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WHY ARE TEACHERS DEMOTIVATED: LITERATURE REVIEW

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Abstract

Motivation is those factors that energize teachers to remain interested in and committed to the job of teaching and to the goal of maximizing student learning (Chandra, 2015). The dreary records of student achievements in the country imply low teacher motivation. The purpose of this paper is to provide a comprehensive analysis of the studies that look into the issues concerning teacher motivation and mitigating interventions suggested. In the paper, we found that there is a clear inclination in the literature to use monetary incentives to improve teacher motivation. The paper explores some of these interventions. It highlights the drawbacks of these borrowed interventions and the limitations to their applicability in the Indian context. The review goes beyond the conventional studies to explore the efficacy of professional and intrinsic motivation derived from non-monetary incentives. We find that intrinsic motivators are as relevant as the extrinsic motivators and might even be more pertinent in the Indian context

Key words: Conventional and non-conventional motivators, Absenteeism, Intrinsic and Extrinsic motivators .

Background

The role of education in the life of an individual is significant. Education not only determines the future economic opportunities and employment prospects but also influences overall quality of life. Education determines an individual's ability to receive and interpret information, influences the bargaining power in the family and/or society and enhances the general power to voice opinions (especially for women). From providing a source of income to giving better understanding of legal rights, the importance of education is indisputable and hence it becomes a necessary prerequisite for development. As per the data published by the 2011 census, India has managed to achieve an effective literacy rate of 74.04 per cent. However, as per the

twelfth Annual Status of Education Report (ASER 2017): about 25% of students in the age group (14-18) still cannot read basic text fluently in their own language. More than half struggle with division (3 digit by 1 digit) problems. Only 53% of all 14-year-olds in the sample can read English sentences. For 18-year-old youth, this figure is closer to 60%. Of those who can read English sentences, only 79% can say the meaning of the sentence. According to the 'PISA Plus' survey conducted in 2009, the Indian performance comes at the bottom of the 74 countries included in the survey. The accentuated attention to enrollment and dropout rates has taken attention away from learning outcomes.

Introduction

The paper attempts to discern the determinants of motivation for public school teachers in India. The scope of this paper is limited to primary teachers because extension to secondary or higher secondary schools will introduce other attributes such as teachers' knowledge of the subject, quality of infrastructure in terms of laboratories, coaching culture etc. In order to isolate out the role of teacher motivation, the paper focuses exclusively on primary schools where these variables play a less important role. A further refinement of the study has been made by limiting it only to regular/permanent teachers in the public education system. There is no categorical definition of a "good teacher". In this study, teacher quality is considered as a combination of easily observable (such as academic qualifications, years of experience, preservice and inservice training) as well as unobservable attributes (content knowledge, knowledge about curriculum adaptation, attitudes, practices, intrinsic motivation). Also, following the general scheme that has been adopted in the papers studied in this review, teacher quality is measured using "Teacher Value Added (TVA)". TVA measures the extent of improvement in the test scores that can be induced by a teacher. TVA is applicable to this analysis as it is likely to be influenced by both observable and unobservable characteristics of teachers (Kingdon and Azam, 2015).

In the absence of studies that look into the employment terms of regular teachers, we use the contract of the para teachers as a proxy to identify prominent determinants of motivation. The purpose of the first section is to determine what motivates the contract teachers to put high efforts. In the next section we draw inferences for the regular teachers. The recommendations based on these inferences (i.e performance based pay, monitoring teacher absenteeism and clear career paths) are also the most popular policy prescriptions that have been evaluated and implemented in most developing countries. The paper provides a comprehensive analysis of the relevance and criticism of these policy interventions. In the next section we extend the scope of the study to include intrinsic motivation. The final section of the paper emphasises on the role of intrinsic motivators in improving dedication and inducing higher quality output. In this study we found that there exist two different areas of studies concerning motivation of teachers. One set of studies take the dissatisfaction as given and suggest interventions that can induce higher efforts. On the other hand, the second (relatively new) set of studies try to understand the causes of dissatisfaction as reported by the teachers. This review highlights the need of amalgamation of the two sets i.e. understand the factors of dissatisfaction and frame incentives accordingly in order to enhance overall teaching quality and improve student achievements.

Motivation matters

In India, improvement in enrollment and attendance rates is not being spilled over to learning outcomes. Therefore, greater attention is now being directed at improving learning outcomes.

Till the last decade, infrastructure was considered to be the biggest impediment in acquisition of cognitive skills. However, central support to the state governments under Sarva Shiksha Abhiyan (SSA) and Rashtriya Madhyamik Shiksha Abhiyan (RMSA) has undermined the relevance of this argument. As far as primary education is concerned, "2.94 lakh primary and upper primary school buildings, 17.98 lakh additional classrooms and 9.95 lakh toilets and provision of 2.35 lakh drinking water facilities" have been provided by the state governments and union territories under Sarva Shiksha Abhiyan. The inconsistency in improvement of infrastructural support and student outcomes indicates the existence of another relationship.

Several studies argue that low education quality can be attributed to low teaching efforts (Center for Public Education, 2005). Sanders and Rivers (1996) conducted a longitudinal analysis in Tennessee using a technique similar to teacher value addition. In their study, they found that high efforts of teachers improved the student achievement by 50 percentile points in three years. Moreover, teacher effort was the most powerful determinant of student achievements. Rice (2003) also argues that teacher quality is the most important school related determinant of student outcome.

Kingdom and Azam (2013) assessed the importance of teacher effect in India. They conducted a study based on administrative data on private schools in India. In their study they defined a good teacher "as someone who consistently gets higher achievement from students", mapped pupil achievements with teachers and used TVA to measure teacher impact. They concluded that teacher motivation played a significant role in improving the test outcomes. In fact a good quality teacher adds 0.476 SD to the overall student result. These results were robust even after controlling for school effects which implied great variation in teaching quality within the same school. They argued that the within school variation in the teaching quality can only be explained by unobservable characteristics such as teacher attitude or intrinsic motivation.

In a study conducted in Andhra Pradesh, Singh and Sarkar (2012) determined the impact of mathematics teachers on student scores. They found that teacher characteristics such as academic qualification, experience and knowledge of content had a positive and significant impact on student outcome. Interestingly, they found that qualitative variables such as teachers' perception about their schools and regular feedback through checking homework also had a positive and significant impact on the test scores. In fact, the impact of teacher's perception about his/her school on student score was twice the magnitude of impact of teacher's education qualification.

According to a study done by (Kadzamira 2006) in Malawi, teachers were highly dissatisfied with their remuneration and other conditions of service like poor incentive and condition of service which resulted in low morale and poor performance of students.

Hence, the role of teacher quality in a student's ability to acquire cognitive skills is substantial. In the following sections the paper will explore ways to improve teacher motivation.

1. Improving motivation: Conventional and non-conventional motivators

1.2 Inferences drawn: conventional motivators

In the absence of research into the success or failure of the employment terms of regular teachers, the paper looks into the employment terms of the contract teachers and identifies the key drivers of high motivation and efforts.

Ample number of studies conducted in India and other developing countries prove that contract teachers perform at par with the regular/permanent teachers (see Muralidharan and Sundararaman, 2013; Kremer et al (2005); Goyal and Pandey, 2011; Vegas and Laat (2003); Kingdon and Sipahimalani-rao 2010). Contract teachers are mostly locally hired, this implies that the teacher will have to travel less to place of work, the ties between the teacher and students are stronger and also the community or peer monitoring might be able to stimulate better performance and/or lower absenteeism.

However, empirical evidence negates the importance of this notion. In most of the studies community pressure failed to have an effect or even had a detrimental effect on the students' achievements. (see Chaudhury et al. 2005b). Banerjee et al. (2008), did find some positive effects but it is difficult to attribute this effect wholly to community monitoring as the intervention also included parental training to teach kids. So, there is little evidence in support of community involvement in improved endeavor.

Several studies have explored the impact of temporary employment. Bourdon, Frölich and Michaelowa (2007), argue that there are both positive and negative effects of the unfavorable employment contracts. For non-African countries such as India the dependence of future employment on performance standards seems to dominate the negative effects.

Goyal and Pandey (2011) ran a regression analysis controlling for individual teacher attributes and school effects. They found that the average efforts from contract teachers were in fact higher. Having controlled for all other variables, the higher efforts can be attributed to the difference in employment contract. In fact, it is seldom argued that the permanency of tenure has detrimental effects on the level of dedication. More powerful teachers: male, more experienced, tend to have

greater absenteeism rates (Vimala Ramachandran et al, 2008).

From the above analysis, it can be conclusively claimed that constant evaluation and performance monitoring create incentives for better performance. Unfortunately, both of these are missing from the employment terms of the regular teachers. The lack of threat of penalty or termination and disconnection between remuneration and performance do not foster an environment of professional efficacy and

responsibility.

Replication of the incentives faced by para teachers will create a professional scheme that will convalesce student achievements by ensuring efficiency of hired teachers. The interventions stated below are direct monetary interventions: changes that should be made in the employment contract of the regular teachers that will motivate higher efforts.

Performance linked pay

Interventions based on performance linked pay customarily include linking a variable component of the remuneration to the students' test outcomes. This can be in the form of a bonus over and above the base pay dependent on the improvement of the test scores.

A performance pay, will increase the amount of time devoted to teaching activity and will also promote higher efforts. Most of these interventions aim at improving the pedagogy to include teaching in small groups, individualized instructions and more attention on the weaker students, tracking by ability, adapting teaching methods to student ability, extra instruction time, more classwork and continuous evaluation of practice-based homework. Performance linked pay will also improve screening and signaling (Lazear 2000).

In their experiment, Muralidharan and Sundararaman (2011), randomly selected 200 schools to be divided into control groups and treatment groups. In the treatment schools, they paid rupees 500 as bonus for each percentage (in excess of 5%) improvement in the test score of the subjects taught by the respective teachers. They found by the end of two years of the program, the students performed better in the intervention group by 0.27 and 0.17 SD in maths and language tests. There was no statistical difference in the attrition rates between the treatment and control groups. They observed that the test scores of other subjects (that witnessed no intervention) also improved indicating some complementarities or positive spillover effects.

Using a difference in differences methodology, Atkinson et al (2004) found that teachers respond to direct financial incentives. And these effects were observed after controlling for pupil effect, teacher effect and school effects. Higher teaching efforts due to greater motivation induced from variable pay can be perceived in the form of revised pedagogy, more instruction time and greater attention to the requirements of students. (Lavy 2004).

However, the evidence on the positive spillover effect is not as indisputable. Muralidharan & Sundararaman and Lavy both find evidence in support of complementarities between the test scores of intervention and non-intervention subjects. However, Glewwe, Ilias and Kremer (2010) deny any such link. Therefore, the complementarities must be a function of the orientation of the school and policy specifications.

Notwithstanding the affirmative results, performance linked pay can also lead to negative consequences such as inflated scores, result manipulation, manipulating who takes the test, cheating, weaker students being asked to drop out and narrower test-based teaching instead of enhancing human capital (See Figlio and Getzler 2002 and Jacob and Levitt 2003). Another point of circumspection is the lack of long run trend or culture of continuous achievement witnessed in the studies. A long-term intervention might witness declining rates of incremental efforts and may require frequent upward revisions to maintain the attractiveness of the offer. Such bonus payments are usually pegged onto teaching scores and hence, they may undermine good education and promote "teaching to the test" which may be detrimental to long term

learning outcomes.

1.2.1 Monitoring teacher absenteeism

In the studies conducted to assess the impact of direct financial incentives, it was mostly observed that the increased remuneration did not get accompanied by higher attendance i.e. lower absenteeism wasn't a definite by product of the financial incentive scheme. (See Banerjee et al 2008, Muralidharan and Sundararaman 2009, Glewwe et al. 2010).

Teacher absenteeism is a crucial concern, especially in remote areas or single teacher run schools. Teacher absenteeism can be high due to difficult working conditions, vast distance travelled, lack of monitoring and attendance record, failure to recognise good attendance, job dissatisfaction or the opportunity cost of going to school higher than alternative economic activity. Studies show that monitoring attendance and penalizing the teachers for poor records can effectively remove the widespread problem.

In an experimental research in rural India, 60 randomly selected schools acted as comparison schools and 60 one-teacher schools were given financial incentives directly related with their attendance. In this study, Duflo and Hanna (2005), found that remuneration pegged with attendance record led to an immediate decline in absence rates to 22 percent from an average of 42 percent in the comparison schools. Since the intervention was introduced at one teacher schools, higher teacher attendance implied more school days. The test scores improved by 0.17 standard deviations in the treatment schools. Another positive observation from the study was the increased attendance was not compensated by lower teaching efforts, in fact, there was no observable change in the pedagogy. This signifies that the marginal cost of teaching is not so high, it is the opportunity cost of coming to school that discourages teachers.

And in a similar experiment with monetary incentive along with parental monitoring in Peru witnessed a significant decline in absenteeism rates with no complementary improvement in the test scores (Cueto et al. 2008)

Studies suggest that more comprehensive interventions and not coercion should be used to reduce absenteeism. Spreading awareness of absenteeism effects, and motivating rewards for outstanding teacher attendance encourage lower teacher absenteeism

1.2.2 Clear progression path

The lack of career growth and progression in the teaching profession is considered as a dead-end inducing teachers to look for alternative opportunities in the private sector or administrative posts (Leah, 2014). In a proposal to improve the education quality in India, Pritchett and Pandey (World Bank) recommend a performance-based growth path. In the proposal they suggested that the teachers should have a fixed pay initially, later it should become contingent on performance. Promotions in this model are based on consistently exceptional performance and evaluation ratings and not merely on seniority.

In another similar study based in Thika, Kenya, data was collected from 126 respondents (teachers of secondary public school) through questionnaire. In the study, 67% of the respondents reported that

promotional opportunities influenced their job satisfaction and fairness in the teacher promotion system will induce greater satisfaction and efforts. From the findings of the study, it can be argued that teacher reward systems affect dedication (Nyakundi 2012).

In a comprehensive study conducted in several developing countries that sought to identify determinants of teacher motivation and establish a framework of analysis and recommendation for improving teacher efforts, Guajardo (2011) argues that career development is one of the eight pillars for improving the quality of education. In Nigeria, Adelabu (2005), conducted a study on teacher motivation and incentives using data from semi-structured interviews as well as secondary documentary sources. The study found that an efficient career growth path should include criteria such as "satisfactory performance on the job of a teacher, technical skill in teaching methodology, evidence of impact on student learning achievement, unblemished character ,good relationship with students, colleagues, school authorities and parents." A promotion system that ignores evidence of career performance and emphasises on years of experience will treat good and bad teachers alike and detter all incentives for higher efforts. Bennell and Akyeampong (2007) also corroborate that a more attractive and non-discretionary career structure increases teaching efforts. Well defined career growth paths along with improved working conditions will help attract professionals that consider teaching as an encore career. (report by National Network of State Teachers of the Year).

A point of caution is that none of these studies are based on empirical evidence. In general, the lack of empirical conclusiveness with career ladder programmes is due to the presence of several other internal and external variables that influence the outcomes.

3. Unconventional methods: Intrinsic Motivators

3.1 Lack of applicability of extrinsic motivators

Extrinsic motivators such as direct financial benefits are most frequently recommended and evaluated in studies. Their popularity can be ascribed to the simplicity in their implementation as well as evaluation. However, popularity in literature is not a validation for their applicability. In fact, there are several limitations to adopting direct financial incentives in India.

First, the applicability of financial interventions is narrow. Given that the salary of teachers in India is already higher than other developing countries (see De and Endow 2008; Jain 2009; Kingdon 2010; Dongre, Kapur, and Tewary 2014) and the popularity of contract teachers is owed to lower financial burden targets (Bourdon, Frölich and Michaelowa, 2007, Chandra 2015), relying exclusively on monetary benefits will put further burden on the budget while reaping low benefits. In addition, the studies do not take into account the cost of administering the intervention. Implementing such policies in India where proper databases are not maintained and cost of information is high would imply huge administrative costs. Therefore, financial interventions in the presence of already cramped budget constraints are difficult to be logically justified. Second, possibility of Hawthorne effect. Most of the evidence for success of financial interventions are based on randomized controlled trials which were carried out for one or two years. The respondents were aware of being part of the treatment group and knew that their performance was being monitored. Such awareness is highly likely to alter human behaviour. Third, all the experiments were conducted in rural or suburban districts in India. The geographical characteristics of these schools might have contributed to the

overall results. Similar incentives in the urban setting may not be equally successful due to lower marginal utility derived from the bonuses. Fourth, attracting unethical applicants and pedagogy. The public education system is criticized for attracting money minded individuals. Promotion of financial incentives will further undermine the implicit nobility of the profession. It will also promote unethical pedagogical practices such as cheating, rote learning and/or test based teaching. Fifth, lack of conformity between conventional motivators and causes of demotivation. Studies that aim to understand the causes of demotivation among Indian teachers have reported that teachers are in fact content with the remuneration that they receive. The next subsection, explores the real causes of low morale among primary school teachers.

3.2 Intrinsic Motivation

In this section, we expand the study to look into other aspects such as professional and intrinsic motivation. Intrinsic motivation, sense of responsibility and job satisfaction cannot be ignored when talking about performance enhancement. According to World Development Report 2018, "education systems perform best when their teachers are respected, prepared, selected based on merit, and supported in their work".

In studies and surveys conducted in India, teachers have reported to be demotivated and dissatisfied with their jobs. In a study based on detailed interviews and focus group discussions, Ramachandran and Pal (2008), found that for a significant number of primary teachers that they interviewed, teaching was not the first-choice career option. Although a few teachers were intrinsically motivated, they observed significant gender differences - most females were satisfied with a stable source of income but they had little or no predilection for teaching. In another interview based primary research in MCD schools of Delhi, the primary teachers reported that the absence of a mechanism for recognition and commendation of good performance discouraged higher efforts. Multigrade and multi subject teaching patterns was also identified as another prominent source of dissatisfaction- teachers were reportedly dissatisfied for being required to teach subjects that they don't have skills and interest in (Kabra and Jain, Centre for Civil Society). Jos Mooij (2008) conducted a study based on focus group discussions and interviews with teachers in Andhra Pradesh to analyze reasons for motivation and demotivation of government school teachers. In the survey, the teachers were asked to report the best moment of their teaching career that they associated with pride or satisfaction. 31 of the 127 interviewed teachers responded that "Appreciation from officials- Out of which: getting a prize or an award" led to the biggest boost in their motivation. First-hand information collected in these surveys also highlights the resentment for non- teaching duties that the teachers are often obliged to carry out. These duties can range from supervising the construction of classrooms, distribution of mid-day meals, depositing scholarship money in student accounts to conducting surveys and carrying out election duties. Although these duties take up less than five percent of teaching days, the partiality in assignment of duties is worrisome. Teachers with political or administrative links and teachers that are associated with unions are not given any additional responsibilities (Vimala Ramachandran, 2005). Mostly the burden of such responsibilities falls on the primary school teachers, this non-uniform distribution of workload is considered unfair by the teachers and thwarts motivation. (Kabra and Jain, Centre for civil society).

Another important strong source of demotivation is the increasing corruption in the Education sector. Teacher recruitment and transfers are highly discretionary in India, they are often based on personal motives instead of school needs. The education department bureaucrats and politicians are often accused of favoritism, nepotism and accepting bribes. A study in Rajasthan found that transfers were generally ways of obliging teachers with political connections or powerful influences. The study shows that involvement of politics, rent seeking behavior of administration, unfair transfers based on connections and not performance, are discouraging for all honest teachers leading to declining moral and ethical commitment (Sharma 2009).

A whole other stream of factors linked to student commitment and parental appreciation or support exists in

the literature. These factors greatly influence the teaching efforts; however, this paper focuses on the principal-agent problem between teachers and employers and hence, student linked motivators are outside the purview of this study.

4. Gaps in the Literature and Suggestions for Future Research

The literature on intrinsic motivation of teachers is very small and relatively new, leaving many gaps in the literature. The number of studies focusing on reasons behind teachers' demotivation is scant. Although certain surveys have been conducted recently, they are disjointed and limited. Future research can move into several different directions. First, experimental research on non-financial interventions. Currently, there is a lack of empirical or experimental research on the impact of non-monetary benefits, exploring the relevance of such interventions will provide other cost-effective methods for motivation.

Second, assess the relevance of other elements influencing satisfaction such as autonomy in choosing pedagogy and content. More autonomy in choosing content, pedagogy, textbooks etc will create a sense of belonging and responsibility. Studies conducted in other developing countries (other than India) have found that including teachers' opinions in school management and decision making can play a key role in teacher motivation (Sargent & Hannum, 2005; Wang & Fwu, 2002; Kadzamira,2006; Guajardo,2011). Third, assessment of the applicant pool. In the World Development Report 2018, it was corroborated that the PISA (Programme for International Student Assessment) score of prospective teachers were lower than those of engineers for several developing countries but these scores were higher for teachers in countries that witness high teaching efforts (for example, Finland). A thorough assessment of the applicant pool to determine who enters the teaching profession and why, will help draw insights about the professional mindsets of the entrant teachers and incentives could be framed accordingly.

Conclusion

Teacher absenteeism along with low teaching efforts together make up a very disappointing picture of the public education system in India. The inequality in education translates into inequality in economic prospects and opportunities.

The low efforts by the teachers can be attributed to low economic incentives and low professional motivation. Literature on teacher motivation and incentives is limited, it is particularly sparse in the Indian context. In the presence of lack of literature, the paper draws insights from the efficiency of the employment terms for the contract teachers and looks into the prominent causes of demotivation that have been reported in surveys and focus group discussions.

Based on several studies in developing and developed countries, it can be claimed that the efficiency of contract teachers is at least as good as the regular ones at much lower costs. The proponents of contract hiring often stress on its cost effectiveness, however such a view is myopic as they fail to recognize the long run effects on the education quality and the quality of individuals attracted to the teaching profession.

From the analysis of the contract teachers' performance and incentives, we concluded that the temporality and performance contingency of future prospects creates incentives that lie perfectly in line with the interests of the employer, doing away the principal-agent problem. This implies including a variable component in the remuneration scheme that is contingent on the attendance and teaching efforts and a progression path based on evaluation and not seniority will create similar high effort inducing incentives for the regular teachers as well.

However, there are several limitations to the adoption of pure financial interventions. Hence there is a need to look beyond financial interventions to address "higher order" needs. Clear progression path also attends to the higher order needs of the individuals. Low or no recognition for good work, favoritism and corruption in the recruitment, transfer and promotion systems, obligation to do clerical duties and lack of support or appreciation from the administration, are reportedly the biggest demotivators for teachers. Hence, the paper highlights that new cost effective, non-financial interventions should be explored. Policies such as certificates for high attendance, awards and recognition for high efforts, effective redressal mechanism, more autonomy, teacher collaboration groups, awareness about roles and responsibilities of teachers, support and appreciation for the nobility of the profession, better working conditions, more transparency in the recruitment and transfer process etc can have a positive impact of the overall motivation levels with minimum costs. Applicants getting attracted to the teaching profession are driven more by the attractiveness of steady income and less by nobility of the profession. In such a scheme of things, making the financial incentives stronger will appeal to more money driven individuals. There still exist several gaps in the literature. There is a need to move away from the conventional or adopted methods of improving motivation and to dig deeper into the causes of dissatisfaction in the Indian public education system. Deeper analysis will allow the employers to improve incentives in a way that they tackle the real source of demotivation.

The National Curriculum Framework (2005) acknowledged that "the quality and extent of learner achievement are determined primarily by teacher competence, sensitivity and teacher motivation". In conclusion, we suggest that the right way to improve the quality of education is to inculcate a new professional ethos and culture in the public education system.

References

Atkinson A., Burgess S., Croxson B., Gregg P., Propper C., Slater H. & Wilson D., Evaluating the impact of performance related pay for teachers in England, Centre for Market and Public Organisation, 2004.

Azam M. & Gandhi G., Assessing Teacher Quality in India.

Banerjee A, Banerji R, Duflo E, Glennerster R, Khemani S Pitfalls of participatory programs: evidence from a randomized evaluation in education in India. Working Paper No. 14311.

Cambridge: NBER, 2008.

Chandra M., The implications of contract teaching in India: A review, Policy Futures in Education, Vol. 13(2), 2015, pp-247-259.

Duflo E. & Hanna R., Monitoring works - Getting teachers to come to school, Working Paper 11880

National Bureau of Economic Research, 1050 Massachusetts Avenue Cambridge, MA 02138 December 2005

Figlio N. & Getzler L., Accountability, Ability and Disability: Gaming the System, NBER Working Paper No. 9307, November 2002

Glewwe P., Ilias N. & Kremer M., Teacher Incentives, American Economic Journal: Applied Economics 2 (July 2010): 205–227

Glewwe P., Schools and Skills in Developing Countries: Education Policies and Socioeconomic Outcomes, Journal of Economic Literature Vol. XL (June 2002), pp. 436–482

Goyal S. & Pandey, P. Contract Teachers in India, Education Economics.

21.10.1080/09645292.2010.511854.

Guerrero G., Leon J., Zapata M., Sugimaru C. & Cueto S., What works to improve teacher attendance in developing countries? A systematic review, London: EPPI Centre, Social Science Research Unit, Institute of Education, University of London

Govinda R. & Josephine Y, Para Teachers in India, National Institute of Education Planning and Administration, New Delhi 2004

Kingdon G. & Sipahimalani- Rao, Para teachers in India: Status and Impact, Economic and political weekly, 45(12):59-67, March 2010

Kortez D., Measuring Up - What Educational Testing Really Tells Us, Harvard University PressCambridge, Massachusetts London, England 2008

Kremer M., Muralidharan K., Chaudhury N., Hammer J. & Rogers F. H., Teacher absence in India - A snapshot, Journal of the European Economic Association April—May 2005 3(2–3):658–667 2005

Kremer, Michael & Chaudhury, Nazmul & Halsey Rogers, F & Muralidharan, Karthik & Hammer, Jeffrey. (2005). Teacher Absence in India: A Snapshot. Journal of the European Economic Association. 3. 658-667. 10.1162/1542476054473143.

Lavy V., Performance pay and teachers effort, productivity and grading ethics, Working Paper 10622
National Bureau of Economic Research, 1050 Massachusetts Avenue Cambridge, MA 02138 June 2004
Special

Muralidharan K. & Sundararaman V., Teacher Performance Pay: Experimental Evidence from India, The Journal of Political Economy, Vol. 119, No. 1 (February 2011), pp. 39-77

P. Lazear, Edward, Performance Pay and Productivity. American Economic Review. 90. 1346-1361. 10.1257/aer.90.5.1346., 2002

Press Information Bureau, MHRD, Government is taking continuous efforts to improve infrastructure and quality of education in schools, March 2018 http://pib.nic.in/newsite/PrintRelease.aspx?relid=176989

Sharma R., The Elementary Education System in India: Exploring Institutional Structures, Chapter Internal Dynamics.

Singh R. & Sarkar S., Teaching Quality Counts: How Students Outcomes Relate to Quality of Teaching in Private and Public Schools in India.

Smith G., Increasing Teacher Attendance, SubJournal Vol. 2, No. 1

Vegas, Emiliana & De Laat, Joost., Do differences in teacher contracts affect student performance?

Evidence from Togo, 2003