
Some Issues in School Education

Position Papers from Azim Premji Foundation



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CONTENTS

1. What Makes a School Successful? Page 5

Rural government schools demonstrate better learning when teachers are committed and parents care about quality education. Better infrastructure or better qualified teachers in themselves do not lead to better learning.

2. Status of District Institutes of Education and Training (DIET) Page 11

This paper contains an analysis of the current status of District Institutes of Education and Training (DIETS) in the country and suggests an action plan for improvement.

3. Why is a Pupil Teacher Ratio of 30(or Less) Critical? Page 17

This paper, based on research conducted in 766 schools of Karnataka, highlights the importance of a good Pupil Teacher Ratio and its correlation with learning outcomes of children

What Makes a School Successful?

How the commitment of teachers and head teachers can transform schools



Rural government schools demonstrate better learning outcomes when teachers are committed, head teachers provide leadership and the parents and community care about quality education.

Better infrastructure or better qualified teachers by themselves don't lead to better learning.

What Makes a School Successful?

How the commitment of teachers and head teachers can transform schools

Infrastructure facilities and teacher profile seem to be largely non issues in ensuring better learning in rural government schools. Successful schools display higher levels of discipline, commitment and teacher involvement as well as better school management practices. In addition active SDMC members and involved parents have a significant contribution to learning outcomes. Successful schools make special efforts to provide remedial inputs to all children especially weaker ones.

EXECUTIVE SUMMARY

Why do some schools perform well while others do not? What differentiates a successful school from other schools?

Findings from the Learning Guarantee Program (LGP), a joint initiative of the Karnataka government and Azim Premji Foundation provides some answers. This program measured the performance of 896 schools in 7 backward districts of Karnataka during 2002-05. The performance evaluation was based on:

- enrollment
- attendance
- learning achievement

Data from the LGP reveals the following:

Five Factors that Made a Positive Difference

1. Presence of a committed head teacher
2. Active involvement of teachers
3. Active involvement of parents
4. Educational background of parents
5. Good school practices (cleanliness, neatness and orderliness)

Five Factors that Did Not Make a Difference

1. Infrastructure
2. Teacher profile
3. Caste of teachers, head teachers
4. Proximity of teachers to school
5. Economic background of parents

In other words, most infrastructure and teacher demographic related parameters did not have a major bearing on learning outcomes.

The key differentiators were essentially an

- **'An efficient teacher system'** comprising the commitment, discipline and efforts of the Head Teacher and other teachers and
- **'An involved community system'** comprising active SDMCs and parents.

These findings suggest that the government's heightened emphasis on better school infrastructure and formal qualifications of teachers, by themselves will not bear fruit.

Qualitative improvements will happen through the leadership and commitment of head teachers and teachers and an active demand for good quality education from parents.

LEARNING GUARANTEE PROGRAM: A BACKGROUND

Learning Guarantee Program (LGP), a joint initiative of the state government and Azim Premji Foundation, was a study conducted in 7 most educationally backward districts of North East Karnataka during 2002-2005. In the first year of the program, 896 schools voluntarily enrolled in the program and their performance was evaluated described below.

Measuring School Performance

Qualifying schools had to ensure 100% enrolment and 90% regular attendance. Next, based on the learning achievements of children on standardized tests, schools were categorized as follows:

- **Category A:** schools where 80% children scored over 90% in learning outcomes
- **Category B:** schools where 70% children scored over 90% in learning outcomes
- **Category C:** schools where 60% children scored over 90% in learning outcomes

The results of the LGP were not encouraging. Of the 896 participating schools, the “successful” or “high performing” schools were only 40 i.e. less than 5%. These were as per the categories below:

Category A	Category B	Category C	Total Winning Schools
12	14	14	40

Factors Influencing School Performance

The study then looked at the successful schools and the parameters behind their success when compared to other schools. Schools were evaluated on quantitative measures such as school infrastructure, school management, socio-economic background of enrolled children and community factors such as functioning of the SDMC and presence of active NGOs in the village. The qualitative measures included attitude and commitment of teachers, quality of teaching and class room practices.

The study sample comprised the 40 winning schools and 40 other schools which ‘matched’ the winning schools on basic parameters like district and block, type of school (lower primary school/higher primary school, Girls/Co-ed, approximate school strength) etc. The ‘matching’ school concept was used to minimize the impact of other environment variables. Findings from the LGP are discussed below.

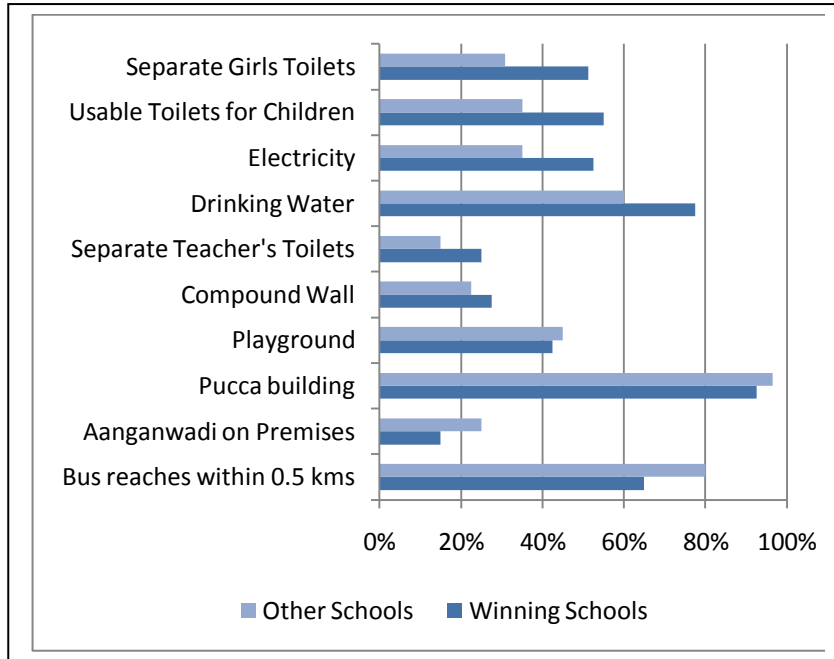
WHAT MAKES FOR A SUCCESSFUL SCHOOL?

The following key factors were seen to make the difference between successful schools and others:

Factors that did not make a difference	Factors that made a difference
Infrastructure	Presence of head teacher
Teacher profile	Education background of parents
Whether teachers stay close to school	School practices (cleanliness, neatness and orderliness)
Caste of teachers, head teachers	Involvement of teachers
Economic background of parents	Involvement of parents

Factors Pertaining to Infrastructure

On most infrastructure related parameters the situation is similar across winning and non winning schools and there are no significant statistical differences.



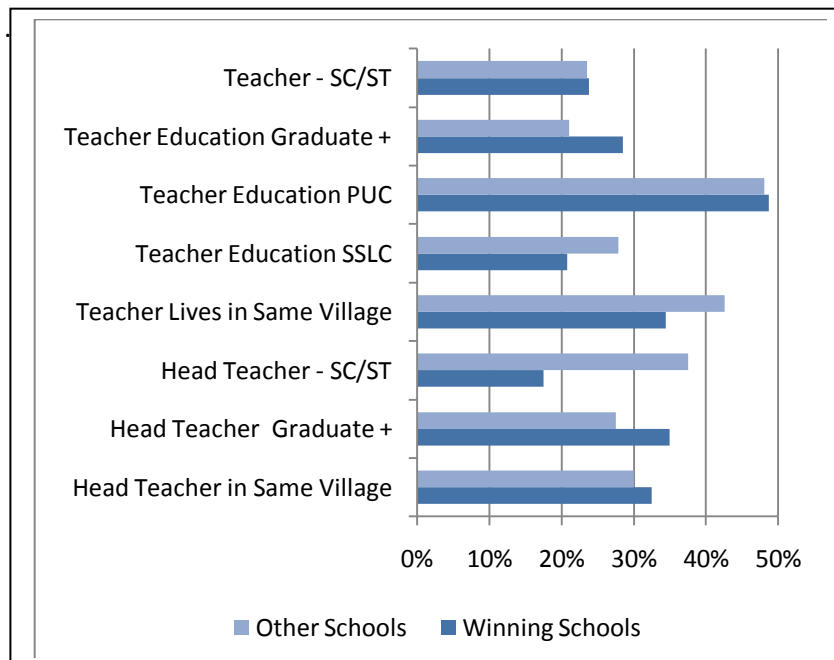
Though most winning schools boast of pucca buildings, other facilities like toilets and electricity are not present in nearly half of them.

A large proportion of winning schools do not have compound walls or proper play grounds.

The proportion of schools with drinking water and usable toilets for children is marginally more (significant at only 90% confidence level) in winning schools as compared to other schools - just a directional difference.

Factors Pertaining to Teachers' Profile

The profile of the teacher does not seem to be influencing in any way the success of the school.



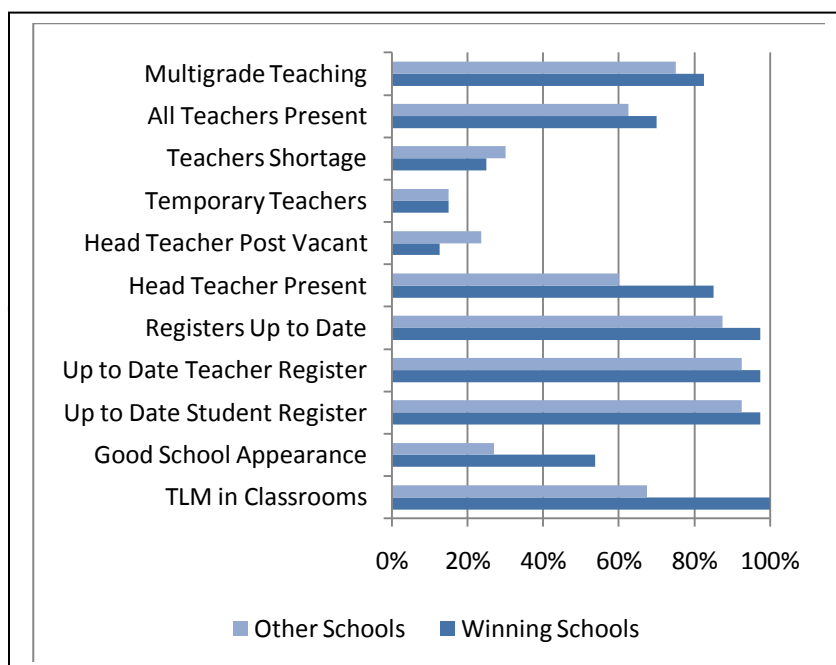
A typical teacher in a winning school is very much like his/her counterpart in other participating schools.

Profile of head teachers across the two categories of schools differ on caste and years spent in the school.

While caste may not be a critical aspect, the duration of the Head Teacher in the school is important as it points to a certain continuity and consistency in the school management practices.

Factors Pertaining to School Practices

The winning schools typically have better school management practices



Winning schools are better in terms of cleanliness, neatness and orderliness etc.

The presence of teaching learning material is a key differentiator

The presence of teachers and head teachers is another distinct pointer to teacher commitment and involvement.

Notably, almost 1 in 4 schools in the other schools category have the head teacher post vacant.

Factors Pertaining to Administrative Practices

The indicators relating to the block education officials, SDMC do not show any significant differences between the two categories of schools. The SDMCs of the winning schools seem to be a lot more active than their counterparts with an average of at least one meeting each month.

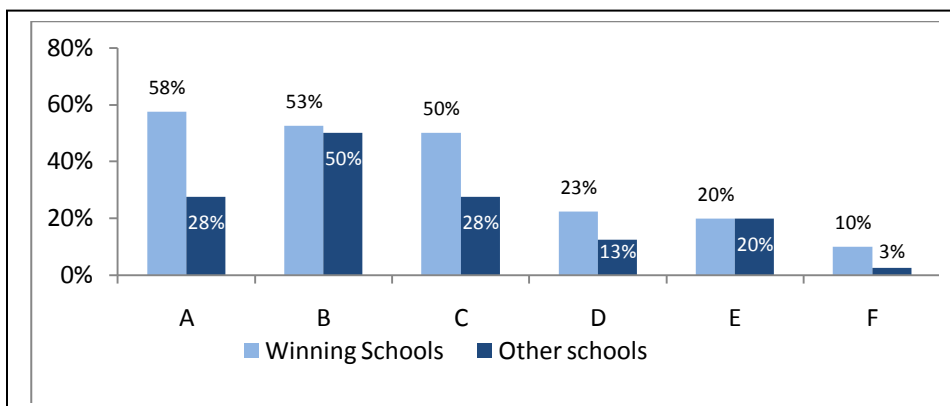
Factors Pertaining to Socio-Economic Background

The absence of 'education' among parents is higher in the 'other' schools category, where more than half are uneducated. While 54.7% of parents in other schools did not have any formal education, the corresponding figure in winning schools was 41.7%.

WHAT DO SUCCESSFUL SCHOOLS DO DIFFERENTLY?

Qualitative research suggests that successful schools made an effort to provide additional inputs to children. These were carried out with greater intensity by the winning schools. Many schools reported taking extra classes on holidays and after school. Several schools identified the relatively weaker children and provided them special inputs. The model question papers provided seem to have been made well use of to get the children to practice them repeatedly.

The key influencing activities are shown below:



What Made the Difference?

Winning schools did the following to improve performance:

- Took special classes for weak students and gave additional homework
- Conducted special tests and practiced model question papers
- Held meetings with parents to improve learning efficiency
- Motivated the children better

Factor	Description
A	Took special classes for weak students and gave homework
B	Carried out remedial teaching, used innovative learning methods
C	Conducted special tests and practiced model question papers
D	Held meetings with parents to improve learning efficiency
E	Took steps to reduce absenteeism
F	Motivated the children

Help Provided by SDMC: More cooperation was seen from the SDMC members and president in the winning schools segment. They helped increasing the attendance, supplying learning material, providing infrastructure, improving admission, and giving financial help to schools.

Effort of Parents: In winning schools, **73% of parents paid regular visits** to monitor the progress of children and hold discussions with teachers. They contributed towards infrastructure, uniforms and took an interest in school activities. But parents do not seem to have done anything much in 40% of the schools in the other schools segment

CONCLUSIONS

Significant differences exist between the LGP winning schools and other participant schools which disprove some commonly held perceptions. Infrastructure facilities and teacher profile seem to be largely non issues while active SDMC members and parents have contributed to learning. Winning schools also display higher levels of discipline, commitment and teacher involvement. Their teachers seem to have traveled that extra mile to get the award. Also social background of the students seems to have a positive correlation with the success of the schools on the Learning Guarantee parameters.

NOTE: This is a short synopsis of the study. A detailed paper with the methodology, sample, and findings can be requested from Azim Premji Foundation

Status of District Institutes of Education and Training

A Brief Report on the State of DIET s in India



This paper examines the current status of District Institutes of Education and Training (DIETS) across the country and proposes concrete actions for their improvement.

Status of District Institutes of Education and Training (DIET)

A Brief Report on the State of DIET s in India

The District Institutes of Education and Training (DIETS), which were conceived as teacher training and curriculum development institutions, have failed to live up to expectations.

This paper takes a look at the current status of DIETS across the country and proposes some actions for improvement.

INTRODUCTION

This note is based on various papers and evaluation study reports concerning DIETs by NEUPA, NCERT and other organisations as well as the experience of Azim Premji Foundation in the field over the last eight years.

The DIETs are envisioned as ‘Academic Lead Institutions’ to provide guidance to all academic functionaries in the district. The main *tasks and role expected* of DIETs are:

- Quality teacher training, leading to high learning levels among students
- Improving pedagogy and making classroom learning interesting
- Developing Curriculum and Academic Material such as child-friendly textbooks
- Planning and Management of primary, adult education and non-formal education of the district
- Conducting Research, developing low & no-cost gadgets, supporting innovation

- Evaluating students, Teachers, Programs and Institutions
- Using technology in education

However, the DIETs do not quite perform these tasks today.

CURRENT STATUS OF DIETS

The performance of DIETs across the country has been abysmal. The poor educational achievement among students in government schools is a telling example.

Specifically, some of the problems/issues encountered are:

- 1. Poor Infrastructure:** While most DIETS have their own campuses
 - **Inadequate space** – very few have the mandated 10 acre space
 - **maintenance** of most DIET buildings is poor
 - **hostels** are not available in DIETs of several states

- women’s hostels are not utilized for security reasons in several states
- **libraries**, a key facility , are totally neglected in most DIETs
- **computer cells** in majority of DIETs are unused due to absence of electricity, UPS. Utilization is mainly for admin purposes
- **laboratories** for different subjects and specifically for psychology and language are absent in most DIETs

The Sorry State of DIETs in India

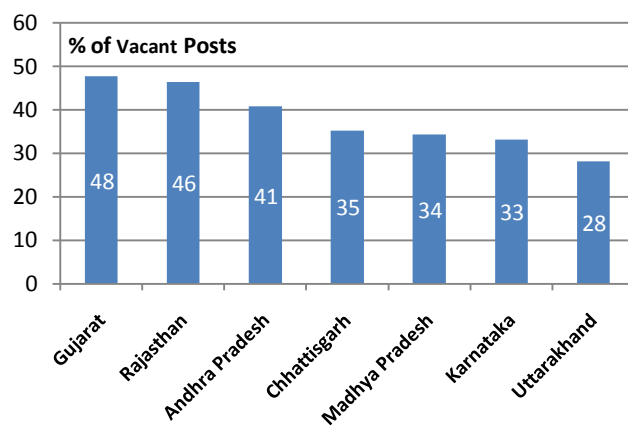
- 17%** do not have their own building
- 40%** do not have their own hostel facility
- 43%** have done no research in last 2 years
- 70%** have no librarian
- 80%** vacancy in faculty positions exists in some DIETs

2. Disturbing Number of Vacancies

A large number of unfilled posts exist in many DIETs thus making it difficult for them to function effectively. Shortages range from 4% to 80% in different states on an overall basis.

This is evident from the adjoining chart.

High Percentage of Vacant Posts in DIETs



3. Personnel Issues

DIETs are almost always in isolated locations and considered neglected institutions.

Transfer to DIET is seen as a ‘punishment posting’ in the department. Absence of vision, mission and perspective is common among the faculty and staff

The quality of leadership in most DIETs is poor and the average tenure of Principals is less than 2 years

3. Dysfunctional Programs

The DIETs are almost dysfunctional in the following areas:

- adult education and non-formal education
- Research and Field Experimentation

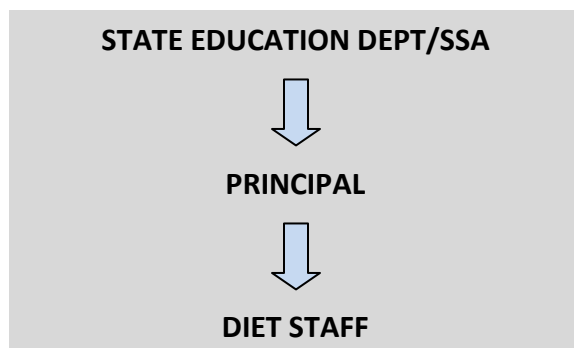
- 82% of DIETs do not have Program Advisory Committee meant to finalize in-service training programs
- The Tenth Plan proposes to lay high emphasis on pre-service and in-service training of teachers; much of it seems to be only rhetorical as no concrete action can be seen on the ground.

Training and Innovation

- Staff and faculty members are not adequately trained especially in IT
- Training programs lack innovation
- The faculty members have not undergone any capacity building in the last 5 years

Top Down Approach

A hierarchy driven approach exists in most DIETs which limits the academic autonomy and flexibility of DIET operations. This relationship is also reflected in the pre-service training classroom, where the interactions are largely uni-directional from the teacher to the student.



Support from the SCERTs is poor and coordination between DIETs and other education departments is inadequate.

IMMEDIATE ACTION PLAN

There is no clarity on why DIETs have been established and how they should operate. Only from a clear vision will the design of the DIETs emerge properly. There is an urgent need to take a serious and comprehensive re-look at the functioning of the DIETs.

It is critical that the DIETs focus on their core academic functions and not become mere “administrators of academic work”.

The DIETs need to have complete autonomy in operation and thus be able to address the academic needs of the local requirements in their respective districts.

A detailed study based action plan is required. In the meanwhile, some possible suggestions are given below which can be taken up on an immediate basis:

1. **Fill Vacancies:** All sanctioned posts should be filled.
2. **Improve Infrastructure:** Create infrastructure according to MHRD norms.
3. **Improve Transfer Policy:** An appropriate transfer policy to DIETs should be drawn up. Such a transfer policy should make provision for identification of academically well qualified and interested persons, from amongst the officers of the department and post them to the vacancies in DIET.

4. **Improve Morale:** Faculty and staff morale must be improved and they should actively participate in the decision making process.
5. **Leadership Training:** Principals must be equipped to become effective leaders of modern institutes of excellence.
6. **Quality Focus:** Regular use of quality monitoring tools developed by NCERT and UNICEF by all the DIETs should be mandated. All training programs developed and delivered by the DIETs be evaluated by the participants.
7. **Establish Participative Processes:** interactive and participative processes have to be established at all levels in the DIETs – between the Principal and the Lecturers and between the Lecturers and Students. Unless these constructive environments are created there is no hope that the guiding principles of NCF 2005 will come into effect in our schools and Students. Unless these constructive environments are created there is no hope that the guiding principles of NCF 2005 will come into effect in our schools.
8. **Leverage External Resources:** Organisations (both not-for-profit and for profit) connected with education and research could run the DIETs in PPP mode or provide specific management and training support.

LONG TERM ACTION PLAN

1. **Separate Academic Cadre:** In the long term a separate cadre needs to be formed for education functionaries.

This will provide academic support, along with growth and development opportunities. Besides the DIETs this would include, functionaries at the State Councils for Education Research and Training (SCERTs), Teacher Training Institutes, and Block and Cluster Resource coordinators.

2. **Elevate DIETs to ‘Academic Lead Institution’:** The critical task is to create a pool of competent faculty, leading to the creation of an institute of excellence in every district of the country. This specifically implies the need for developing:

- **Competency Framework:** Development of a competency framework for faculty
- **Selection Process:** Better selection and preparation program for faculty
- **Career Path:** Faculty retention process by providing a cadre and career path.

DIETs should work as ‘Referral Units’ for addressing all academic challenges in the district.

DIETs should function as vibrant resource centres for all individuals and groups connected to education in the district.

- 3. Strengthen Core Processes:** Academic and academic processes should be strengthened as follows:
- Encourage a decentralized planning process with autonomy of DIET
 - Establish strong linkages with higher education
 - Use principles of motivation, delegation, leadership, performance based progression
 - Conduct international assessment and accreditation like ISO – 9001 : 2000 or NAAC
 - Conduct periodic academic and financial audit of DIET performance.
 - Mandate minimum number of innovations in teaching-learning material, research studies and assessment processes
 - Encourage evolution of DIETs as Mini-Universities

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Why is a PTR of 30 (or Less) Critical to Learning?

*Empirical Evidence from 766 Lower Primary schools of
North East Karnataka*

A Research Study from the Azim Premji Foundation



This paper highlights the importance of a good Pupil Teacher Ratio and its correlation with learning outcomes of children based on a three year long research study conducted by the Foundation.

The Criticality of Pupil Teacher Ratio

Empirical Evidence from 766 Lower Primary schools of North East Karnataka

The Right to Education Act mandates a pupil teacher ratio (PTR) of 30:1 in order to ensure that children learn better in the classroom. A detailed three year long empirical study by Azim Premji Foundation in 2006 had underlined the importance of PTR and its direct correlation with students and school performance. The study shows that a PTR of less than 30:1 has a high correlation with superior school performance. Also when PTR goes beyond 40:1, schools seem to have less than 2% chance of turning in a strong performance.

INTRODUCTION

Does a smaller pupil teacher ratio Pupil Teacher Ratio (PTR) (of less than 30:1) enable students to learn better and aid classroom interaction?

The paper attempts to answer this question based on data from the evaluation of 766 lower primary government schools under the **Learning Guarantee Programme (LGP)** conducted jointly by the Azim Premji Foundation and the Karnataka government in 7 Districts of North East Karnataka during 2002 - 2005.

1,887 schools participate in the program including 766 lower primary schools. Learning outcomes in Kannada and Math of 61,709 children in classes 1 to 4 in these 766 schools were assessed.

Schools were assessed on the following criteria:

- enrolment of children in the habitation
- regular attendance of children
- level of learning in Language (Kannada) and Mathematics

The performance of schools reveals wide variety – from schools whose average achievement scores exceed 90% to those schools where practically no learning is happening.

PTR and School Performance: Key Findings

Schools in which the PTR was between 10 and 20, showed the best learning levels.

Performance dropped sharply as the PTR increased, particularly from 30 upward.

Only 8% of all the schools qualified under the learning criteria. Less than 2% of schools with PTR > 40:1 qualified.

Though the average PTR was 35:1, over 28 % schools had a PTR in excess of 40.

LEARNING GUARANTEE PROGRAMME (LGP): A SNAPSHOT

The LGP was a large scale pilot involving a large number of schools and students:

Schools Assessed in LGP Pilot (Year 2005)	
Parameter	Value
Total schools assessed	1,887
Lower primary schools assessed (Class 1 to 5)	766
Children assessed across all schools	2,54,577
Children assessed in lower primary schools	61,709

Schools participating in the LGP were independently assessed on the following criteria:

- Enrollment:** 100% of children in the habitation should have been enrolled in the school.
- Attendance:** At least 90% of enrolled children should have regular attendance
- Learning Level:** A significant % of pupils should have achieved desired learning levels as tested by external evaluators.

Learning achievement was tested for children from classes 1 to 4 in Language (Kannada) and Mathematics. Schools in the seven selected districts participated in the programme voluntarily.

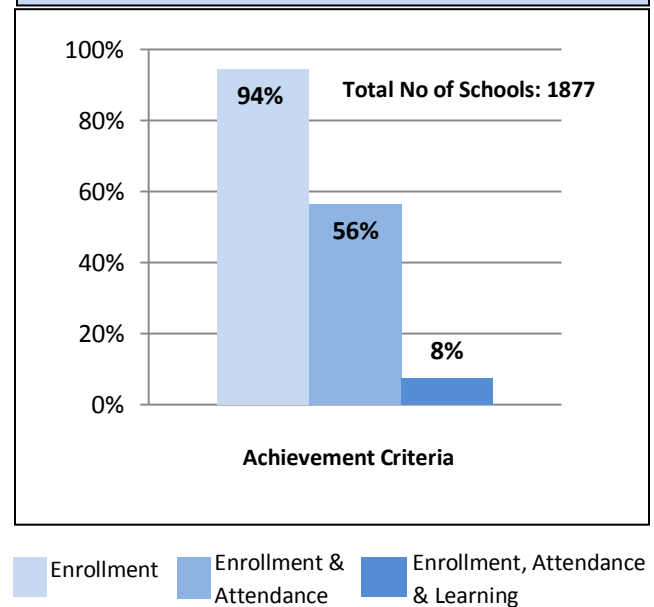
A set of model question papers, which tested competencies rather than rote learning, was given to participating schools.

Based on the achievements of the schools along these three criteria, cash awards were presented to the qualifying schools.

MAIN FINDINGS OF THE STUDY

The first finding was that only about 8% of the schools assessed, qualified under all the criteria of enrollment, attendance and learning achievements.

Only 8% Schools Achieved Learning Levels



Any further reference in this paper to “qualifying schools” is for such schools that met all three criteria.

Two other facts stood out during this study as seen in the table below. These are:

- More schools qualified in the lower primary segment (10.43%) as compared to the higher primary school (5.71%) segment.

- The average Pupil Teacher ratio in qualifying lower primary schools was much lower than the non – qualifying (other) lower primary schools.

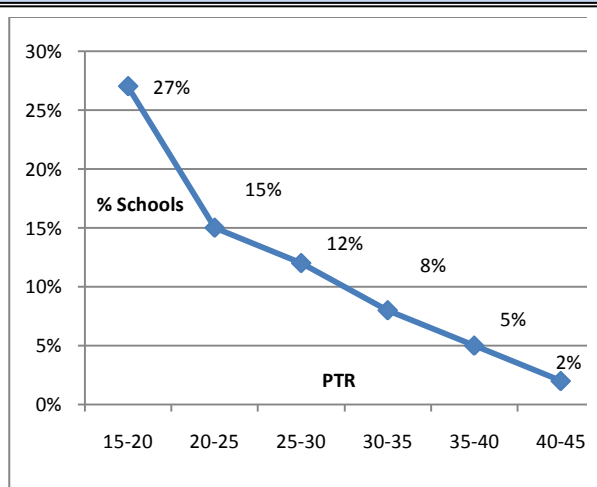
Assessment of LP Schools and PTR

Category of School	Number	Percent	PTR
Total LP Schools Assessed	766	100%	37.4
Schools Not Qualified	686	89.6%	39:1
Schools Qualified	80	10.4%	24:1

Correlation Between School Performance and PTR

The effect of PTR on learning levels can be quite profound as can be seen below.

% of Schools Achieving Learning and PTR



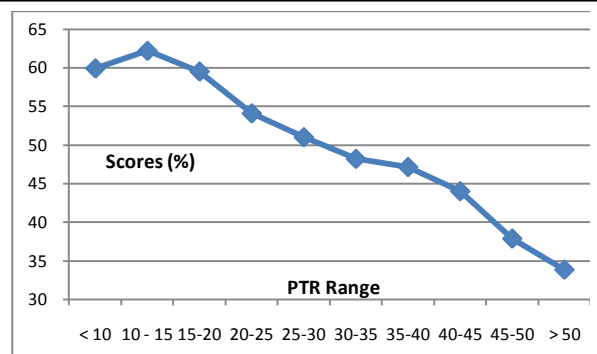
PTR and School Performance

Less than 2% of schools with a PTR of over 40 were able to deliver learning outcomes while 27% of the schools with a sub 20 PTR could do so.

Similarly analysis of the school’s overall average scores (the average of the learning achievement scores of the children in the school in Classes 1 to 4) shows that schools with greater PTR had lower performances.

The data also shows that the best performances in terms of average scores, maximum children with over 90% and minimum children with low scores are being delivered by schools whose Pupil Teacher ratio is in the sub 20 band.

LGP Assessment Scores and PTR



Ultra Low PTR and Poor School Performance

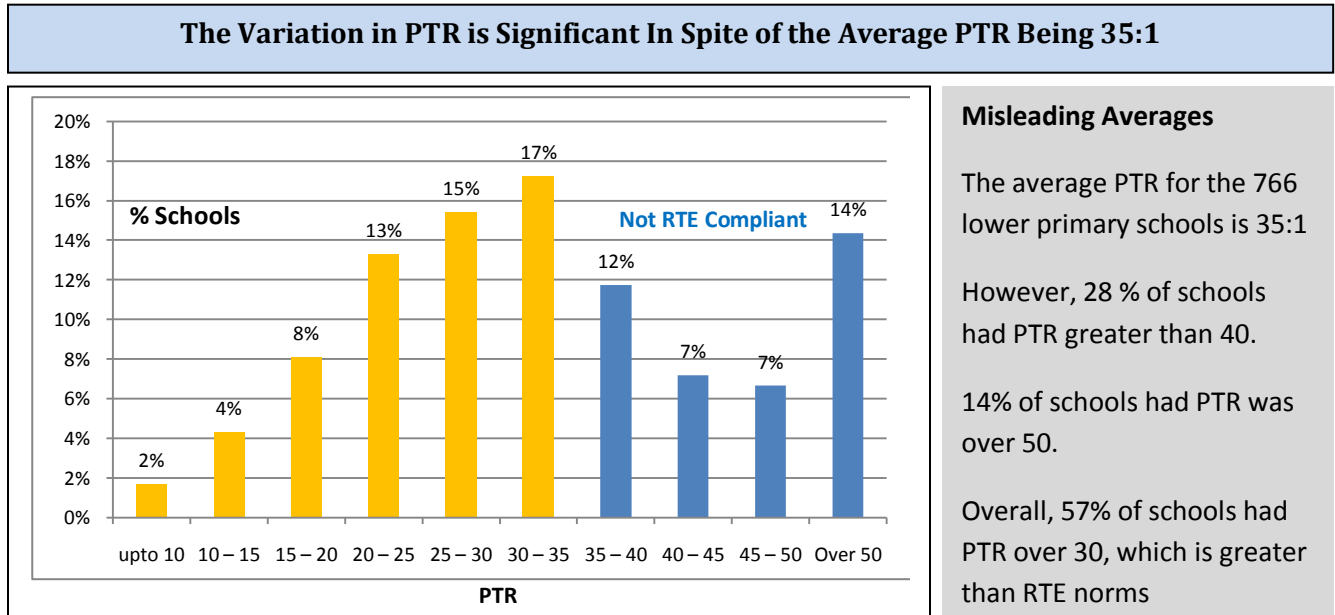
It can be seen that ultra low PTR (less than 10) results in poor performance. This could arise from insufficient peer interactions and classes which are boring for teachers and children without a minimum number of children.

Perhaps beyond a point, individual attention to a child becomes counter-productive?

THE STORY OF AVERAGE PTR

While it is clear that PTR has a significant impact on learning levels, average PTR in schools – at a district or state or national level – often hide the inequity among schools. Average PTR figures often cited by government schools can be misleading.

Our study shows that significant variations exist in the PTR of the schools assessed although the average PTR is 35:1 which is not too far away from the RTE norm of 30:1



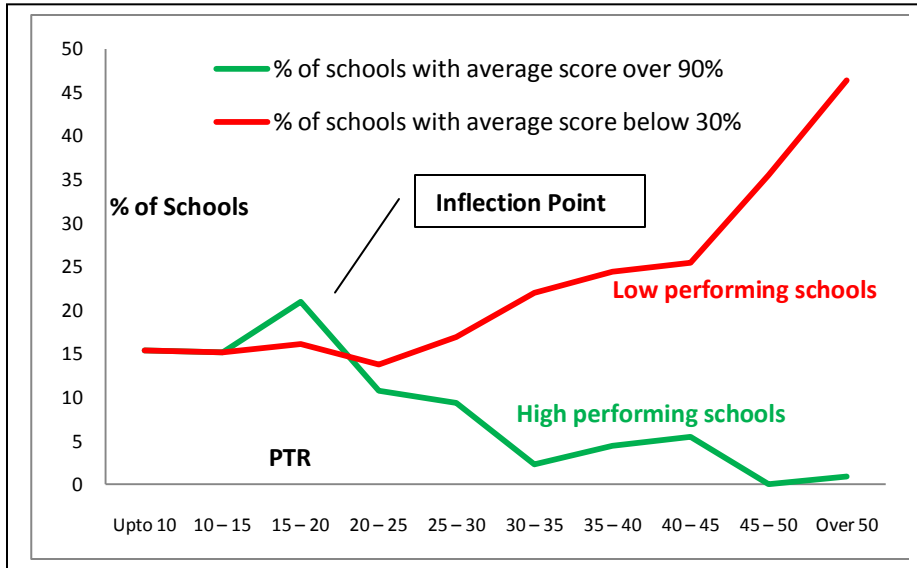
Even among top 10% of schools the PTR is skewed. 75% of top schools have a PTR of less than 30:1 while only 5% of these top schools have a PTR > 40:1

WHAT IS A DESIRABLE PUPIL TEACHER RATIO?

The impact of PTR is at all levels – for both high performances and low performances. The data shows that as the PTR increases, the % of schools that turn in poor scores (average school performance <30) increases and the % of schools with good scores (average school performance > 90%) also decreases.

These results are shown in the chart below.

PTR Impacts the Performance of Average, High and Poorly Performing Students



PTR Impacts Performance at All Levels

The proportion of high performing schools dips after PTR exceeds 20

The proportion of low performing schools rises sharply after PTR exceeds 25

The ideal PTR is thus somewhere between 20 and 25

CONCLUSION

Schools will turn in good performances if their Pupil Teacher Ratio is less than 30:1. At the same time, schools with PTR of more than 40 have very little chance of demonstrating that a majority of their children achieve the learning outcomes for their age or grade.

It is imperative that government schools – both state and central – follow the guidelines laid out by the RTE Act and ensure they have enough teachers to guarantee learning in the classroom.

There is also a need to simultaneously address issues of infrastructure, and the need to build the academic and pedagogic capability of teachers to take advantage of lower PTR. Many of the crucial class room processes can be better implemented if the teacher could operate in an environment of favourable PTR.



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