Universalisation of School Education Using the Public-school System is Feasible

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One of the challenges for universalisation of school education using the public-school system arises from the supposed lack of financial resources. Particularly, the high salary of teachers as per the Sixth Pay Commission has been used to point towards infeasibility of public institutions serving the goal of universalisation (Jain and Dholakia, 2009; 2010). This article demonstrates that with more realistic parameter values, the estimates would be revised downwards significantly. Further, in a federal set up, teacher salary is arrived at through a complex set of negotiations, such that the recommendation of the Central Pay Commission is not sacrosanct. In working towards a normative, a "middle path" of decent salary for all teachers is suggested, which would ensure both equity, efficiency and feasibility.

EPW Engage recently featured a [discussion map](#) on the feasibility of universalisation of school education using the public-school system (PSS). The inability of the PSS to deliver learning outcomes has prompted several scholars to suggest public–private partnerships (PPP) as alternatives to government schools. The PPP model, in the shape of low-cost private

schools, ostensibly provides the added advantage of substantial cost savings to the government.

This argument has gained further traction in recent years from evidence that universalisation using public school system is financially infeasible if reliance is largely on publicly funded institutions. In the context of the implementation of the Right of Children to Free and Compulsory Education (RTE) Act, Pankaj Jain and Ravindra Dholakia (2009) provocatively argued that

> "meeting the goal of universal schooling of all of India's children under an education budget of 6% of GDP is not possible if all education is through government schools and all the teachers are to be paid salary as recommended by the Sixth Pay Commission."

This is used to suggest that there is no alternative and to justify the hiring of low paid teachers. Jatin and Dholakia also propose the only remaining alternative as

> "PPP in which low cost providers of school education, who pay much lower salaries, cover a significant proportion of school education. As it happens, many studies have brought out that private/non-government schools can supply a reasonable quality of school education at almost 25% to 35% of the cost of government education. This happens because the salary of a schoolteacher in the private sector is almost 25% to 35% of the government salary as found by several studies."

In the debates that followed, the evidence on better quality of private schools was challenged. The proposal for PPP based on low-fee private schools was summarily rejected on the grounds of equity (Ramachandran 2009). Sarangapani (2009) questioned if the notion of "school" could be reduced to non-formal centres imparting numeracy and literacy skills through a few hours of engagement adjusted around child labour schedules. Countering the evidence from Tooley et al (2007), which had been extensively quoted by Jain and Dholakia—on the supposed superiority of average test scores of private versus government schools—Sarangapani demonstrated that there is no credible evidence that the education provided by budget private schools is comparable, let alone viable or desirable. The politics of low-cost schooling in the neo-liberal ethos essentially targets the teacher. The teacher is seen as an easily available human resource, as one input whose purpose is defined with respect to quantifiable outputs, namely the learning achievements of students leading to greater workplace productivity (Jain and Saxena 2010). Given the needs of the first-generation schoolgoers, there is an even greater need and urgency for increasing per child allocations (Ramachandran 2009), and to appoint qualified teachers in government schools

for reasons of equity, justice, rights and democratic citizenship (Jain and Saxena 2010).

We know that despite this pointed criticism, the inefficiency of the PSS including the high salaries of government school teachers continues to be the dominant discourse of the day.[2]There is official advocacy to move away from the RTE requirements on inputs and to lower the regulatory standards for both private and public schools (NITI Aayog 2017).

A Closer Look at the Estimates

The high resource needs, amounting to 22%–23% of the gross domestic product (GDP) (and above 15% of the GDP on a sustained basis), reported by Jain and Dholakia (2009; 2010) were at completely variance with the estimates by the Tapas Majumdar Committee (MHRD 1999) and Central Advisory Board of Education (MHRD 2005). We argue that the disproportionately high resource requirement reported by Jain and Dholakia, is, to a considerable extent, an artefact of the model.

Jain and Dholakia proceeded in two steps. They calculated the amount of money available for school education and consequently on each child, if 6% of GDP is spent on education. Next, they obtained how much money can be paid as teacher salary, given the educational spending per child. Incongruence between the teacher salary so derived and the Sixth Central Pay Commission (CPC) salary is the key point of the paper. The former is only a fraction of the latter. The calculations were made for 2006, 2011, 2016, and 2021.

There are two important parameters that drive the results in Jain and Dholakia's paper. Average work experience of a teacher is assumed at 20 years which translates into a markup of 80% over the starting salary (denoted by $1/e = 1.8$). And, allowances to teachers over and above the basic salary is assumed at 40% (denoted by $1/d = 1.4$). These parameters deserve closer attention.

Figure 1: Service-Age Distribution of Existing Elementary School Teachers in 2015–16
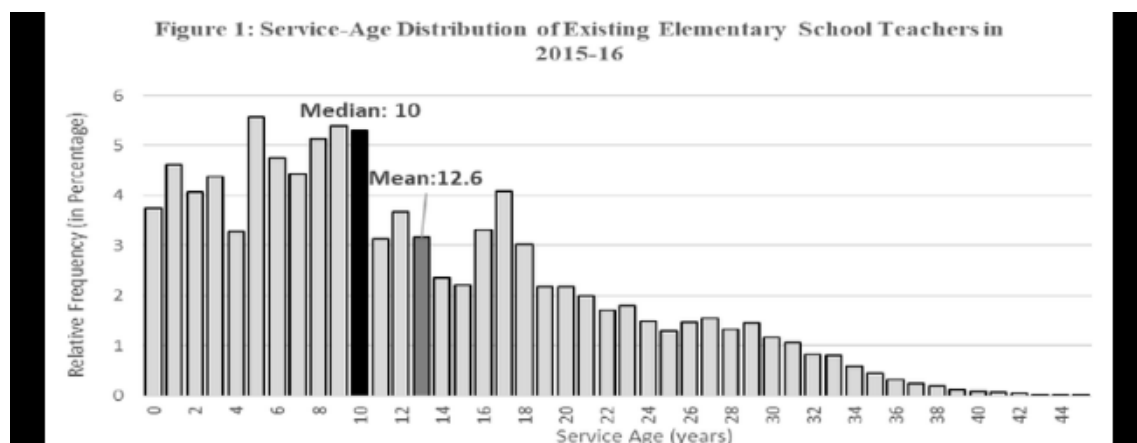
Source: District Information System for Education (DISE), 2015–16.

Figure 1 shows the all-India service age distribution of existing teachers at the elementary level in 2015–16. It denotes the number of years of experience of elementary teachers. Mean and median values are 13 and 10 years, respectively. The average service age, thus, is significantly lower than the 20 years assumed by Jain and Dholakia. This is important as the average experience determines the markup over the starting salary and hence the average salary. Note that the distribution (Figure 1) only represents the experience of the existing set of teachers. There are substantial gaps relative to the normative requirement (Bose et al 2017). When the normative teacher requirement based on the RTE is calculated using unit-level school data, the estimated teacher deficit at the elementary level works out to 31% of the required teachers at the all-India level. This percentage was possibly much higher in 2006, the base year for calculation.

Fresh teacher appointees to make up for this deficit would start at zero experience (and thereby at the starting salary). Taking cognisance of the estimated teacher deficit brings down the effective average experience of teachers to around six years or eight years depending on whether we consider the median or the mean experience.

Teacher allowances have been assumed at 40% by Jain and Dholakia. This is on the higher side, and more representative of the central pay and allowances. It does not represent the average picture for the regular teachers across states where a variety of arrangements exists. We observe that some states have travel allowances, many do not. House Rent Allowance (HRA) rates vary but do not exceed 20%. In Tamil Nadu, the HRA, city compensatory allowance and medical allowance together work out to 12%–14% of the basic plus grade pay. Regular teachers in Telangana and Andhra Pradesh receive an HRA of 12% and 14% in rural and urban areas, respectively. In Jharkhand, the HRA is 20% in cities and 10% in rural areas. Assistant teachers also receive Rs 800 as conveyance allowance (in real terms) and medical allowance of Rs 300 per month. In Uttar Pradesh, assistant teachers receive HRA of 10%. City compensatory allowance varies across cities, and bigger cities and towns have higher allowance.[1]

Looking at the evidence, a rate of 20% for allowances (excluding the dearness allowance, since the calculation is in real terms) seems to be a reasonable assumption.

Jain and Dholakia's calculations of the required budget for education are reworked below with the altered parameter values (Table 1). A pupil–teacher ratio (PTR) of 30:1 is assumed for all the scenarios. 80% children in the relevant age group attend government schools with the remaining catered to by the private sector. All teachers receive the Sixth CPC salaries in the pay band Jain and Dholakia assume. Calculations are in 2006 prices. Column 2 gives the calculations based on Jain and Dholakia's assumption of 20 years average experience and 40% allowance rate. These assumptions are altered one by one in the next two columns. The picture in 2016 is presented next, based on the average experience and allowances rate that we found to hold.

More realistic parameter values, even with the Sixth CPC salaries, bring down the financial requirement substantially. For 20 years average experience of teachers and 40% allowance rate, the estimated education budget is 17.3% of the GDP for 2006. Whereas, the estimates with eight years of mean experience and 20% allowance rate is 10.5% of the GDP (column 4). The assumption on teachers' experience is crucial as can be seen from the comparison of Column 3 and 4. It is easy to check that for a PTR of 40:1, the share would be 7.8% of the GDP the for 2006. While the figure is certainly high relative to the present levels of spending, India can certainly aim for it. One would like to note that the earlier analysis of feasibility by the Ministry of Education (1966), which had originally used the method Jain and Dholakia employ, was in the context of an expanding resource envelop.

How does the picture look for the present year? The actual GDP and the recent estimates of projected population by Ministry of Human Resource Development (MHRD) have been used for 2016. These population estimates are higher than the projected population in Jain and Dholakia by 25 million. The overall education budget works outs to 4.6% of the GDP. It proves how the growth of the economy makes higher public expenditure possible. When the coverage of the public system is extended to 100 percent children in the relevant age group, the number rises to 5.7% of the GDP. Universalisation of school education using the PSS is imminently "feasible."

Table 1: Cost of School Education under Different Conditions				
	2006			**2016** [3]
	Average experience of teachers is 20 years and allowances @ 40%: Jain and Dholakia's assumptions	Average experience of teachers is eight years and allowances @ 40%	Average experience of teachers is eight years and allowances @ 20%	Average experience of teachers is eight years and allowances @ 20%
Children in the 5–14 age group in million [1]	243.79	243.79	243.79	251.91 [2]
Required number of ET (PTR: 30:1) in million	5.20	5.20	5.20	5.64
Required number of ST (PTR: 30:1) in million	1.30	1.30	1.30	1.34
Elementary				
Starting salary of ET per month in Rs	13,042	13,042	13,042	13,042
Average salary of an ET per month in Rs	23,476	16,563	16,563	16,563
Average emoluments per month in Rs [4]	32,866	23,189	19,876	19,876
Teacher costs for all ET in Rs crore	2,05,116	1,44,721	1,24,047	1,28,178
Non-teacher costs of schooling @ 35% of the total in Rs crore	1,10,447	77,927	66,794	69,019
Cost on elementary education in Rs crore (I)	3,15,564	2,22,648	1,90,841	1,97,197
Secondary				
Starting salary of an ST per month in Rs	15,996	15,996	15,996	15,996
Average salary of an ST per month in Rs	28,793	20,315	20,315	20,315
Average emoluments per month in Rs [4]	40,310	28,441	24,378	24,378
Teacher costs for all ST in Rs crore	62,894	44,375	38,036	39,303
Non-teacher costs of schooling @ 35% of the total in Rs crore	33,866	23,894	20,481	21,163
Cost on secondary education in Rs crore (II)	96,760	68,269	58,517	60,466
Elementary + Secondary				
Cost on school education (I+II) in Rs crore	4,12,324	2,90,917	2,49,358	2,57,663
GDP in Rs crore	35,80,000	35,80,000	35,80,000	84,58,731 [5]
School education budget to GDP (%)	11.52	8.13	6.97	3.05
Education budget to GDP (%) [6]	**17.28**	**12.19**	**10.45**	**4.57**

Notes: ET: Elementary Teacher; ST: Secondary Teacher.
1. Children in elementary and secondary are assumed to be in the ratio 80:20;
2. Projections for 2016 for 6–15 age group (Source: MHRD Statistics)[3];
3. Calculated at 2006 price;
4. Emoluments include salaries plus allowances;
5. GDP for 2016–17 (Source: National Account Statistics, Central Statistics Office);[4]
6. School education budget is assumed at two-thirds of overall education budget as in Jain and Dholakia.

Sixth Pay Commission Salaries Are Not Sacrosanct

Jain and Dholakia (2009) assert that

> "political leadership in the country will rule out the possibility of reducing the government schoolteachers' salary significantly below the levels recommended by the Sixth Pay Commission either through hiring them on ad hoc basis or denying them the benefits available to permanent regular teachers for a longer time."

This does not accord with the reality.

In a study of nine states, Ramachandran et al (2016) report that although most states in principle have adopted the Sixth CPC, each state has contextualised it. Karnataka and Punjab, among the nine states, did not accept the Sixth CPC recommendations. Some others have adopted the Sixth CPC, but a lower pay band for teachers. Odisha, for instance, has a pay scale of Rs 5,200–Rs 20,200 and grade pay of Rs 2,200 for primary and upper primary teachers. Some states have adopted a lower pay band for primary teachers and a higher pay band for teachers of higher grades. Since government school teachers are employees of the state government (or local bodies in some cases), it is the prerogative of the state government to determine the salaries. Increase in wages for teachers would be linked to the states' own plan for the performance of the system. This is not a fiat by the centre, as is conveniently assumed; the federal structure of the Constitution gives that space to the states.

The political leadership has also not ruled out para-teachers and guest teacher recruitment. In the neo-liberal reform period, subcontracting tasks that were hitherto performed by government employees became a norm. Since the 1990s, the bureaucracy and political leadership have combined to work out the para-teacher framework on a large scale. As De et al (2015) note, there are at least four or five different salary scales in every state of the country, with only one scale coinciding with the Sixth CPC level of salary. Thus, teachers' salaries could range from Rs 2,700 to Rs 50,000 a month, for the same quantum of work. In any school with multiple teachers, perhaps one or two would be regular teachers. The implication is a distorted teacher cadre that has contributed to the breakdown of trust in the system.

In working towards a normative, it is important to ask, what would be a decent wage for teachers? And, how do the incentives work out in real life? This is not an easy question. On the one hand, teachers' salary in a low-fee, private school is a depressed distress wage and cannot be considered as a benchmark. Private sector is highly differentiated—one is the elite and the other is a low-cost, ramshackle variety. To use the wage rate of the low-cost schools as the norm is to deny universal quality as being achievable. On the other, very high wages relative to prevailing market wages give rise to distortions of many kinds. There is a great incentive in cornering these posts and keeping out others. All attempts at a fair selection process are subverted by the political process. The Sixth CPC-level salary followed by Kendriya Vidyalayas, on the other hand, is an island. If one uses the Kendriya Vidyalaya payscale for all, it would be way above the wage bill that states (particularly the poorer ones) can sustain on a regular basis for all teachers. The fiscal burden would be way too much.[5] A middle path becomes necessary. Through negotiations, some state governments (for example, Tamil Nadu and Maharashtra) have worked out middle paths of what is fair in terms of teachers' salaries, and what would ensure trust and commitment to run the system with a degree of efficiency. No one is saying that a reasonable fair wage be offered without commitments. The accountability of the teacher, however, is a mirror of the accountability in the system. Today, many teachers express in private that the state is not interested in running the system since it does not counter exit and encourages a blame game with teachers.

Conclusions

Using a reasonable decent wage for all teachers and the RTE framework, we have estimated the resource requirements for elementary education in a forthcoming work. This is a detailed exercise in resource estimation starting with unit-level data and takes into account the complementarity of inputs that the RTE emphasises for its effective implementation. Unlike Jain and Dholakia, who addressed feasibility within 6% of the GDP envelop, we begin with the question what would be the normative level of spending required for the RTE in a formal school which fulfils certain essential norms and standards (Bose et al 2018). Our estimates confirm that universalisation is feasible using the PSS. It also emphasises the sub-optimality of the present levels of public spending on education, essentially a reflection of the present social policy.

This article is a response to "[Right to Education Act and Public-Private Partnership](#)," by Pankaj S Jain and Ravindra H Dholakia published in the Economic and Political Weekly on 20 February, 2010.

End Notes:

[1] Some of the information is obtained from the National University of Educational Planning and Administration (NUEPA) series on national study on working condition of teachers (2015/16).

[2] See De, Bhatty and Roy (2015) for a fair perspective on this issue.

[3] See Projected Population in Different Age Group 2016,
http://mhrd.gov.in/sites/upload_files/mhrd/files/statistics/PopulationPr...

[4] See National Accounts Statistics 2017,
http://www.mospi.gov.in/publication/national-accounts-statistics-2017-1#.

[5] There are other reasons why very high salaries for teachers might be undesirable. Drèze and Sen (2013) argue that while the higher pay attracts more candidates for teacher posts, it does not necessarily attract the person most interested in teaching. More importantly, it increases the social distance between the teachers and the community. The opposition to high teacher salary is located within the larger critic of the government's pay commission.

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