**Tata Institute of Social Sciences, Mumbai, INDIA**

**Centre of Excellence in Teacher Educdtion**

**Estimating teacher vacancies/requirement using Pupil-Teacher Ratio**

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The State of Teachers, Teaching, and Teacher Education Report 2023 focuses on issues of teacher supply and demand. As part of exploring the issue of teacher demand and requirement, the report seeks to estimate teacher vacancies, both at the country and state levels. In order to do so, we propose to use norms for recommended Pupil-Teacher Ratio (PTR) at the school level to arrive at an estimate of teacher deployment: requirements and excess .

PTRs estimated at the country, state, or even district levels do not provide the true picture of teacher deployment and availability at the school level. The Right to Education Act (RtE) is categorical that teacher requirements and PTRs are to be met at the school level. Hence the importance of understanding teacher availability at the school level. Non-availability of teachers at the school level, further analysed with reference to contextual or systemic characteristics can enable understanding what may be giving rise to these issues, and how they could be addressed.

The teacher requirement i.e. vacancies could arise on account of

* inadequate recruitment
* problems in deployment/rationalisation of available teachers arising for a range of reasons including insufficient subject teachers, difficult to staff areas, etc.

UDISE provides information on the number of teachers school wise, along with data on school enrolment. However, neither sanctioned positions in each school nor teacher availability as against sanctioned positions nor vacancies are reported.

UDISE also calculates and reports overall PTRs by level (1-V, 1-VIII, VI-X, VI-XII, etc) for each state.

School-level UDISE data can be used to estimate teacher vacancy at the school level, reported state wise and across rural urban locations. The estimation is made across all schools enumerated in UDISE, taken together (govt, private, govt aided, etc. and all levels). This provides a preliminary understanding of adequacy of teacher requirements at the school level, using the RtE standards for teacher provisioning which are based on a combination of total enrolment and subject teacher and art/physical education teacher requirements for each school. RtE does not prescribe norms and standards for secondary schools.

**Estimation of teacher requirement.**

For purposes of the Report, we estimate teacher requirements in the following manner:

1. UDISE data on school-wise enrolment, organised for states and retaining rural-urban location characteristic, is calculated.
2. UDISE data on teacher availability for each school is taken.
3. The PTR of each school is calculated using the number of students and the number of teachers.
4. PTR=35 is assumed as a reasonable norm to be met at the school level to ensure adequate teachers, for all schools without making any distinction between primary or above grades. (In 2021, when a few states when asked about how they estimate the teacher additional requirement for the purpose of recruitment indicated that this PTR is used by them. This PTR is based on the RtE recommendation for Primary Schools (1:30 and middle schools 1:35)).
5. The count of schools with PTR>35 is taken to be indicative of schools having teacher shortage/requirement/ vacancy.
6. The count of schools with PTR<30 is taken to be indicative of schools having teacher excess.
7. % of schools in a state having vacancies is calculated using the formula: (Total schools with PTR>35:1/Total schools available)\*100.