and provincial education data to examine the administrative-process-related missed classes at the provincial level within five jurisdictions of Pakistan and the staffing differences at the district level within Balochistan's 36 districts (World Bank, 2021, 2026). Also included is a consideration of the design of administrative workload caps, along with how they might be evaluated, to enhance working conditions for new teachers. Because there is no available secondary data that measures workload-cap implementation or individual employment transitions, the study is not positing causal effects on retention or annual absenteeism. Rather it points to the evidence gaps, institutional barriers and patterns that will need to be addressed for future policies to be evaluated.

The specific objectives of the study are:

- To examine the relationship between administrative-process-related missed classes and observed teacher presence across selected Pakistani jurisdictions.
- To analyse district-level staffing differences and institutional conditions affecting public schools in Balochistan.
- To assess the potential role of administrative workload caps in addressing instructional disruption and administrative burdens among early-career teachers.
- To develop an evidence-based framework for evaluating the effects of administrative workload caps on early-career teacher retention and annual absenteeism in Balochistan public schools.

2. LITERATURE REVIEW

A workload is typically not a uniform load. There are differences in the timings and level of professional discretion available in teaching, preparation, marking, pupil assessment, school administration and externally imposed reporting. Based on a systematic synthesis, Creagh et al. (2025) explore workers' role intensification and time poverty for teachers saying that teachers accumulated demands instead of working in blocks of time. This is also related to workload caps in that de-escalating a task might not necessarily decrease workload if teachers are then asked to do something else or if the task happens again in a more complex e-platform. Similarly, some reporting can enhance school planning or help to protect public resources. This is not to say that all administrative work is bad, it's just a matter of whether it's worth the instructional time and resources it takes.

The OECD's Teaching and Learning International Survey 2024 (2025) is a helpful comparison of time and stress. In all the systems participating in the study, around 52% of teachers reported that general administrative work is stressful, but the percentage of calendar time spent on general administration is much smaller. The relationship was not straightforward: a few systems reported little administrative time as being a source of stress, which indicates that unpredictability, duplication, interruptions and the sense of irrelevance of an activity may be as important as the time spent on it (Organisation for



Economic Co-operation and Development [OECD], 2025). These are international patterns and not estimates for Balochistan. They suggest that the measurement of a cap should be distinguished between the hours reported and intrusiveness of the tasks and unscheduled interruptions.

Special consideration needs to be given to the job of beginner teachers. An early career teacher may take longer than a colleague teaching the same course for years to dedicate time to adapting materials and getting the daily routine to run smoothly. A novice might be less likely to be able to refuse an unscheduled request from an office or older colleague. Instead of creating one distinct group of vulnerable novice teachers, Admiraal (2025) identifies different profiles of teachers at risk based upon an extensive TALIS sample of novice teachers. In a similar fashion, Collie (2023) discovers that job demands and supportive resources are in interplay in teacher well-being and quit desires. The downside is that limiting a teacher to a maximum number of administrations may fail to serve one who is teaching in an isolated school with limited internet access, challenges getting to school, or no administration support person. Two nominal caps may have widely varying effective reliefs.

Organisational relationships and professional identity also impact teacher retention. Mentoring and induction can have a strong influence on an educator's understanding of their early challenges; either as aspects of learning that can be handled or as evidence that the profession is not a viable long-term career. Maloch et al. (2025) refer to 'context-attentive mentoring' which addresses local contexts of teaching, not just offering technical advice. Based on the words of the ex-teachers themselves, Brandenburg et al. (2024) identify several pressures contributing factors that result in teachers leaving the profession and that can be the result of a long decision-making process. Their research is pertinent because they're saying that a teacher can be on a payroll even as his or her attachment is being undermined, and a cross-sectional survey could click off attachment issues as a sign of a teacher on the verge of leaving. Stronger study would allow us to see the actual transitions and can study job satisfaction as a mechanism or not replace it for a retention outcome.

Teacher intention and exit studies also caution against attributing the reasons for leaving to one factor. Nguyen and Kremer (2022) provide linkages between dissatisfaction, burnout and subsequent attrition behaviour. Gundlach et al. (2024) provide evidence as to why

involuntary departure, movement between schools and resignation from teaching should be distinguished from one another. In Pakistan, Perveen and Raza (2025) investigate the levels of emotional exhaustion and intentions to quit within the academic profession by focusing on newly recruited teachers in Sindh, demonstrating a regional context, highlighting that conditions of early employment are important. Their study is a cross-section sample and it models intentions, not actual departures, and so cannot provide missing Balochistan retention rates, nor can it provide an effect that a workload cap did not occur.

There is a similar need for caution in the interpretation of the correlation between workloads and absenteeism. A visit may be officially requested by an official and result in a teacher's absence from the classroom, to be noted as permission or duty, rather than misconduct. Alternatively, a teacher might not attend school because he/she is ill, there is road closure, family responsibilities or due to unauthorised absence. The GEPD specific question determines if the teacher was absent during the previous school year for administrative reasons such as pay, School Administration, District office errands, and official requests. Nor does it capture the number of missed periods or whole days (World Bank, 2021). Illness-related absence remains unchanged, but such a policy could decrease the number of administrative errands reported in the figures. Similarly, better monitoring could lead to a revision of recording practice before a change of behaviour occurs. Theories therefore are needed that are outcome specific.

The way a workload reform works can be shaped by the accountability environment. Several offices may ask for the same information, causing teachers to submit the same documents or data frequently, and local administrators may need to verify it for funding and oversight purposes. The GEPD monitoring indicators explicitly differentiate between rules and actions and include teacher input on whether they think that repeated absence without justification would have consequences. These are background variables and no measures of workload limits. This is important when comparing Balochistan with Punjab, Sindh, Khyber Pakhtunkhwa, and Islamabad Capital Territory, and differences between jurisdictions regarding staff distribution, monitoring rules and availability of routine support services. Concurrently different issues can be reflected by any cross-jurisdictional association, not administrative aspects.



This is put into perspective by international teacher shortages but isn't identified as such. UNESCO and the International Task Force on Teachers for Education 2030 (2024) predict a massive teacher shortage at primary and secondary levels for the world by 2030 and link teachers with recruitment challenges with conditions of employment and retention. According to Pakistan's own education statistics, as well as provincial Education Sector Plan, it is faced with challenges of equitable staff coverage (Pakistan Institute of Education [PIE], 2025; SED, 2020). The Balochistan Gender Parity Report also outlines gender inequalities in accessing to schools and staffing (Balochistan Commission on the Status of Women, 2025). Gender and locality should, therefore, also be included in any analyses at the teacher level that follow, since travel expectations, school assignments, and administrative support may not be equally distributed. But a school system's teacher shortage is not the rate of teacher attrition because of early career.

Therefore, an administrative workload cap should be specified as a policy package, not as a slogan. The package should at least include a list of non-instructional functions that qualify for exception, a time limit, who can petition for extension, and a petitioning, reporting, or appeal process, as well as the institution that takes care of the displaced clerical work. If an activity is not enforced and/or replaced, it may be deferred to the other person's unpaid time or to the other teacher. Nowhere is this more potentially problematic than in small schools where the headteacher may also be teaching several grades and it would be possible for a cap to create an unintended effect – that of making something simply invisible rather than removing it. Alongside documented hours, this should be professional autonomy and perceived fairness, with employment status and recorded absence numbers the key outcomes.

This results in two hypotheses. One is a near-instantaneous time-substitution process: teachers are less likely to call in for scheduled classes to attend to routine administrative requests. The other is a slower route when it comes to employment whereby predictable workload is associated with well-being, perceived support and decision to stay in a challenging job. These pathways may overlap, and their time scales vary. A survey indicator to missed class in the previous year cannot tell whether teachers were less happy with the policy before they left for less class time per week or less happy with the policy before they stopped teaching altogether at the end of the year; a one-day

attendance visit cannot tell how many of them did stop. However, the current evidence indicates that both need to be measured; neither causal pathway is visible in the public evidence at present.

3. METHODOLOGY

In this study, quantitative research design was used in which secondary evidence was used to address the issues related to administrative workload, teacher presence, and staffing conditions in Pakistan with a greater focus on Balochistan. There were two independent sources of information. The first surveyed five Pakistani jurisdictions - Balochistan, Punjab, Sindh, Khyber Pakhtunkhwa and Islamabad Capital Territory, based on published indicators from the Global Education Policy Dashboard (World Bank, 2026). The second was about the teacher-to-school ratio in 36 districts of Balochistan and is based on Balochistan Education Statistics 2023-24 (School Education Department [SED], 2024). Both were consulted on October 22, 2026. The information was at various geographical levels and in a variety of reporting periods, and thus the two sources were treated separately to keep the statistics consistent and to avoid unwarranted comparisons.

Administrative workload was explored by teachers' reported absences due to administration during the previous school year. The proportion of teachers present at school during the monitoring visits, and the proportion of teachers present in their assigned classrooms were used as indicators of teacher presence. To assess variation in institutional attendance was compared to classroom attendance these indicators were calculated in percentage points. Other criteria related to formal policies regarding attendance monitoring, attendance monitoring in practice and perceived effects of recurrent absences were explored. However, some reporting categories had incomplete information and so missing observations were identified from reported value numbers. The reporting periods and different measurement procedures were considered when interpreting the results.

To explore relationships between missed classes for administrative purposes and teacher presence, descriptive statistics, Pearson correlation, Spearman rank correlation and ordinary least squares regression were used. Direction and magnitude of the observed relationships were determined by calculating regression coefficients and confidence intervals. Since there were only five



observations, an exact permutation test has been used based on all 120 possible arrangements of the five observations. Theil-Sen robust slope estimation and leave-one-jurisdiction-out sensitivity analysis were also used to test the robustness of the results. An alternate outcome of classroom presence was examined to see if any of the relationships differed across attendance indicators. Effect sizes, uncertainties and consistencies were the focus of statistical interpretation and conventional significance thresholds were not used alone.

Teacher distribution per school was analyzed for different categories of schools (Boys', Girls', Co-educational and Combined Schools) at the district level. The medians and ranges were computed for the 36 districts. A paired-sample t-test, a Wilcoxon signed-rank test and exact binomial sign-test were used to investigate differences between boys and girls staffing ratios of schools. To assess statistical uncertainties a fixed-seed sign-flip randomisation procedure was used with 100,000 repetitions and bootstrap confidence intervals using 20,000 resamples. A second sensitivity analysis was performed by removing Quetta to assess if there was any significant impact of the provincial capital in the overall pattern. These comparisons were used to provide evidence of geographical and institutional staffing differences but not direct estimates of administrative workload.

The methodological evaluation also looked at the information needed for assessing early-career teacher retention and annual absenteeism. Operationally, retention was defined as employment within an identifiable recruitment cohort and annual absenteeism as number of days absent out of days scheduled to work. Causal effects on these outcomes were not estimated due to the absence of linked histories of employment, attendance records, and exposure to administrative maximum workload limits. A longitudinal evaluation framework was thus identified with the school level implementation records, teacher employment history, and attendance information every year. Cluster-based comparisons, difference-in-differences estimation, and count regression methods were used to address the various outcomes in the proposed framework (Sun & Abraham, 2021; Callaway & Sant'Anna, 2021; Roth et al., 2023). During the analysis, the differences between observed statistical relationships and policy impacts proposed were retained.

4. RESULTS AND ANALYSIS

The presentation of descriptive results assumes no implication of the units being teachers. The share of administrative-process reporting in Balochistan is 23.2%. These percentages are 26.8% in Punjab, 19.4% in Sindh, 33.1% in Khyber Pakhtunkhwa and 35.6% in Islamabad Capital Territory. Thus the range for the five units is 16.2 percentage points (from Sindh to Islamabad Capital Territory). The other four jurisdictions reported an unweighted mean share of 28.7%, which is 5.5 points less than the share reported for Balochistan. This is a descriptive comparison of the aggregate survey indicators only and no estimates can be made about the proportion of teachers in Balochistan who work more than the administrative-hour limit. There is no measurement taken anywhere in the 5 rows in a cap. The percentages are shown in Figure 1.

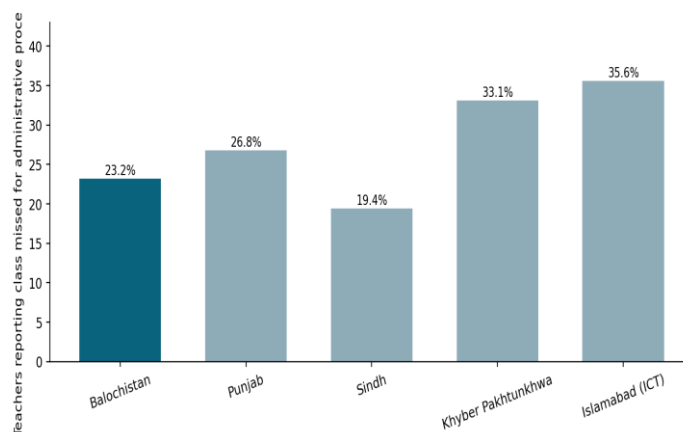


Figure 1: Reported administrative-process missed class, by jurisdiction.

Note. This is an indicator percentage observed in each jurisdiction - there is no cap exposure shown, nor is there annual retention.

The observed school attendance in Balochistan is 87.9%, Punjab 92.3%, Sindh 90.5%, Khyber Pakhtunkhwa 89.9% and Islamabad Capital Territory 86.9%. These indicators are of teachers seen at school during a visit. The complement of Balochistan is a non presence during visits during visit days namely 12.1% not as 12.1% a year absence. Classroom presence is lower in each jurisdiction: 82.2%, 90.1%, 87.8%, 87.6%, and 81.9%, respectively. Figure 2 compares the two measures. The greater number of days observed in the school building compared to the number of days observed in the classroom is consistent with teachers sometimes being in the school building but not in



a scheduled classroom, but cannot be interpreted to determine why this is the case solely from these results.

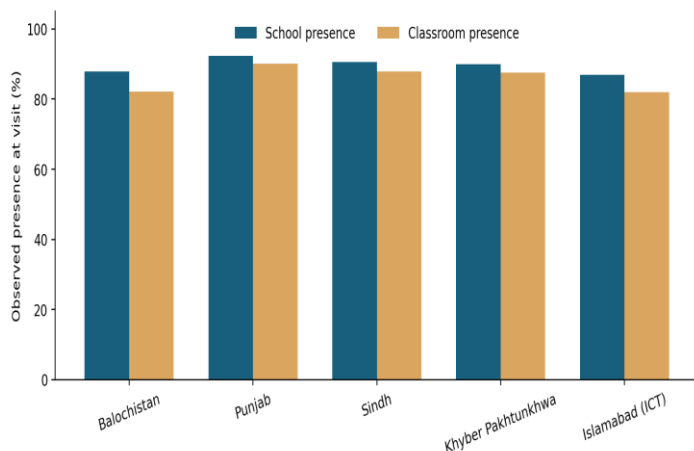


Figure 2: Teacher presence at school and in the scheduled classroom, measured at a visit.

Note. Displayed are observed jurisdiction indicator percentage; no cap exposure and annual retention are shown.

This difference between school and classroom snapshot measures is 5.7-percentage-points for Balochistan as compared to 2.2 for Punjab, 2.7 for Sindh, 2.3 for Khyber Pakhtunkhwa, and 5.0 for Islamabad Capital Territory. The gap in Balochistan is more than the mean unweighted four-jurisdiction comparison (3.1 points). This pattern might warrant further investigation regarding timing of school assignments, school activities other than class, and interruptions during the visit day. It doesn't support the idea that administrative operations engendered the whole gap. Teachers may be outside the room, teaching at another location, on a scheduled break or doing administrative tasks. These possibilities could only be partitioned by being properly linked by the classroom timetables and reason codes. The administrative reporting indicator and teacher-presence indicator at the jurisdiction level are shown in Table 1.

Table 1: Published GEPD jurisdiction indicators (percentages; source-verifiable)

Jurisdiction	Admin reports	At school	In class	Gap (pp)
Balochistan	23.2	87.9	82.2	5.7
Punjab	26.8	92.3	90.1	2.2
Sindh	19.4	90.5	87.8	2.7
Khyber Pakhtunkhwa	33.1	89.9	87.6	2.3
Islamabad (ICT)	35.6	86.9	81.9	5.0

Note. Admin reports are for missing class for administrative procedures from previous academic year. Presence is a measure

of visit-day not annual attendance; the difference is in percentage points. Data from World Bank GEPD public dashboard (checked 22 October 2026).

The monitoring numbers provided highlight contextual heterogeneity. On the World Bank's five-point scale, the de jure monitoring/accountability score for Balochistan is 1.0, whereas the scores for each of the other four jurisdictions is 3.0, while its de facto score is 2.7, which is equal to the score for Khyber Pakhtunkhwa and less than the score for Punjab, which is 3.1. Of the teachers in Balochistan, 71.6% believe that a consequence would be triggered by frequent unjustified absence, compared to 83.7% in Punjab, 72.9% in Sindh, 67.2% in Khyber Pakhtunkhwa and 56.3% in Islamabad Capital Territory. These measures reflect the teacher's perceptions of the policy and the institutional rules, not how much paperwork he or she did. Additionally, their divergence indicates that an accountability system not tied to workload limits may be able to take the form of an aggregate school-presence pattern.

The Pearson correlation coefficient between the five jurisdiction shares is mainly negative ($r = -.382$), which aligns with the description that a higher percentage of administrative-process class interruptions also tends to co-occur with a slightly lower school presence. The ordinary least-squares coefficient is -0.121 , which means that for every 1 percentage-point difference in the administrative report share in this 5-unit comparison, there is a 0.121-percentage-point difference in school presence. The t-based 95% interval is $(-0.661, 0.418)$ percentage point, with the conventional 2-sided p value .526. This is displayed as the fitted line and each jurisdiction in Figure 3. There is no justification for rejecting a null of no linear association and no causal interpretation of the value of the slope is available.

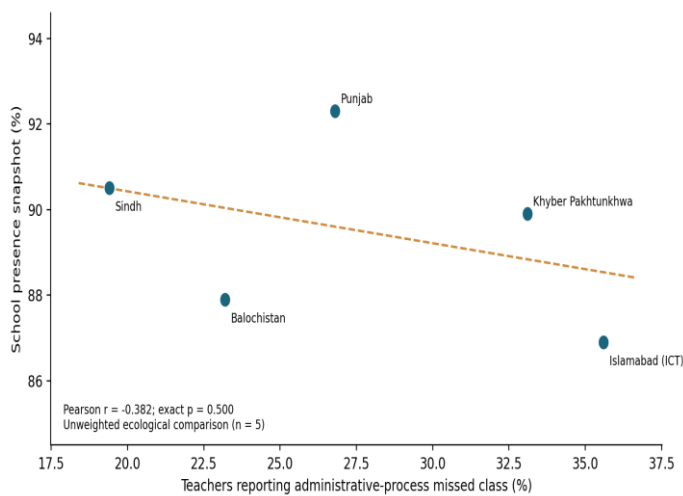


Figure 3: Ecological association of administrative-process reports and school presence (n = 5).

Note. Figure created by importing the values in the source from an exported companion Excel workbook. The observed jurisdictional indicator percentages are shown, no cap exposure or annual retention is shown.

The exact two-sided permutation calculation for the primary correlation—the one in which all five school-presence shares were included—results in $p = .500$ over the 120 permutations of the five observed shares. The Spearman's rank correlation is $-.500$, but this is descriptive and, with so few ranks, is unstable. The median slope from Theil–Sen is -0.151 with a wide range spanning both positive and negative relationships. The Pearson correlation is changed to $-.256$ (and the exact permutation p value is $.625$) by replacing school presence with classroom presence. The correlation between administrative-process reports and the difference between school and classroom presence is $+.075$ with exact $p = .925$. There is no systematic link between these different operationalisations; they are not all evidence for the same mechanism.

The leave one out check is particularly revealing. Removing Balochistan results in $-.633$, Punjab in $-.488$, Sindh in $-.288$, Khyber Pakhtunkhwa in $-.484$ and Islamabad Capital Territory in $+.124$. So, one missing jurisdiction flips the sign of the association. In a five-unit sample, even models that include a few predictors, nonlinear effects (beyond linear), or province fixed effects would be unidentifiable or overwhelmingly driven by modelling assumptions. Just because one of the labels is

advanced doesn't mean it's more credible. The actual inference and influence sensitivity are thus reported in this diagnosis, instead of some spurious high-dimensional model, to accommodate five rows. A summary of the main correlation estimates, regression coefficients, and sensitivity analyses is presented in Table 2.

Table 2: Exploratory model results and sensitivity checks

Check	Estimate	Interpretation
Pearson r: admin vs school presence	-0.382	Exact permutation $p = .500$
OLS slope	-0.121	95% CI [-.661, .418]
Pearson r: admin vs classroom presence	-0.256	Exact permutation $p = .625$
Pearson r: admin vs gap	0.075	Exact permutation $p = .925$
Spearman rho	-0.500	Exploratory rank check
Theil–Sen slope	-0.151	95% CI [-1.200, 1.222]
Leave-ICT-out Pearson r	0.124	Sign reverses

Note. The unit is the jurisdiction (no teacher level uncertainty or any causal workload-cap effect estimated).

For newly recruited cohorts in Balochistan, a percentage of teacher retention is not reported, neither is the number of absenteeism days per year reported or a distribution of administrative workload-hours, nor is the difference between capped and uncapped teachers reported. Some of those fields are explicitly stated as not applicable in the Excel spreadsheet and no figure is extrapolated from snapshot percentages. In a proposed policy scenario sheet, the reduction in the share of teachers reporting for administrative process is arithmetic and no teacher retention or days absent are implied. The statistical figures do not include scenario calculations. The principal policy outcomes and their availability and identification status are given in Table 3.

Table 3: Identification status of policy questions

Policy question	Available observed outcome	Status
Do administrative processes interrupt class?	Teacher-reported exposure: 23.2% (Balochistan)	Observed aggregate
How many annual days are absent?	No annual teacher-day denominator	Not identified
Are early-career teachers retained?	No linked appointment-to-follow-up cohort	Not identified
Do workload caps change either outcome?	No exposure/implementation or untreated comparison	Not identified



The direct finding of jurisdiction is bespoke, with only a measurable reported administrative interruption issue in Balochistan, but the cross-jurisdictional correlations are too volatile to be reliably associated, let alone suggest a workload-cap effect. A district-level analysis provides a more nuanced picture of inequities in staffing relevant for implementation. None of these descriptive measures is a teacher retention rate or an estimate of the number of absence days per year. Observed evidence and limitations are provided in tables 1-4 and figures 1-5; values, calculations and links to source documents are provided in the workbook.

The administrative-burden hypothesis must be supplemented with an operational qualification, namely: dispersion of district staffing. The provincial EMIS 2023–24 teacher–school ratio for the district is between 1.39 and 10.37. The median number of unweight teachers per school is 2.565, the mean is 2.936, and six of the districts are fewer than 2 and six have more than 4. The separately reported province-wide ratio is based on an aggregation of the schools rather than equal weighting of the 36 district averages. The highest 12 district ratios are shown in Figure 4, and all the district and school-category values reported are retained in the workbook. All these ratios fail to answer questions about the number of teachers who have quit their jobs, the number of days they have missed, or whether they have been beyond the administrative hours limit.

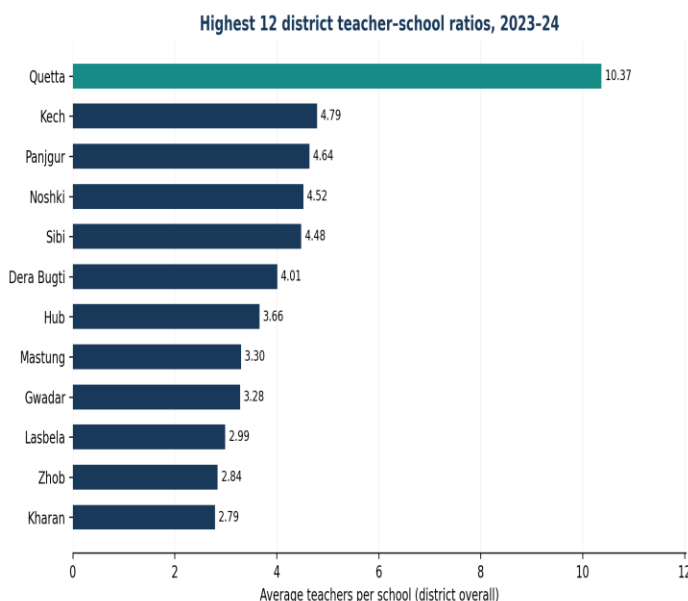
Figure 4.: Highest district-level teachers-per-school ratios, Balochistan, 2023–24.

Note. All created from the original 36 district sources, verified and read from the attached exported excel spreadsheet. This is a comparison of staffing structures: There are no measured workload limits or retention outcomes in the chart.

Another large descriptive gradient, identified by a paired school-category comparison, is the difference in 2012 NAEP scores. For the 31 of 36 districts for which average teachers-per-girls'-school are published, the average is greater than the average for boys' schools. The district-level mean difference is 0.936 teachers per school ($t[35] = 4.073$, two-sided $p = .000252$; conventional 95% CI [0.469, 1.402]); the Wilcoxon signed-rank p value is .0000246, and the exact two-sided sign-test p value is .0000129. The prespecified fixed-see sign-flip Monte Carlo check results in a value of p close to .000010, while the percentile bootstrap results in an interval of (0.533, 1.421) across districts. The measures refer to school populations, not individual female and male teachers and the population of district entries is close to complete thus the statement regarding probabilities are conceptual rather than actual sampling uncertainty. The district-level staffing indicators and related statistical comparisons are included in Table 4.

Table 4.: Published EMIS district staffing ratios and paired school-category diagnostics (2023–24)

Statistic	Estimate	Unit / interpretive note
Districts	36	Aggregated district records
Teachers per school, district median	2.565	All schools; equal district weights
Teachers per school, range	1.39–10.37	Duki to Quetta
Districts below 2 teachers/school	6 of 36	Threshold of district means only
Girls'-minus-boys' school ratio	+0.936	Mean within-district category contrast
Paired t test	$t(35) = 4.073$; $p = .000252$	95% CI [0.469, 1.402]
Wilcoxon signed-rank	$p = .0000246$	Distributional sensitivity
Exact sign test	31/36 positive; $p = .0000129$	Two-sided binomial
Exclude Quetta	+0.760	Mean within-district school-category gap





Note. Official ratios refer to the average number of teachers per school, and not vacancies or retention rates. Girls' and boys' refer to moyens in schools and not to the sex of the teachers. Inferential p values are diagnostic throughout the published district enumeration and are not estimates of workload-cap effects. Source: SED (2024), section 2.2.5.

The result is not necessarily due to the unusual ratios of Quetta. If Quetta is excluded, the average difference between girls' and boys' schools is 0.760 teachers per school, and the paired Wilcoxon comparison is still in the same direction ($p < .001$). 12 biggest differences shown in Figure 5, with Quetta included for transparency. Having more teachers per school does not necessarily imply having enough teachers for girls' education: there are variations in the number of pupils, the number of grade levels, sleeping-in schools and exposure to a single teacher. Geographic heterogeneity, therefore, can be measured to guide the location of a pilot to stratify workload-cap implementation, and test for differential effects while not being used to estimate administrative burden or teacher retention from an observed workload-cap staffing gradient.

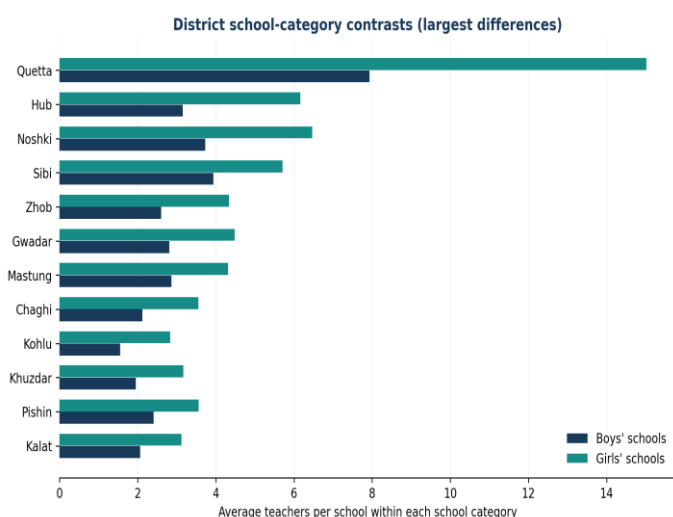


Figure 5: Girls'- versus boys'-school teachers-per-school ratios in districts with the largest contrasts.

Note. Only created from the values verified by the source in the attached exported excel workbook, 36-district based. This is a comparison of staffing structure – the chart is not measured workload limits or retention outcomes.

5. DISCUSSION

The core outcome is not same as the low impact of workload limits. Unidentified effects are not the same as an effect that is near zero, and the data does not include a cap

treatment. The available data suggests that sometimes administrative procedures interfere with instruction. They also indicate the presence or lack of presence by the observer when the teacher is in the school vs in a scheduled classroom. In neither instance does it create an uninterested or unending link between an easily implemented decrease in administrative time and fewer annual absenteeism, nor does it track teachers into future years of their careers. A policy evaluation with a policy retention rate and denominator of these numbers, when the policy counterfactual and policy exposure definition indicates a positive retention improvement, would be making a numerical claim that is not backed up by the denominator, exposure definition, and counterfactual.

A better way of reading this is as a statement about the current administrative-data architecture being based on numbers of schools, teachers and students rather than on documenting where teachers' working time is spent. EMIS reports are essential for school planning but on their own cannot show why or which individuals have left a job in public-sector school teaching from a particular entry cohort. The GEPD takes care of part of the blindspot by asking about absconding from administrative-process and/or attending visit-day. Its public dashboards, however, are still too summary to do a within-province evaluation of the survey. Together, these systems provide a reasonable motivating context for policy and a vocabulary for baseline measurement, not an experimental or quasi-experimental finding.

The district staffing results indicate that there is real danger of concrete design issues for a capped administration hour. A flat rate of a ceiling across Quetta and in the remote low-staffed areas may have different impacts, though it may be similar with compliance rate. Randomisation or rollout comparisons should therefore be based on group-stratification by the pre-policy staffing levels and remoteness and separate group-level analysis performed using prespecified interaction estimates. Only timed task logs and duty assignments verified, and complete teacher-year outcomes, can inform that question, as the paired category contrast cannot be used to show that girls' schools are less burdened administratively.

There are also few similar jurisdictions, and therefore the meaning of significance testing must be approached differently. Five pairs of numbers can always be fitted to a standard regression, which only has three residual degrees of freedom, with a very limited ability to differentiate



administrative work from wages, urbanicity, school type, connectivity, vacancy pressure and monitoring systems. If Islamabad Capital Territory overturns the seen sign, the sensitivity of the model is easily noticeable and does not require a huge set of p-values. The exact permutation result is not a solution to the problem of confounding or sample selection; it is simply a way of not pretending that the large-sample reference distribution has been observed. The first step in doing good applied statistics is to obtain credible units of observation and sensible variation in the treatment.

Some practical design considerations are presented. A workload cap should focus on reducing unplanned outside work and duplication of data returns, rather than on reducing all outside-of-class time. Administrative requests can be divided into school-based record keeping, district travel, financial transactions, committee work, emergency requests and inspection requests. Weekly approximation of time, approval process, and replacement procedures need to be in place for each category. Where a principal delegates reporting to an office assistant, or shares reporting forms with other departments, the reform might result in some savings of teacher time with minimal reduction in accountability. A cap that doesn't allow teachers to log incrementally past the cap can be the same name as the game with the upside of workloads becoming less visible. These outcomes need to be distinguished using an independent sample of time-use diaries.

Predictable time, supportive supervision, and focusing on teaching practices may be most important for early career teachers. However, policies should not assume that the same effects occur in all schools. Rural postings often include longer travel distances for official documents, not as good digital services, less administrative support and instances of teachers teaching more than one grade. Such burden could be alleviated with a limit of 1 hour per week, although enforcement also might be easier at a larger school than at a one-teacher school. The need for prespecifying the differences between subgroups (school size, distance from district headquarters, gender, connectivity, and teaching assignment) will therefore be quite strong, to avoid an unmanageable series of exploratory interactions. We need to highlight the confidence intervals and the size of the effects in practice, not whichever subgroup hits the nominal significance level.

Retention and absence will need to be implemented on different calendar timelines in policy terms. Administrative errands may immediately decline following the

implementation of a new approval process and could be identified on monthly attendance records or time-use records completed by teachers. A retention payoff might involve one or more school years, and may be based on factors such as job security, job identity, promotion, or family relocation. Exposure also should be carefully measured for the annual absentee. The number of working days a teacher who was employed in August has less than a teacher who has been employed in the calendar year, so the total number of days absent is not directly comparable and will lead to bias. The protocol should therefore indicate a similar window (school year), denominator (school days) and coding convention of authorisations.

As much attention should be paid to compliance as to outcomes. If it's a cap to limit any non-pedagogical work that is to be completed within a specific week, then document hours worked before the cap and after the cap and the percentage of teachers whose activity logs are within the cap. Assigning the cap and compliance with the cap can be measured and they are answering different questions. The intention-to-treat effect is the one that has to do with the policy decision of offering the cap; a per-protocol association would include the possibility of contamination as those schools are more likely to be in good management and more likely to be a good place to have a job. Any instrumental variable approach that uses assigned cap treatment on top of the others would need to be accompanied with concrete assumptions about the cap's impact beyond hours worked and enough variation in compliance; it should not be applied simply for statistical finesse.

Also, there should be a place for proper monitoring in the policy. A 'cap' that cuts down on paperwork, but softens attendance check may give inconclusive results, and a well thought out redesign of the reporting process can maintain accountability with less workload for classroom teachers. The World Bank policy scores should not be interpreted as a ranking of teacher welfare, but rather as general conditions: the formal score that Balochistan gets in comparison to the four comparison regions is an indicator of the reported monitoring framework, not whether teachers are protected from administrative tasks in that region. A balanced policy would involve clear reporting requirements, outside of the classroom clerical support, if possible, and periodic audits on time spent on teaching, and time spent using delegated resources.



We need prudential assertions of policy transfer in the developing-country context. Administrative burden is highly prevalent, but the OECD TALIS sample of education systems is diverse in terms of staffing, institutional capacity, teacher contracts and financial systems, and does not compare well with those in Balochistan. Use of international estimates should not replace the values in an indicator in a local data set but should be used in guiding theory and indicator selection. Likewise, in burnout and turnover-intention research, different pathways to the outcome can be suggested and attitudes to quit cannot directly be translated into actual quitting. This distinction is particularly significant when early career teachers are thinking about leaving but are unable to do so due to lack of alternative employment opportunities, family responsibilities or the presence of security of a public sector position. A cap might result in better well-being, but with no actual effect on the number of observed errands, or vice versa: less official errands, but no impact on overall job satisfaction.

There are restrictions at both the evidence level. The five jurisdictional observations are weak – the uncertainty estimates and survey denominators and sample dates are not fully revealed in the retrieved dashboard entries. Missed-class reports and observed presence on visit days on administrative-process are based on different recall windows. The 36 EMIS entries are for districts, not 36 randomly selected schools or teachers; ratios may differ depending on grade level and school size, and the source PDF is labeled draft. These tests of significance are supplementary distributional diagnostics, not sampling based evidence of the effects of provincial policies. When you combine the two layers you will generate a false teacher level sample. Causal workload-cap and survival or longitudinal absence estimates were precluded by the absence of cap implementation, novice cohort retention or annual absence-day registry.

The most important practical suggestion is to establish a small, fixed linkage to the workforce before developing statistical design. Schools and district offices should track a stable anonymised teacher ID, initial date of appointment, current placement, absences and/or participation days, days at risk for the school year, administrative task hours, and date of cap implementation (verified). Monthly logs would be useful for trend analysis and payroll reconciliations would be performed annually to determine actual exit. Based on this, a stepped or cluster-randomised programme

of sufficient schools could then assess if the cap recovers time in instruction, if it leads to a reduction in days missed due to administrative reasons and ultimately if it has a protective effect for early-career retention. Also, unintended consequences such as transfer of work to headteachers, increases in unpaid work and delays in legitimate district reporting can be studied through such a programme.

6. CONCLUSION

In Balochistan, 23.2% of the teachers surveyed stated that they did not attend class for administrative procedures during the previous academic year; 87.9% of teachers were at school during the visit and 82.2% were at the teachers' classrooms. There is no clear decision in the ecological five-jurisdiction administrative-report/presence correlation ($r = -.382$; exact $p = .500$). In the meantime, the official numbers for the 36 districts have shown significant variation between the number of teachers per school (1.39-10.37) and school category differences remaining even when removing the provincial capital. Administrative burden and staffing capacity appear to be plausible administrative outcomes to measure, but they are not necessarily administrative outcomes that accompany administrative workload caps to retain newly recruited teachers or to reduce the number of days teachers are absent each year. An assignable or accepted rollout plan, an accepted time use record, and a teacher-year linked data are still essential to that answer.

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