Push-Out, not Drop-Out: Youth and Secondary Schooling in India

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1 Introduction

There is a general consensus that the natural next step to universalise elementary education is to near-universalise secondary schooling for the country's youth. This would ensure that the basic learning capabilities that they are likely to achieve at the elementary level are cultivated further at the post-elementary level, contributing to the growth of their cognitive knowledge, abstract and critical thinking, and practical skills (Tilak 2007, 2008). That this transition is critical for individual flourishing, for country's social and economic development, and for its democratic functioning is well accepted in both scholarly thinking and policy planning. And yet this transition and, especially, high school completion remain truncated in the country.

There are competing and even conflicting accounts of such halted educational journey of India's young girls and boys. At the risk of over-simplification, in this paper, three such approaches are discussed, namely the choice-centric view, the supply-centric perspective and the curriculum-, pedagogy- and evaluation-centric approach. One common concern that motivates several such prominent theses is to examine why young children 'opt out' of secondary schooling, followed by the common retort that they are simply not interested in their studies, or that they are overly keen to prematurely enter the world of work. Even those who stay back—at least a sizable section of them—simply 'rust out' in the system, it is claimed; they just 'pass time' in school for want of work (Jeffrey 2010). It is as though a secondary school is a 'waiting room' where reluctant pupils loiter around for a certificate which, in the long run, may not prove to be worth the wait after all, in terms of getting a

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suitable job. To put it differently, it is the narrative of 'drop-out' that dominates the discourse on the gingerly pace of high school completion in our country.

As a counter-argument, this paper contends that what the 'school', understood as an ensemble of vision, policy and practice, can (or cannot) do largely determines the 'school life expectancy' of the youth, their personal predicaments and predilections notwithstanding. More concretely, first, while we acknowledge the importance of agency in schooling decisions, we focus on why the youth and their parents collectively aspire for high school completion even with a lot of family hardships, but then are often driven to lose that agency by the education system, itself embedded within a social field of power that truncates their school life and pushes them into precarious livelihoods. Second, we then seek to look at the 'push-out' factors within the school education sector. For this, we focus primarily on two related dimensions: infrastructural and instructional resources available or lacking at this level, on the one hand, and the curriculum load and the 'eliminative' as opposed to the 'evaluative' model of examination (Kumar 2005) prevalent, on the other. Our general argument is that there are strong forces within the education system and its underlying 'vision' that tend to work against the egalitarian goal of secondary education for all.

Surely, there is no all-or-nothing dichotomy between drop-out and push-out factors that impel a young adolescent to discontinue schooling, and it is simplistic to pose one. And yet, systemic deficiencies and imbalances, which often create an outright hostile learning and testing environment or an enervating and de-motivating learning experience for young boys and girls, remain relatively under-discussed, while unfavourable external determinants of discontinuation are routinely brought to the fore. Hence is our focus on what schools do or do not do. Internal workings of the school system, however, themselves constitute a vast subject, and, therefore, at the risk of being partial and inexhaustive, we attempt here to shed light only on a few corners of this multi-layered canvas.[1]

In the following sections, we, first, try to map out the trajectory of progression of the country's youth to secondary grades, in the light of prominent perspectives on school transition or truncation. Second, keeping unfavourable social determinants, such as class and caste impediments to schooling as a backdrop, we probe whether the school system is ready to facilitate near-universal transition of post-elementary students to secondary grades or whether there is a need for the system to fail pupils for the purpose of rationing of school places. Third, the school's readiness is also examined through a preliminary analysis of a sample of question papers that we label as 'push-out' papers. At a time when transition readiness of young boys and girls is being seriously doubted in the light of their 'underwhelming' quality of learning, the quality of assessment tools, question papers and the high-stakes examination system, in general, calls for scrutiny as well. Finally, the paper alludes to the so-called shadow of secondary education, i.e. privately paid tutoring, and asks whether

[1] A major limitation of this paper relates to its inattention to the critical role of teachers, their classroom pedagogy, and of their professional development and autonomy in shaping the overall learning environment in school, which, in turn, influences the educational voyage-successful or otherwise of the youth.

the financial stress, that it generates for parents and students, renders the market, rather counter-intuitively, a choice-curtailing 'push-out' mechanism.

2 Secondary Schooling: Transition, Progression and Truncation

Available figures clearly indicate a rising trend of participation in secondary grades among the youth, once they complete the stage of free and compulsory education (Banerjee 2018). According to Annual Status of Education Report (ASER) that focusses on the age group of 14–18 years, more than 85% of young boys and girls continue their education at least up to the age of 16 (ibid.). This aggregate picture, of course, hides several area-, class-, caste- and gender-based disparities in transition from upper primary to secondary grades as well as within the secondary/higher secondary cycle itself. A Pratham study (cited in Banerjee 2018) tracking the transition of school-going children from Classes 8–9, conducted in selected locales of Hardoi district in Uttar Pradesh and of Sambalpur district in Odisha, finds that close to 40% of children discontinued their education after Class 8 in Hardoi; the corresponding figure in Sambalpur was less than eight per cent. This is despite the fact that Hardoi has a greater number of schools on the whole and a significantly higher proportion of private schools, in comparison to the corresponding figures in Sambalpur.

Scholarly studies, understandably, make a good use of the classical economistic lens to look at both demand and supply side issues that affect transition to secondary school (Ramachandran 2017). Parental perceptions about the value of secondary education, social practices and norms that shape their demand and aspirations for their children's educational progress, and their economic wherewithals or its lack (commonly encapsulated under the label of 'poverty') are often identified as demand-side variables that have a major bearing on participation at secondary level. What this demand-side story underscores, however, is the role of family choices and family strategies, to the relative neglect of the fact that, in several cases, due to unfavourable social determinants such as caste, communal and gender disadvantages, parental demands and high hopes for their children's educational progress get thwarted. In a sense, therefore, there is a 'social' supply-side tale (i.e. short or ample supply of enabling social conditions) that remains hidden within the demand-side narrative.

Ramachandran's (2017) study that probes factors either facilitating or impeding transition to secondary grades attempts to elicit views, on this subject, of parents, on the one hand, and of teachers and head teachers, on the other. Intriguingly, parents often point the finger at the 'inside', i.e. the school system, for the poor quality of training it allegedly offers, whereas teachers mostly focus on the 'outside', holding parents responsible for their lack of awareness and poor attendance of their children in school. In fact, the factors that teachers have identified as 'enabling' forces hardly relate to the school system and teaching–learning processes in classrooms, the quality

of their professional training, their autonomy, the testing culture in school and so on. This paper, therefore, makes a specific attempt to develop a 'view from within', that is to say, to look at the inner workings of the school system and its underlying education policy apparatus. Its primary motivation is to examine how helpful the 'Inside' is to facilitate transition of young boys and girls to the secondary level and their school completion. In particular, to what extent is the school system ready to open its gates to an increasing cohort of students? Does it, at least, avoid pushing them out? But before addressing this question, let us briefly look back at the theme that this section begins with, namely the current scenario of high school participation in the country.

The initiatives taken by the State in the field of school education, especially during the last decade, are clearly yielding positive results. An analysis of the age-specific participation rate emerging out of the last two rounds of NSSO data (64th and 71st) definitely indicates a rise in enrolment among children up to the elementary level (age cohort of 6–14 years). This success may be partly attributed to the promulgation of the Right of Children to Free and Compulsory Education Act (RTE) in the country. However, since the last round of NSSO data was collected in 2014, only after a lag of a few years since the enforcement of RTE, one has also to give credit to earlier State initiatives.

School participation rate has shown noticeable improvement during the last few years. For convenience of analysis, we consider here (in Fig. 1) age-specific participation rate rather than participation rate at various educational levels, to glean a picture of year-to-year progression in education. However, as the gap between gross enrolment ratio (GER) and net enrolment ratio (NER) has narrowed considerably during the same period, an age-specific analysis may not be very different from the one based on particular levels of education.

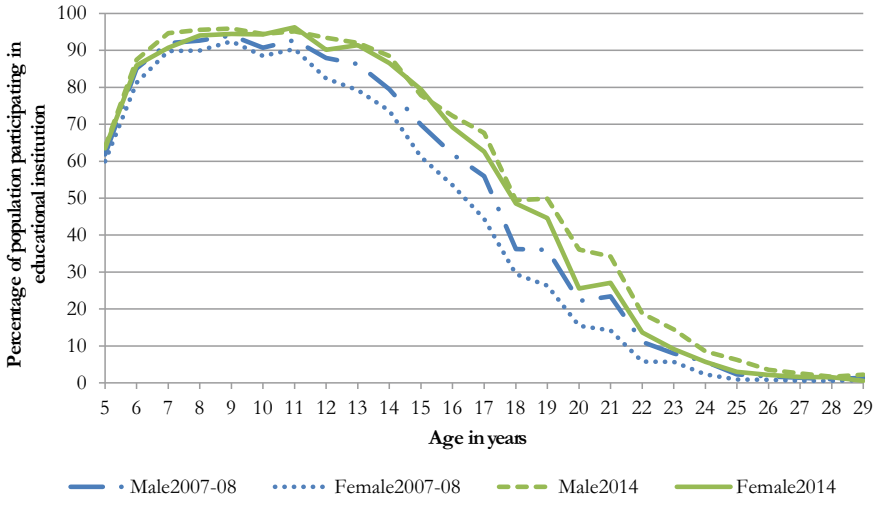


Fig. 1 Gender-wise participation rate in educational institution in India by single year age, 2007–08 and 2014. *Source* Calculated from NSSO 64th and 71st round

As Fig. 1 suggests, school participation rates among children between 6 and 13 years of age remained consistently above 90% during 2014. Significantly, the participation rate among girls has improved and has almost been at par with that among boys, at least up to the age of 18 years, i.e. roughly up to the higher secondary level. The figures were quite different during 2007–08 in at least two respects. First, a sharp decline in enrolment was evident in the mid-upper primary age group across the genders during 2007–08. Second, this rate of decline was much steeper among girls, and the gap between participation rates of girls and boys widened at the lower secondary age group (i.e. in the age bracket of 15–16 years).

But what has not changed much in the last few years is the fact that the participation rate takes a nosedive among children of 14 years and above, to halt only at a couple of stages, that too momentarily, at the ages of 18 and 20 years. However, the participation of boys in the age cohort of 18–19 years and 20–21 years remains almost unaltered. The picture is a little different in the case of girls at the same age groups. Let us now focus on the children in the age group 13–18 years in order to examine how they have fared between the two rounds of NSSO surveys in terms of their participation in higher levels of school education, taking into account their economic status, caste and religious affiliations and their place of residence—rural or urban. These socio-economic determinants are broadly considered to be some of the most decisive factors underpinning expected schooling years of children in the country.

Not surprisingly, the current rate of discontinuation is much higher among children from poorer economic backgrounds. This so-called class effect on educational participation and progression is old news. But what makes the situation particularly disconcerting is the fact that the gap between participation rates among children (in the age group of 15–18 years) from the lowest and the highest quintile classes has increased in recent times, whereas the corresponding gap has, in fact, declined marginally among the same (i.e. the richest and the poorest) classes of children below this age group. This implies that access to elementary education has improved for economically marginalised sections of the society. To put it differently, the 'class effect' seems to have been mitigated somewhat for the children of indigent families at least up to 15 years. In contrast, such effect seems to have become much more pronounced in recent years, when we compare the elite and indigent children in the older age cohort. This suggests that over time, in absolute terms, there may have been some increase in transition to secondary grades among poorer children, but class-based inequality in secondary participation, the rich-poor divide in particular, has also increased, since economically underprivileged children have fallen far behind their privileged counterparts in this respect. Similarly, the gap between the rate of participation among children of this age group from Hindu and Muslim families has also increased to some extent (see Fig. 2a, b), indicating a widening educational distance between these two religious communities at the post-elementary stage.

It is important and encouraging to note, however, that the said gap is found to be closing over time, when we consider caste/ethnic affiliation of children. For example, the gap in post-elementary participation of children from ST families and from general castes (the two polar groups in educational terms) is narrowing in recent years (see Appendix Table 5).

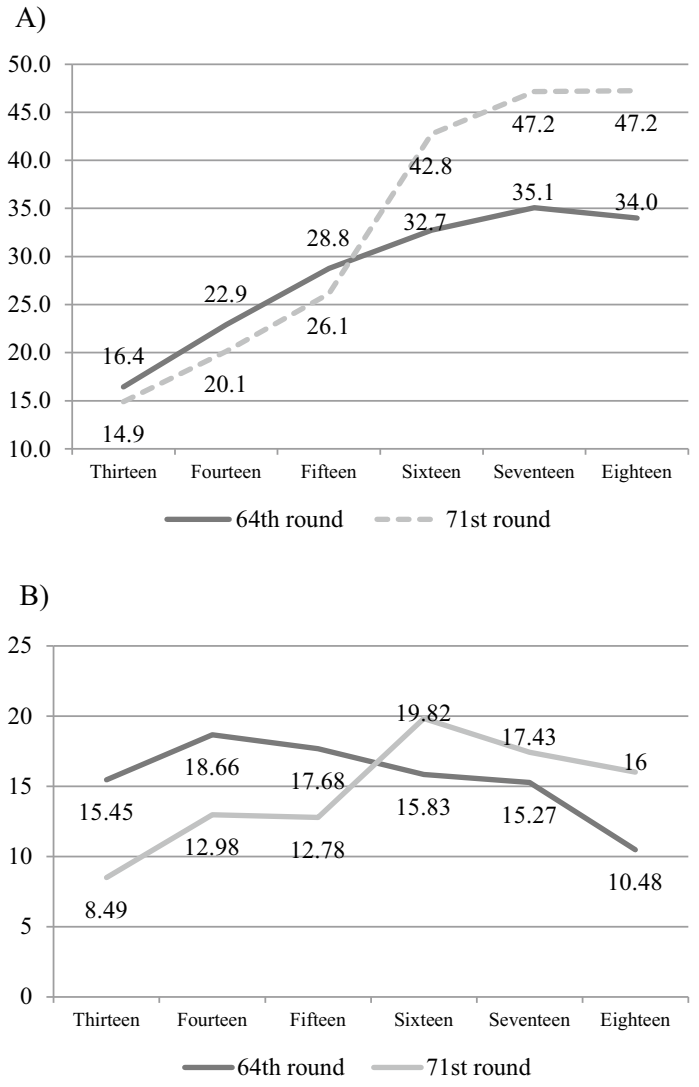


Fig. 2 Age-specific Participation rates, 2007–08 and 2014. **A** Gap between the lowest and highest quintile classes. **B** Gap between the Muslims and Hindus. *Source* Calculated from NSSO 64th and 71st rounds

The privileged seem to be internalising the dictum that high school completion for their children is the minimum educational cut-off point that they must aim for, causing a rise in their progression through secondary grades. The underprivileged, on the other hand, also seem to be appreciating the value and advantages of secondary schooling ('school pass' in common parlance) for their children, as reflected through their entry in greater numbers into the post-elementary stage; but they seem to be

driven to lose that steam of ambition on the way. Do we then need to turn to the proverbial 'lack of interest' thesis for an explanation, or is it to be replaced by a counter-thesis of 'loss of interest'?

Various reasons are attributed to such premature discontinuation of schooling of children. Most of the quantitative data available in the country in this regard follow almost a similar pattern of enquiry, with almost a similar array of questions, framed in a routine manner. They differ only in the number of reasons that specific surveys canvass, but the prominent reasons, mostly, remain the same. Though these surveys are known for their dependability regarding assessment of the extent of participation and of household expenditure on education, when it comes to determine the reasons for discontinuation, these sources appear limited in that they do not reveal much. For example, first, they do not procure multiple responses to the question regarding reasons behind discontinuation, whereas, in reality, children are driven to leave school under various compelling circumstances, which are intertwined and mutually reinforcing. Second, there are some responses that raise more questions than they actually answer; for example, since 1986, all the NSSO rounds of data on participation and expenditure in education mention lack of interest as one of the most important reasons for discontinuation of education (Table 1), but one hardly gets an answer to the crucial follow-up question as to why they lack interest. The framing of this question as well as responses to it constitute a kind of a 'black box' or even a 'black hole' from which no light emerges to illuminate our understanding. Do they really lack interest? Or do they lose it in the course of their journey through the school system?

In the absence of a fair answer to the question as to why students lack interest in studies, it becomes difficult, for example, to explain why there is a continuous decline in the proportion of women, both in rural and urban settings, citing lack of interest as the reason behind their discontinuation, while the proportion of men citing the same reason for their decision to leave school has remained more or less constant for almost three decades. This constancy of a particular genre of 'reasoning' over a protracted period, which surely has witnessed considerable socio-economic changes likely to cause changes in our educational decisions, renders it an unclear or even a socially irrelevant investigative tool to make sense of children's educational opportunities, ambitions and attainment. If the same question was asked to the students who have

Table 1 Percentage of persons who are currently not attending any educational institution citing reason for discontinuation as 'lack of interest in further study', by year, sector and gender

Year	NSSO Round (and age group)	Rural			Urban		
		Male	Female	Person	Male	Female	Person
1986–87	42nd (age 5 and above)	26.57	33.25	26.26	23.62	28.47	25.6
1995–96	52nd (age 5–24)	28.5	21	25.3	23.9	19.4	22
2007–08	64th (age 5–29)	24	17	20.7	20.3	15	17.9
2014	71st (age 5–29)	25.1	16.2	20.9	20.8	14.3	17.7

Source Respective rounds of NSSO

not discontinued their studies yet, who are either progressing into higher grades with enthusiasm or just 'passing time', no one knows what the answer would be. But it is not implausible that a sizable number of them would voice similar disinterest, while continuing their studies. In short, this demand-side, 'natural' interest-driven reason is an obscure indicator of why children do or do not go to school. After all, their interest in studies is either cultivated with much care or enervated because of its absence within the school system.

That children's 'school life expectancy' depends, to a considerable extent, on what goes on within school, on its overall environment, on teacher development, their interaction with students, content and language of training, and pupils' freedom from fear of failure and corporal punishment are issues that need to be reiterated, because such 'common knowledge' is routinely ignored. Admittedly, pupils and parents are asked to reflect on some school-related reasons, such as the availability and distance of schools, inadequate infrastructure, school timing, and the medium of instruction and so on. However, often they are not in the know of systemic gaps that make their educational transition difficult and, hence, are not in a position to voice such lacunas. Those in the know, on the other hand, often are indifferent in their amends. For example, a Pratichi India (Trust) study (2013) on secondary schooling in West Bengal suggests that a noticeable decline in enrolment is evident between Grades 9 and 10. This is not the stage when students transit from one school to another; rather this is a stretch of time by which students complete their first year in high school and, perhaps, find the curriculum too onerous to handle, and the culture of testing and purging too intimidating to cope with. Here, truncation appears to be a function—a 'push-out' effect—of internal workings of the education system.

From the prevailing perspective of demand and choice, therefore, it is difficult to explain satisfactorily why children across all social and economic classes show enthusiasm to begin their school life roughly at the same age but quit school at different ages, unless we pay closer attention to disabling conditions that are generated from within the school apparatus. A similar entry and a dissimilar exit cannot be interpreted entirely as a class phenomenon. An analysis of the recent NSSO (71st round, 2014) data clearly shows that mean age at discontinuation among persons aged 5–29, who have already discontinued their education, varies widely across economic classes, although there is hardly any difference in mean age at first enrolment among the same set of population across various economic classes (Table 2). It clearly shows that though the age at exit is dissimilar for various economic classes, their age at entrance is very much similar; in other words, children of lower economic status and their families are equally eager to enrol children in school but they are pushed to leave school much earlier, as compared to children of higher economic classes.

3 Systemic Resistance to Transition

We argue that we need to pay much more attention, than is usually given, to issues pertaining to the readiness of the school system to equalise opportunities for

Table 2 Mean age at first enrolment and discontinuation for persons aged 5–29 years who are currently not attending any educational institution in India

Quintile class of MPCE	Mean age at first enrolment	Mean age at discontinuation
1	5.6	13.8
2	5.6	14.5
3	5.5	14.9
4	5.5	15.8
5	5.4	18.0
All	5.4	15.4

Source Calculated from NSSO 71st round, 2014

secondary schooling for all. The bare minimum of such equity conditions includes provisioning of school places for all secondary age children in the hope and readiness that nearly all of them will throng the gate of high school. And yet the system does not seem to be ready; worse, it seems to resist universal high school participation for all. Why elementary school graduates are forced to fiercely compete for opportunities for further education and why education has been rendered a 'race' has a lot do with scarcity and resulting rationing of places at the post-elementary stage, as several scholars have pointed out (Deshpande 2018; Kumar 2018a; Rampal 2018). As Kumar perceptively observes, this 'systemic resistance to social inclusivity' has become more palpable from the 1980s onwards; earlier, the pressure on the secondary stage of school education was relatively low, as primary school completion rates were unsubstantial. In Kumar's words, 'That scenario has changed, and now the pressure of a radically expanded base level is manifesting at each level placed above it' (2018a, p. 2). This systemic imbalance is largely because the two stages of secondary and higher secondary education have not grown at a pace that is '…sufficient to accommodate the far higher growth in the number of children crossing elementary education' (ibid.).

For example, if we do a counter-factual exercise and assume that all pupils who are enrolled (as per the recent available data) in lower secondary section make a successful transition to the higher secondary level, the average enrolment at this stage in the country will increase from the present already high figure of 195 to 334 (Table 3). Were we to include those elementary school graduates who have stopped short of joining the lower secondary section, the accommodative agility of the higher secondary level would have appeared even more dismal.

Admittedly, schooled children are unable to make a successful transition to secondary and higher secondary grades due to a variety of reasons; but systemic deficiencies feature prominently among these disabling factors. So a 'transition bottleneck' is not just a function of students' personal failings or family decisions, but the system itself cannot afford to encourage or even allow all post-elementary students to progress further. Ironically, and as Carnoy (2004) astutely observes in a different context, the available places in many schools do not '…permit all students to complete all grades…in those schools there is an expectation, *even a need, to fail pupils.*' (cited

Table 3 Schools with secondary and higher secondary sections in India and their total enrolment: 2016–17

Total schools with lower secondary sections	249,089
Total schools with higher secondary sections	116,125
All	365,214
Total enrolment in lower secondary sections	38,823,854
Total enrolment in higher secondary sections	22,625,448
All	61,449,302

Source State Report Cards, NUEPA

in Majumdar 2018) italics supplied). Again, a recent ASER study by Ramanujan and Deshpande (2018) finds the presence of 'continuous grades', i.e. integrated schools, to be important for children to continue in school. It suggests that children from schools that offer education at both elementary and secondary stages are less likely to discontinue their studies than those who attend schools without continuous grades.

To facilitate students' progression through the secondary cycle, of course, would require much more than sufficient places and integrated schools, including 'equitably resourced classrooms (with qualified and enabled teachers, libraries, materials for experiments) etc.' (Rampal 2018, p. 57). The contrasting reality shows that a large majority of schools are resource-starved, in terms of laboratories, libraries and so on (Mahajan 2018). A study of about 2.5 lakh secondary and senior secondary schools in the country, conducted by NUEPA, observed that about 75% of them lacked well-equipped and functional laboratories (NUEPA, as cited in Mahajan 2018, p. 102).

Furthermore, there is 'geography of inequality' in resource starvation as well. For example, a recent Pratichi (India) Trust study on secondary education in West Bengal (2017) found that mean enrolment in secondary sections was very high in the State—180 and 327 respectively in sampled government-run secondary and higher secondary grades. In the under-developed blocks, in particular, secondary classes were found to be bursting at the seams. Teacher distribution, across rural and urban schools, also revealed a highly skewed pattern; a disproportionately smaller proportion of teachers at the high school level were found to be working in rural schools as compared to their urban counterparts. In the socio-economically laggard block of Sitai, for example, as per the DISE data for 2015–16, the pupil–teacher ratio was 99, followed by a student–classroom ratio of 157.

Thus, over and above being an individual difficulty, the 'fear of failure' that often debilitates students at the level of secondary education is an artefact of real needs of the system to fail pupils—through screening and sorting, offering poor learning environments, conducting 'eliminative' examinations and so on.

4 The Narrative of Learning Crisis and Push-Out Question Papers

Before we talk about examinations and assessments, especially the high-stakes 'Board' examinations at the end of lower secondary and higher secondary cycles, that arguably work towards 'eliminating' rather than 'evaluating' high school students (Kumar 2005; Nawani 2018a, b), we briefly dwell on the narrative of learning crisis that currently dominates the educational discourse in the country. This is because it is important to ask as to what extent this stated crisis is produced from within the system and in which directions our reform efforts should be steered to remedy these structural and systemic deficits.

For several years now, large-scale ASER (Annual Statistics of Education Report) surveys show that levels of learning, in basic fields of literacy and numeracy, are disconcertingly poor among the country's schooled children. Indeed, many children are unable to reach grade-level learning outcomes and their learning trajectories are flat over time. Besides, there are inequalities in learning outcomes, since such outcomes are poorer for poorer children (Banerjee 2018; Filmer and Rogers 2018; Ramachandran 2018). In short, there seems to be a countrywide crisis of learning.

And yet, several scholars and educationists, both in India and other parts of the globe, are of the view that currently popular standardised tests and assessments do not lend a hand in improving learning levels (Carnoy 2004; Ramachandran 2018) and that children's imagination, creativity and critical thinking are enervated by standardised testing (Ravitch 2017). In what ways, then, does the discourse on learning crisis shed light on how to ameliorate the situation? More insistently, does the discourse on learning outcomes deflect our attention away from the first-order questions about teaching and learning, about teacher autonomy and pedagogy, about textbooks and examinations that constitute the core of schooling? Or, alternatively, does this debate on learning shortfalls lead to a prior debate on shortfalls in learning conditions?

Some scholars are concerned about the direction in which such conversation is bending the arc of our attention. Rampal (2018), for example, is concerned that 'this global manufacture of a learning crisis' is likely to divert our attention from 'classroom practices that have the strongest association with learning and achievement' (p. 58). More disconcertingly, on the other hand, it may open up the field of education to the free play of 'business enterprises for teaching, tuition and testing…' (p. 59). Kumar (2018b) forcefully argues about how ASER data on low learning rates are usually presented along with teacher absenteeism data and, as a result of this linkage, how such declared 'truancy' among teachers serves as the basis for introduction of 'different kinds of accountability regimes' for teachers in many States in India. Kumar further contends that these reform measures routinely assume that 'the so-called learning crisis has been caused by non-performing teachers' and consequently ignores the crisis in teacher training, teacher recruitment, and their working conditions (p. 20). Kumar therefore compellingly argues to 'spot' the crisis in teaching rather than in learning. In line with this genre of thinking that seeks to veer our discussion towards systemic trouble spots and their amends, we briefly dwell on

the prevailing examination systems in the country as also on the issue of quality of assessment itself. This is followed by a discussion, based on a sample of what we label as 'push-out' question papers.

High-stakes Grade X and XII 'Board' examinations, as opposed to school-based, teacher-conducted assessments, carry the colonial legacy of the need for institutionalisation and centralisation of examinations for the purpose of screening aspirants for government service. In independent India, this system has been consolidated to serve as a filtering device primarily to eliminate rather than evaluate pupils (to assist them in their learning) and to '…allocate success and failure on the basis of a one-time performance', through assessment modes based on non-involvement of teachers who have taught them (Kumar 2018a, p. 12). In a sense, therefore, this is not only an '…examination for elimination [of students] celebrating fear and penalising failure…' (Nawani 2018a, p. 64), this also screens out those who teach and interact with them in the classroom. Besides, thanks to this legitimising device, the 'bitter pill of failure' (p. 72), to use Nawani's pithy phrase, is swallowed by unsuccessful students as a mark of their own inability, discounting the fact that the system can accommodate only a few to square with the availability of seats.

High-stakes examinations, however, have an overriding and permeating effect on what goes on inside the classroom on an everyday basis, on the curriculum, syllabus and textbooks, and on teachers' pedagogic practices. The distant and centralised Board, thus, determines the de-centred and quotidian school life in a significant way. Hence, even if school teachers are invited to set question papers under the rubric of the existing centralised regime, they are not necessarily autonomous to frame tools for assessment of deeper learning. It is, therefore, apt to examine a few sample Grade X Board-conducted question papers, in Mathematics and English, in order to ascertain the quality of assessment itself, in a climate replete with talk of quality of learning.

The focus on a select set of question papers in this article, to the relative neglect of secondary syllabi, textbooks, and teaching–learning processes in the classroom, clearly restricts our analysis of the inner workings of the school system that we have set out to do. But, as a limited attempt to deduce the connection between question papers and teaching practices, we raise a few motivational issues that underpin the introduction of various concepts and topics in the classroom. For example, when a mathematics paper sets a question on logarithms, one is prompted to ask a prior question: whether students have been given the motivation to learn this concept. When a Grade XI student was indeed asked why he was studying this topic, his simple answer was: 'because it is there in the Mathematics syllabus'.

That this mathematical tool may help avoid multiplication of huge numbers, that it can help to do same operations by addition of smaller numbers are not appropriately presented before pupils, either in standard textbooks or in class, so that they can grasp the underlying motivation. Thus, those students, who are lucky to 'get the idea', complete the race, but the rest struggle with the burden of miscomprehension. To cite another example, in order to assess numeracy levels of students, ASER surveys set questions that require use of unitary method and calculation of area and perimeter, in addition to some straightforward numerical operations such

as addition and subtraction. These surveys find that the former set of questions poses more difficulty for students even though these are, arguably, simple questions.

Once again we need to push back the enquiry to raise motivational issues. How are these concepts introduced to students? Does the instructor explain why we need to study concepts like area and perimeter? For example, if it is said that we need to grow grass in this ground or we need to put up a fence around it, then these everyday practical issues will make it clear to children why they need to pay attention to these issues and what, after all, are area and perimeter. Assessing learning outcomes without pushing our enquiry back to probe these first-order questions will likely hide more than reveal as to what is ailing our school system.

For example, Board examinations, and correspondingly, school examinations in many States, primarily focus on rote memory and recall of facts and information (Rampal 2018), with hardly any attempt to encourage critical thinking and self-expression on the part of students. In a similar vein, Burdett (2017) provides a careful and comparative analysis of assessment materials used in high-stakes examinations in a few developing countries, including India and Pakistan. His close look at papers from the Central Board of Secondary Education (CBSE) in India makes him argue that these papers mostly test 'rote-learnt knowledge' and mere ability to recall facts, with no encouragement to students to learn 'higher-order skills'.

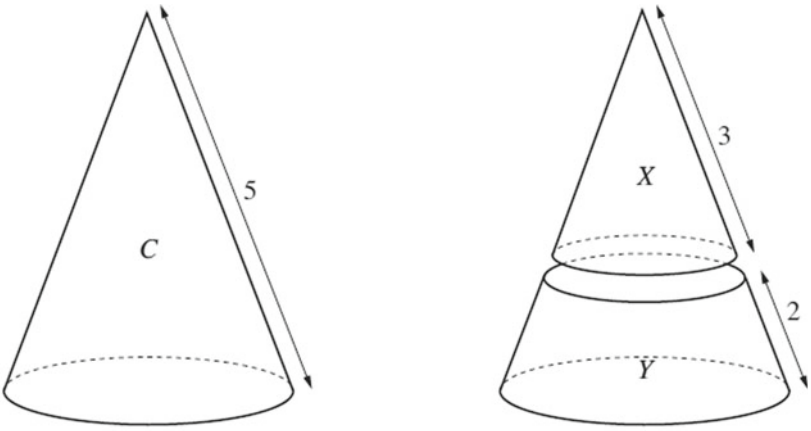
By seeing a couple of CBSE question papers on Mathematics and English, we draw a rough comparison with Cambridge O Level (i.e. Grade X) question papers on these subjects to determine the quality of the CBSE-administered assessment tool itself that decides the educational fortune of so many in the country.

In Box 1, we reproduce the Hindi as well as English version of a particular question from the Mathematics paper, set for CBSE Board Examination, in 2017. Overall, this paper covers a whole lot of mathematical themes and concepts such as trigonometry, coordinate geometry, mensuration, probability, algebra, quadratic equation, AP, GP, Euclidean geometry, etc., covering primarily materials introduced in Grades IX and X. This paper does not aim to test any elementary mathematics, and, therefore, is useful only for pupils who will go on to study mathematics, physics, etc., in future. This paper is pitched at a specialised section of students and, in that sense, is not inclusive and ready to develop a sense of mathematics for all. Many questions test familiarity with mathematical terminologies and how well a student memorises mathematical formulas. There are only a few visual presentations and diagrams in the paper that are likely to help students deduce the problem better than just relying only on difficult language.

In contrast, a General Certificate of Education Ordinary Level Paper on mathematics (also known as Cambridge O Level Examination for Grade X students) has a good range of questions and appears more balanced in its assessment. This is because it focusses on testing knowledge of elementary mathematics such as fractions, elementary algebraic inequality, unitary methods, cardinality, ordinality, set theory at a basic level etc., while also including questions on more advanced mathematical problems. It tests both basic and 'higher-order' skills. There is a general focus in this paper on everyday usefulness of mathematics, explaining questions with

many diagrams, and, at the same time, not diluting the primary and rigorous goal to help pupils understand mathematical concepts.

To return to the specific question, we have reproduced in Box 1, it is clear that a student who has forgotten the definition of the frustum of a cone will remain eminently frustrated. The Hindi version, too, looks so inaccessible because of the use of the heavily Sanskritised phrases like 'Chinnak' and 'Brittio', that sound so alien to everyday usage in Hindi. It seems as though language is used here to disable and not enable students. We label such assessment tools as 'push-out' question papers, and argue that these are designed to exclude the less fortunate sections of the student body from an essentially 'elitist school system'. Thus, an examination paper, just like the education system as a whole, can be put to the use of serving a social purpose: either to massify, democratise and universalise educational opportunities or to render them exclusive. To quote Burdett (2017), '…the majority of students are not being catered to by the content of these examinations [for example, CBSE examinations] and, by implication, the education system.' Almost an identical question has been posed in the Cambridge O Level mathematics paper through diagrams (Fig. 3). It first draws a cone, identifies a frustum and then asks examinees a few conceptual questions. Importantly, framing the question in such a fashion, with the aid of diagrams, does



A solid cone, C, is cut into two parts, X and Y, by a plane parallel to the base. The lengths of the sloping edges of the two parts are 3 cm and 2 cm. Find the ratio of

(a) the diameters of the bases of X and C,

(b) the areas of the bases of X and C,

(c) the volumes of X and Y.

Fig. 3 Cambridge O level mathematics paper 1

not in any way dilute or water down the rigour of understanding or Grade-level competencies that are expected from these students.

Box 1 "Eliminative", not "Evaluative" examination: A push-out question paper

एक शंकु के छिन्नक की तिर्यक् ऊँचाई 4 सेमी है तथा इसके वृत्तीय सिरों के परिमाप 18 सेमी और 6 सेमी हैं । इस छिन्नक का वक्र पृष्ठीय क्षेत्रफल ज्ञात कीजिए ।

The slant height of a frustum of a cone is 4 cm and the perimeters of its circular ends are 18 cm and 6 cm. Find the curved surface area of the frustum.

A quick comparison of CBSE English papers with Cambridge O Level papers on English language also reveals a noticeable difference in their respective emphases. Both contain questions to test pupils' reading and writing skills, but Cambridge O level papers probe deeper to gauge as to what extent they can 'read for ideas' (i.e. can glean main ideas from a factual communication) and 'read for meanings' (i.e. can grasp explicit and implicit meanings from a narrative passage); CBSE papers also contain similar questions and comprehension exercises but give more stress on reproducing facts narrated in given passages. To assess writing skills, Cambridge O Level papers give candidates a task such as writing a letter to test their level of 'directed writing' as well as test their 'creative writing' skills through essays that test both language and content. There is relatively less focus in CBSE papers on gauging creative writing skills of candidates and their ability to write in their own words. The Cambridge O level examination sets a separate paper on literature in English, on poetry and prose, that almost always reproduces the selected poems or extracts from selected prose, on which questions are set, along with the names of their authors, making no demands on memorisation or information recall. In contrast, the questions on textual literature in CBSE papers are stand-alone, even cryptic, questions without any reference to the original text materials, which expect candidates to know the literary texts by heart and do not reproduce excerpts from any poems or prose. To give a couple of examples of this sort of questions, 'What is your impression of Peter?' (There is a good chance that this refers to Anne Franks' Diary that is included in the syllabus), or 'Dedication and hard work are essential for success. Explain how these qualities enable Patol Babu to perform his small role to perfection.' (This question relates to a short story written by Satyajit Ray that is one of the chosen texts in the syllabus). We argue that such questions seem to test pupils' familiarity with the text and not so much their ability to engage with these texts in a meaningful way and their skills to think and argue critically. This raises questions about *what* we are testing and what our *desired* learning outcomes are, and correspondingly, about the *type of learning* that our education system values (Burdett 2017; also see, Somerset 1997).

In this context, it is important to recognise that with adequate training of various examination techniques, it would be possible for a student to provide set answers to such set questions and score high marks, without necessarily having any meaningful

understanding of the subject matter. Underlying the so-called learning crisis, therefore, there lurks a crisis of assessment tools and their questionable quality. To ensure, therefore, that learners are 'fairly' assessed and that their level of 'real' learning is improved, there is a systemic need to undertake a drastic and thorough going examination reform which will aim at evaluating students' meaningful learning and not push them out of the system prematurely.

As has been mentioned above, poor assessment formats allow mechanical teaching practices to continue within the classroom; more disconcertingly, they cultivate a widespread reliance among high school students on paid private tutoring, in the hope of examination success. We will now briefly discuss this almost ubiquitous practice of extra coaching among high school students in the country, to then ask whether the market-driven, overwhelming 'shadow' of secondary education curtails rather than expands educational choice for the country's youth.[2]

5 Financial Stress as a Push-Out Factor

In his two influential articles, Tilak (1996a, b) asks: how 'free' is 'free' primary education? In a similar vein, we are inclined to ask as to how affordable is secondary education. Admittedly, there is no official mandate to provide free secondary schooling for all in our country (in government schools, fees are claimed to be nominal); but there are both public and private initiatives to expand secondary participation for a number of compelling reasons. There are several public programmes and schemes that aim to ease the financial burden that parents usually carry to send their children to high school. In other words, there seems to be a kind of social acceptance that the responsibility to near-universalise secondary schooling cannot be entirely laid at the door of the family.

And yet, private spending on secondary schooling, including huge and rising expenses on private coaching, is treated as a sign of the proverbial willingness and ability to pay on the part of parents—an expression, in turn, of parental choice. From a pro-choice perspective, therefore, the tutoring market allows more options, not less, for students to benefit from a paid supplement in order to cope with their studies at school and, thereby, ensure that they are not pushed out.

It is myopic to deny, however, that examinations (and the urge to improve children's performance in examinations) have been at the heart of both the culture of schooling and the culture of private tutoring in the country (Kumar 2018a). Thus, it seems as though spending on extra coaching is more of a system-generated compulsion than a parental 'freedom to choose'. Indeed, as in the case of healthcare sector, in education also, out-of-pocket spending (Oops) appears to be causing a real affordability crisis so much so that both patients and parents are practically left with what may be called a 'freedom to lose'.

[2]For an illuminating analysis of 'shadow education' (i.e. supplementary private tutoring), see Bray (2009). Also, see Majumdar (2018).

Hence, it is arguable that rising, and often binding, private expenditures on secondary schooling restrict options of students, especially of those from indigent families, to continue in school. High school students from all economic classes, from the poorest to the richest, appear to incur sizable expenditure both on course fees and private supplementary tutoring (Table 4). Moreover, the demand that paid course fees makes on the overall expenditure of a household in the lowest quintile class is roughly comparable to the corresponding load borne by families belonging to higher quintile classes, and, in some cases, such load is even more for the least privileged households. This, indeed, is a substantial price to pay for parents having meagre economic wherewithals. Their means get even more stretched to meet expenses for extra coaching of their school-going children that they consider 'essential' and yet find onerous. Considering the bulk amount, spent almost mandatorily, on extra tuition even by indigent families in the hope that their children complete the secondary cycle, one cannot but acknowledge how prohibitive secondary education is for a large section of our society. The recently conducted ASER study by Ramanujan and Deshpande (2018) alludes to similar financial constraints, drawing on the findings of their study, among children who have discontinued from school; the most commonly cited reason for such an act has to do with the 'financial implications' of continuing to study. But why is secondary education so expensive? What are the systemic forces that cause this cost inflation? This paper falls short of such deeper probing. But we only make a simple point about revisiting a statement that we have made earlier in this section. Is the onus of secondary school completion to be conceived primarily as a household responsibility? Or is it time to turn to discussing the role of social and collective commitment to expand secondary education?

6 Concluding Remarks

Instead of belabouring the points already made above, we close our analysis here, by reiterating two critical points. First, we need to wash out from our current educational ethos the dominant idea that secondary education is all about fierce competition. In the perceptible words of Ravitch (2017), 'Education is a developmental process, a deliberate cultivation of knowledge and skills, a recognition of each child's unique talents, not a *race*.' (emphasis added). Second, this careful cultivation of cognitive and creative diversities of India's children and the youth is to be undertaken as a joint, collective and collaborative endeavour on the part of a democratic, autonomous and professionalised school system—the 'Inside', in short.

There is no denying the fact that unfavourable social situations, such as economic hardship and social discrimination, impede the educational participation of a significant section of the country's youth. Hence, undoubtedly, the 'Outside' matters. But what matters more is whether and to what extent the school system and school teachers are given support, through adequate resources and training and through other supportive social policies to alleviate student poverty, to effectively deal with

Table 4 Out-of-pocket spending on course fees and private coaching at secondary and higher secondary level, All-India, 2014

Quintile classes	Average annual private (household) spending on course fees (Rs.)		Private expenditure on course fees as a percentage of average annual household expenditure		Percentage of students opting for paid coaching		Average annual expenditure on paid coaching (Rs.)	
	Secondary	Higher secondary	Secondary	Higher secondary	Secondary	Higher secondary	Secondary	Higher secondary
1	1044.3	2329.4	13.0	29.1	31.1	25.6	1333.3	1850.5
2	1276.4	2453.1	10.7	20.6	37.2	33.6	1734.5	2450.2
3	1926.8	3297.5	12.3	21.0	33.1	28.7	1911.0	2559.7
4	3332.9	4384.4	15.9	20.9	37.1	34.6	2537.8	3779.0
5	9128.3	11,243.6	21.3	26.2	46.0	46.6	5916.8	9512.7

Source Calculated from NSSO 71st round

Table 5 Gap in age-specific participation rates among various social groups during 2007–08 (64th round of NSSO) and 2014 (71st round of NSSO)

Age	Gap between the highest and lowest MPCE quintile classes		Gap between Hindus and Muslims		Gap between general castes and STs		Gap between urban and rural residents	
	64th round	71st round	64th round	71st round	64th round	71st round	64th round	71st round
Thirteen	16.4	14.9	15.5	8.5	10.6	6.8	5.2	2.9
Fourteen	22.9	20.1	18.7	13.0	15.7	7.5	8.8	3.7
Fifteen	28.8	26.1	17.7	12.8	22.8	14.3	11.3	7.3
Sixteen	32.7	42.8	15.8	19.8	21.6	19.7	14.8	13.0
Seventeen	35.1	47.2	15.3	17.4	22.0	21.9	16.3	10.3
Eighteen	34.0	47.2	10.5	16.0	21.1	21.8	16.6	11.9

Source Calculated from NSSO rounds 64 and 71

the challenges of educating poorer children so that their educational journey does not get derailed.

Importantly, to ensure their educational progress does not detract from the need to expect from them the attainment of high academic standards; indeed, on the contrary, to expect high levels of learning from all students is both egalitarian and democratic (Rose 2014). But the system has to make sure that the standards are fair and fitting to facilitate learning for all, and not discriminatory and damaging for those who are already disadvantaged. The school system cannot alone alter social exclusions and inequalities that may make students drop out, but it can, through fair and appropriate internal reforms, stop pushing them out.

Appendix

See Table 5.

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