India has about 65 percent of her human resources in the age group of 19-55. Country is said to be sitting on this demographic dividend (goldmine) in otherwise aging world. It is being said that India will have the largest working age population (962 million, ET, 7th Feb.2018) globally by 2030. To tap this untapped demographic dividend into a treasure trove, it is essential that this workforce is skilled and future ready for the future job market. This is possible only when they are imparted quality education at primary, secondary and higher levels. Given the kind of quality of education being imparted in our public schools presently, there is a risk of turning this demographic dividend turning into demographic nightmare. Such a situation could threaten our social fabric unless urgent steps are taken to improve the quality of learning at all levels of education. Discussion paper identifies the vulnerable areas particularly in primary education for policy action with suggested remedies. Paper also highlights that how the policy action in these areas could pay rich dividend in future in improving the human capital.

Education is said to be the greatest leveler in social mobility of the individual in society. But this is true only when it is a good quality education. In Indian context, there has been significant progress in access to primary education. Government records near 100% enrolment in primary segment of education. However, there is significant debate on lack of quality of primary and secondary education in the country. In the first place, there is no credible monitoring of quality of education. Nonetheless whatever is being reported by agencies like ACER, there is a dismal picture as far as quality of primary and secondary education is concerned.
The Language Conundrum

Before we make an attempt to suggest improving the quality of education, there is an urgent need to understand as to what is meant by quality of education. Perceptions may differ on this count. But quality can be interpreted as what empowers the individual to acquire higher knowledge nationally and internationally without putting him/her to any disadvantage and earn his livelihood. In other words he should be able to make full use of market to earn his livelihood opportunities as far as his acquisition of knowledge and skills and hence consequent employment in the market is concerned. Pragmatically we may start with this as a concept to avoid confusion on this important aspect of quality of education.

People think that English is the language of inspiration alone. Studies have shown that in job market. Persons with English competencies earn 12 to 15 % more than their counterparts. In addition more opportunities remain accessible to persons with proficient English capabilities.

Now the question arises as to what are those components which help individual to gain competencies which help him get further knowledge (read higher studies) and finally employment in the market. The first of these components obviously is the competency in English language. Main reason for this is because acquisition of knowledge and skills in higher academic and professional classes is available in English alone. Then many opportunities in higher order employment require sufficient proficiency in English nationally and internationally. Corporate employment invariably requires proficiency in English. For those wishing to migrate internationally, and there are many opportunities available for them now, higher order competency in English is a sine qua non. In other words, from the employment point of view, proficiency of English is the basic requirement and fountainhead of individual’s success professionally in the present context.

Now look at the scene of this important component of education in our country at the primary and
secondary level. Many of the state governments are not encouraging teaching of English as a subject at the primary level. Many state governments are announcing that medium of instruction would be in vernacular language even at secondary and graduate levels in government schools and colleges. Some state governments do it in the guise of state sun nationalism, thereby jeopardizing the future of students. Some state governments do not find resources particularly human resources to introduce English as a medium of instruction. These state governments are unable to see the benefits and popularity of federal government run successful experiments such as Kendriya Vidhalyas or Navodaya Vidhalya being run in English medium at district level. Major cause of popularity of these schools is that they give an option to parents and their wards to impart educational instruction in English medium as well besides being residential. We may accept it or not, parents perceive instruction in English medium as a critical component of quality of education, and rightly so, when knowledge of English opens up so many opportunities for economic and social mobility of the individual. That is the reason there is such a huge exodus from government owned schools to private schools even though there is free education in public schools. It is a different matter that our public leaders do not recognize this crucial component of quality. If they do, it is not difficult to put in place a system over a period of time to meet this aspiration of parents and their wards.

**Acquisitions of computing skills: Road ahead for future**

The second crucial component of quality of education is the acquisition of computing skills. This is because without these skills, one is put to disadvantage in pursing higher knowledge or getting quality...
employment. The way digitization is proceeding nationally and globally, proficiency in the computing skills has become a must. Many of the tests for employment are conducted digitally. Admissions to institutions of higher learning are conducted online. Students without knowledge of these skills are put to disadvantage and discrimination for no fault of theirs especially from rural areas. It is not that government does not have resources to equip schools at primary and secondary level with computer labs. There is even a scheme “ICT at Schools” to establish computer labs in secondary schools in MP. But alas, for the last 10 years this scheme has not even taken off in government schools. This is such a big management failure that we are failing our students’ badly. Many state governments such as Kerala Tamil Nadu etc. have rolled it out very successfully. It is high time we streamline this important component of quality in our public schools. Once our students are conversant with these new age skills, they can self learn many things from internet and online solutions available today and improve the quality of learning continuously on technology enabled platforms. To realize this goal, infrastructure of public schools (including electricity) has to be improved a great deal especially in rural areas.

**Impact of computing skills on acquiring higher Education and employability:**

Once the basic functional and computer literacy is achieved in India, she can leapfrog into a transformative phase in Higher Education and skill development. Education can be the next inflexion point for the country. If India has to really achieve the demographic dividend, adoption of technology is one of the tools for achieving that end. It is going to change the way education is delivered in the country. The best of education nationally and internationally can be accessible to the person sitting in the remote corner of the country. With India’s strength in IT and its introduction in education, particularly in higher education and skill development, can transform the learning landscape (read quality) in the following manner.

Introduction of ‘anytime anywhere’ learning is the key to improve the
quality of learning by adapting to online learning in our institutions. The future of work and future of education will converge more and more in future. The future competencies and learning will be a continuous and life-long learning rather than stage oriented learning. Reskilling throughout will be the key to obtain and retain a job. The system should be such that the student should be able to stack his/her certificates and they are eligible for securing a higher degree later on. Today about 30-60 of the future skills do not exist in the workforce. Equipping such a workforce with future quality skills will require use of online component in our present day education. The advantage of going for online education is that it is accessible life long, flexible, student oriented, market customized and affordable. India, as a shining example of IT prowess, must embrace more and more of online content in our educational institutions to reap rich dividends to build quality workforce and also survive technology disruptions in future.

A beginning can be made by introducing the online content for market oriented courses in our quality educational institutions such as IITs, IIMs, renowned central universities, AIIMS etc. For this to happen, the policy has to be to put ‘online courses’ equal to on-campus courses. These MOOC courses can be obtained by lakhs of students at a fraction of the cost. Such courses can also be introduced for new age skills needed by the work-force to make it future ready. The present day system of higher education can be modified in such a way that online credits of diplomas and certificates can be used to seek admissions for online and in-person degrees. Industries should support the absorption of such online skill sets at par with credentials from in-person courses. Industry generated credentials (read certificates) should form the part of skilling drive. So looking to the potential of use of IT in education, present day system should be tweaked to accommodate these online credentials for higher qualifications in distance education and on-campus enrollment so that large numbers are not left outside the formal system of education.
Virtual classroom has become the innovation to supplement quality learning presently and in near future. Learning shall be characterized by the collaborative team efforts by the cohorts of similar age using technology enabled platforms. The best of the content will be available at national and international level. People will interact with the ‘best in the world’ through live video, apps and modern ICT techniques. So the real time learning with the best in the world is the future of learning through online learning. It is high time we move in this direction by making full use of IT in our educational system.

**Governance: Needs Systemic Reforms**

There is a mass exodus from government schools to private schools due to neglect of quality. According to DISE data as many as 13 million enrollments has fallen in government schools and has increased by 17.5 million in private schools between the year 2011-16. Consequently some schools have been left with as few as 40 students in some schools which have not remained viable any more.

Inter alia, the main reason for such a mass exodus has been the deterioration of quality in education. Reason, why quality has deteriorated so much, has been the pattern of funding in our public schools by the government. Presently funding is given to all schools regardless of their performance in results. It disincentives schools to perform better in view of assured funding. If quality is to be improved, this method of funding has to change to bring about a systemic reform.

**Adoption of voucher system**

Alternatively, we can adopt the ‘voucher system’ for primary and secondary education in our schools. These vouchers can be given to the parents of eligible students directly.

| The rot in education has set so deep that large scale systemic reform is need to retrieve the situation. Basic governance tools such as funding, accountability and information sharing need to be totally overhauled. |
Students can en-cash the monitory value of voucher by paying these vouchers to schools. Public and private schools both shall be entitled to honor the vouchers. Students shall have the choice of selecting the schools based on the declaration of their performance of results. Such a system will make the service providers accountable to students. Public and private schools will be made to compete with each other. Teacher’s salary may be linked to the earning of voucher revenue in public schools as voucher revenue will depend on the ability of teachers to attract and retain students. Schools not earning enough revenue can be identified and their grants gradually reduced proportionately based on some criteria fixed for revenue earning. Those not earning the benchmarked revenue over the long period, of say some five years, shall be closed and their manpower deployed in schools earning higher revenue. This way, we shall be able to group our resources optimally including the human resources. We shall also avoid the present situation of thinly spreading our resources. The better performing schools in rural areas can be converted into residential schools at prominent centers with residential and transport facilities at these places. Later on these centers can be converted into centers of excellence in rural areas for the catchment around them.

**Details of the scheme:**
Government can give a voucher of a given monitoring value to the parents of each eligible child at the beginning of the session. Voucher can be fixed at some monitory value e.g. say Rs. 500/ or 1000 pm value. Parents could admit their wards to the school of their choice including the public school that charges up to that amount. S/he can supplement this voucher with her own money to attend a higher fee school. Parents can choose government, aided or private school of their choice. All economically weaker children shall be eligible for vouchers under the scheme. The voucher value can be fixed in reverse and the weaker section students shall be eligible for higher value vouchers. Thus, such an arrangement will be progressive in nature.

**Advantages:**
Such a funding arrangement has certain merits. It places the
bargaining power in the hands of students. Parents can withdraw the students if they are not satisfied with the quality of education. This will make school management more responsive to the needs of students. This method of funding will eliminate the system of block grant which is one of the main causes of inefficiency. All schools including the private ones shall be forced to have competition and hence will lead to improvement in quality. Private schools will also be beneficiary of such funding and this will improve the quality of education in private and public sector both.

Managing HR

Mismanagement:

Mismanagement in the process of recruitment of teachers has played havoc in governance of education. Education department in MP till 1995 used to recruit regular teachers in school education department regularly. Subsequently government started recruiting ‘Guruji’. They were paid Rs. 500 as salary. Thereafter, government started recruiting ‘Shikshakarmi’ and this cadre was called ‘Adhayapak Samverg’. Teachers recruited in this cadre were not part of school education department but instead were on payrolls of ULBs. These teachers did not get benefits such as leave, medical benefits, pension, gratuity, transfers or appointment on compassionate ground, etc. This led to lot of resentment and much of their energies were spent on getting absorbed into regular school cadre. Such kind of reckless experimentation has played havoc with the teaching and educational governance in the state. Of late state government has again decided to merge these 2.84 lakh teachers into regular school teacher cadre.

Yet another consequence of these ill thought changes in the recruitment process has been that this has led to enormous litigation. Lakh of cases are pending in Subordinate courts and High Court. Education department has become one of the most heavily litigated departments in the state. Majority of these cases are of employees and related to their establishment matters. These have been languishing in courts for many years and have been a drain on time, energy and resources of the department. A study in AIGGPA found that as many as 76% of the cases of
education department filed in the court were on account of arbitrary administrative action, delay in departmental action or non-compliance of judicial orders. Be that as it may, it has become a drain not only on public exchequer but also on time and energies of teachers and administrators of the education department. Due to the preoccupation in litigation, the real purpose of teaching and learning has taken a back seat. It is high time we take a considered view on filling these vacancies quickly in a meaningful way and stop this experimentation.

Besides experimentation in recruitment process, there has been a question of number of adequacy of human resources particularly teachers. Lakhs of vacancies have been lying vacant at national level. So is the situation in many states. Fifty thousand vacancies are lying vacant in MP for the last so many years. Within state situation is comparatively even worse in tribal areas. Teachers of Science, Mathematics and English are not available in the state. Besides, teachers are busy in non-teaching work such as elections, census, voter list revision, mid day meals, compilation of information etc.

**Training: Too Little For Any Substantial Change**

Training is one of the most important components in capacity building of the human resources. It is one of the key elements in improving the quality of learning by way of building capacity of teachers regularly. Training is not only a tool for developing the capacity but also the leadership qualities in teachers who are one of the key resources into the system. Pre-service and in-service, both trainings are important but are below par. Trainings as a focus of policy is not a priority as the figures of inter se allocation of funds among different heads in the following table indicate.

Teacher is one of the most important key inputs into the system. Quality of these resources will impact in short and long term. Required changes need to be carried out immediately after adequate thought and then stabilized.
Table 1
Year: 2016-17 (Analysis of Plan Budget: School Education)

<table>
<thead>
<tr>
<th>S.N.</th>
<th>Name of the Head</th>
<th>Amount (cr)</th>
<th>As %age of Total Plan Budget</th>
<th>Remark</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Total budget</td>
<td>1701.58</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Capital expenditure</td>
<td>638.00</td>
<td>40.13</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>RTE fee reimbursement</td>
<td>515.39</td>
<td>30.20</td>
<td>Spent on 25% Students in Private Schools</td>
</tr>
<tr>
<td>4</td>
<td>Free uniforms</td>
<td>282.55</td>
<td>16.60</td>
<td>Opportunity Cost Very High</td>
</tr>
<tr>
<td>5</td>
<td>Free books</td>
<td>33.33</td>
<td>0.19</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Training</td>
<td>27.53</td>
<td>1.61</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Grants</td>
<td>77.87</td>
<td>4.57</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>E-Governance</td>
<td>3.98</td>
<td>0.23</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>Salary</td>
<td>34.4</td>
<td>2.02</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>R &amp; M &amp; E</td>
<td>11.37</td>
<td>0.66</td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>Bridge courses</td>
<td>53.53</td>
<td>0.031</td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>Training, free books, e-Gov</td>
<td>32.37</td>
<td>1.90</td>
<td>Components Enabling Learning</td>
</tr>
</tbody>
</table>

Author’s Calculation:
Source: Website, School Education Department: Government of MP

Thus we see from the above table that the amount spent on training as percentage of total plan funds amounts to 1.61 % (Budget 2016-17, Govt. of MP) which shows the ill thought out priority of planning process. Even if we combine the amount spent on IT and related heads at serial number 12, the expenditure on improving the quality of education works out to be 1.90% of the total plan budget as shown at
serial no 12 in the table No wonder, majority of teachers are not conversant with the latest methods and pedagogy in teaching in absence of effective training programme. Big chunk of amount is disproportionately spent on infrastructure as compared to capacity building of HR. Ironically; even the amount spent on free uniforms is significantly higher than the amount on components enabling the quality of school education. Bridge courses having a direct impact on improving the learning levels of first generation learners account for merely .031% of total plan expenditure. We can imagine the existence of very low levels of learning due to lack of imaginative allocation of resources.

Another item of misallocation of resources is the amount spent on providing fees to private schools for enrolling 25% students of weaker sections. Amount spent is almost a third of the entire plan budget in year 2016-17 in MP. We are not even very sure that this amount is being spent on one quarter of the total number of students because much less number of students is admitted than the specified quota. The opportunity cost of using this amount in improving learning levels could be huge for public schools. Moreover, there are no credible studies to show that learning levels are appreciably high in these private schools. These schools are more popular for the love of English language of poor parents. It is high time that a credible study is conducted and learning levels of these students are assessed. If there are no appreciable differences in learning levels, then there is need to review this provision because Rs one out of three is being spent on this today. This huge amount is depriving the public schools of much needed resources which could be utilized for improving the learning levels.

It is clear from the above analysis of budget that there is a clear misallocation of resources as far as priorities are concerned. There is a need to review these priorities immediately and make corrections where ever required. There is an urgent need to focus on issues of quality and make requisite provisioning for them.
Disclosure: A Tool of Accountability:
We acknowledge that disclosure of information can act as a very effective tool of improving the accountability of teachers and school management. Education department has a whole lot of credible information which can be customized, standardized and publicized in schools and colleges and across the state at definite intervals. For instance, board exam results information can be standardized and compiled school wise and district wise to be published after the declaration of results in a way that seeks to inform parents about the quality of school and its management. Similarly school departments conduct in-house test at state level, e.g. in Pratibha parv in MP or in Gujrat. This information about the performance of students and teachers can be put in public domain.

Based on information, schools in the district and districts in the state can be graded by the government herself. Voluntary agencies can use this information to accredit schools to inform parents. There will be a market pressure to maintain quality failing which students will not enroll themselves in lower ranked institutions. This grading can in some way be linked to the grant later on to make the teachers more accountable in the system.

Conclusion:
Discussion paper highlights some of the important issues for attention of policy makers, academicians, parents, teachers and students to give some serious thought for improving the learning levels. Department can convene a workshop or a round table to deliberate further on these issues and initiate policy action sooner than later if we really want to reap rich demographic dividend.