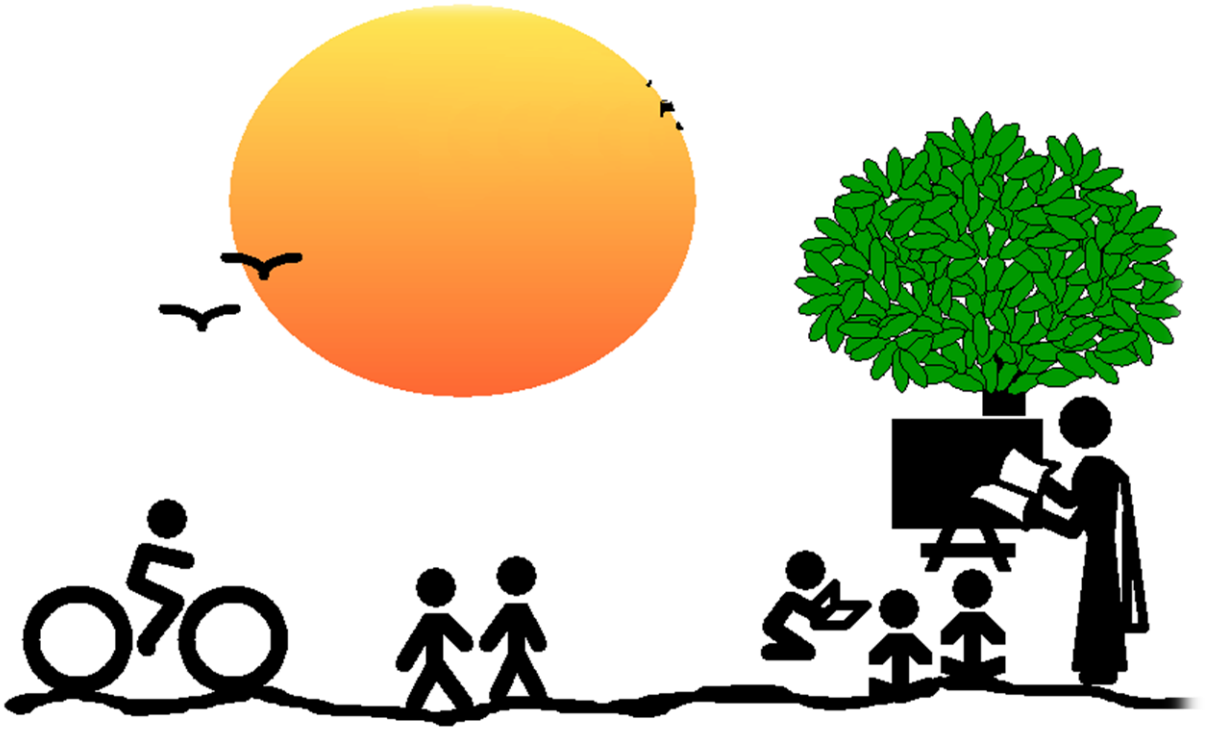
Research Monograph on

Foundation for providing 'Skills for life and livelihood' through Elementary Education:
Outline for Policy Framework



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Preface

Education in India has always been a symbol of pride and heritage. However, since post independence delivery of quality education to all has been a prolonged effort. When India heads to be world's fastest growing economy in near future, and is world's youngest nation in terms of demography, the aspirations of maximizing the demographic dividend calls for an opportunity for all. Although the statistics reported on poor employability skills of Indian graduates restricts their scope of access to opportunities thereby. Education is the learning that begins since the conception of life as a being. Hence, in order to overcome the poor skills of Indian graduates as reported, interventions must be made from the outset of learning processes.

Elementary education (EE) in India is the only compulsory level of education extended as a right to all children in the age group 6-14 years. The concern starts from this level itself, when after so many years of independence and focus on Universal Elementary Education, and more than a decade of Sarva Shiksha Abhiyan, education was given as a right to children just few years ago. Even so, there have been continuous reports on poor basic learning standards in our schools. Children, who struggle to even read and write during basic education level and somehow get through to higher levels of education, shall definitely have poor skills for life as well as livelihood subsequently.

This study emphasizes looking at education as a breakthrough in the vicious circle of poverty. For developing countries like India, with huge inequalities of wealth and income, education is a resource for sustainable and comprehensive development. In order to build on this, the study portrays extracts from theories of education and contribution of education philosophers of India, which have relevantly emphasized providing universal and compulsory education to all children alongwith imparting skills for life and livelihood through basic education. Then, the study explains in detail the skill component for Elementary education: *Basic Employability skills* and *Life skills.* Thereafter, the study presents the contemporary concerns and issues in the existing framework which deters delivery of these essential skills through the compulsory level of education in India.

With these issues, the study finds that there are disconnects in policy and practice, and that all the variables in EE could be not influenced in the desired direction effectively, and were even not dealt at the same time. In order to prove these, the study considers a multi-dimensional comparison of 2-models of States (Less Developed-UP, Bihar and More Developed-Kerala, Himachal). The comparison was made on grounds of *inputs factors* in the education system (indicated by Enrolment rates, Pupil teacher ratio and % of Trained teachers), *desirable outcomes of education* (Reading and Arithmetic skills) and *external factors* (IMR, Poverty rates and % of children Not in Pre-School), which portrayed the same. This comparative study also underlines that there are huge differences in the education process in different states, resulting in huge inequalities even on essential basic parameters of education. Henceforth, in the end, the report traces out a possible road-map for resolving these issues in the current compulsory education system, which is categorized in three parts: *Policy reforms, Governance reforms* (through Mission based approach) and *Innovations.* The points covered in these sub-sections are suggestions to combat the existing problems within the existing framework, and gradually

build on them in order to strengthen the framework. These are connecting lines to bridge disconnect in policy and practice in the elementary education system.

The study involved rigourous data scanning, data analysis (both qualitative and quantitative) through library research and interviews (through purposive sampling model), as well as through participant observant analysis. With evaluation research as a prime methodology of the study, the study also involves some action-oriented research. Overall the study can be described as 'Secondary descriptive research'.

The findings of the study with the policy memo have been submitted at the Ministry of Human Resource Development for consideration in the new National Policy for Education framework under School Education. The efforts have been acknowledged.

Acknowledgement

As John Dewey has said, '*Education is not preparation for life but life itself*.' And the endeavour made through this study, which is to provide for a strong base for education in India, would not have been possible without the contribution of the entire research ecosystem at Public Policy Research Centre and the academic support extended from other stakeholders. In this regards, it is necessary here to express gratitude to the experts/academia and relevant other stakeholders who have contributed their insights for the development of this study.

Starting from Prof R.Govinda (VC-NUEPA) and Prof M. Bandhopadhyay for providing library assistance and preliminary guidance to design the study, and then Dr Rukmini Banerjee, Mr Shailendra Sharma and ASER centre team for extending data support. Further, cognizance of Prof BK Tripathi (Director-NCERT), Sm Kiran Bhatty (S.Fellow-CPR), Sm Anuradha De (CORD), Prof RP Pathak (Reader-LBS Vidyapeeth), Dr Arun Mehta (Director DISE), Dr Sonal Desai (NCAER), Dr Vimala Ramchandaran (Director-ERU), Dr Mahadev Desai (Ex Secretary-Vanche Gujarat Campaign, Gujarat), Dr Avadhesh Singh (Covenor-Knowledge Consortium, Gujarat), Mr Akhilesh Tiwari, Mr Deepak Dogra (GPE), etc was very useful. The academic support and assistance from stakeholders at MHRD, viz. Mr Dk Bhawsar (Dy Education Advisor), Sm Shakila Shamsu (OSD-NEP), Sm Surabhi Jain (Director-EE) and Mr SC Khuntia (Secy-Dept of SE&L) is also appreciable. Cooperation of States Project Directors/Office of Bihar, Himachal, Kerala and Uttar Pradesh, was very instrumental. It was fortunate to have guidance of Mrs Rekha Palshikar (Secy-Maharashtra Girls Education Society) and Mr Prashant Kothadia (Consultant-Azim Premji Foundation) for this study. Dr Anirban Ganguly (CABE-Member) has also extended his expertise and knowledge to explore and meet the requirements of this study. It is really opportune to get support from all these specialists in the field of elementary education.

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1. Introduction

India is one of the world's fastest growing economies in terms of GDP share (PPP), only behind China and US (World Bank Report 2011). The 'Global Economic Prospects' report published by World Bank in January'2015 forecasted that by 2017 India will out-pace China in terms of GDP growth rate.[1] The country sits on a most advantageous situation with 65% of its population being under the age of 35 and approximately 12 million individuals on an average are expected to join the workforce every year. With these demographics, it happens to be world's youngest nation of median age 27years.

However, the ability of the nation to reap maximum benefits out of this better-off is doubted when the quality of our education system is bothering. Annual Status of Education Report (ASER) 2014 mentions though the enrolment levels in Indian schools are 96% or higher for the 6-14 age group but 25% children in Std-VIII and 50% in Std-V cannot read Std-II level textbooks and 19.5% children in Std-II cannot recognize numbers.[2] National University of Education Planning and Administration (NUEPA) also mentions concern over the quality of learning in its document titled 'India: Education for all- towards quality and equity' published in August'2014.[3] And so does National Achievement Survey (NAS) 2014 conducted by NCERT[4].

With this huge grey area in terms of quality of education in the Indian Education System we cannot expect our generations to have a future of vast opportunities. This definitely paves way for poor employability. Quoting in this regards further, the India Skills Report 2015 released by CII with PeopleStrong and Wheebox that finds only 39.36% (18-21 yrs), 34.13% (22-25 yrs) and 30.48% (26-29 yrs) graduate/under-graduate candidates employable out of 300,000 tested all across India,[5] and most lacked basic employability skills of communication and numerical/logical ability. These statistics certainly threaten the aspirations of comprehensive development and maximizing the demographic dividend in India.

2. The Study Outline

At Public Policy Research Centre this study is an attempt to explore gaps in existing policy framework in regards to the missing links in delivering basic employability and life skills through compulsory elementary education in India, and converge good practices to yield better results on grounds through efficient policy implementation framework. The subject matter of this study is hence, 'Discrepancies in delivering UEE wrt learning; Fundamentals of skill development at Elementary education'.

2.1. Research objective:

- To understand the backdrop of UEE in India, in light of SSA and RTE.
- To emphasize basic learning variables in EE that build essential skills eventually.

[1] GEP Report, World Bank 2015 availble at http://www.worldbank.org/en/publication/global-economic-prospects/summary-table
[2] ASER 2014 press release: http://img.asercentre.org/docs/Publications/ASER%20Reports/ASER%202014/pressreleaseeng.pdf
[3] http://mhrd.gov.in/sites/upload_files/mhrd/files/upload_document/EFA-Review-Report-final.pdf
[4] http://mhrd.gov.in/sites/upload_files/mhrd/files/document-reports/Main%20Report%20NAS%20Class-3%20%28cycle-3%29-Final.pdf
[5] India Skills Report 2015: https://wheebox.com/logo/India%20Skills%20Report2015.pdf

2.2. Research questions and assumption:

Learning from contemporary statistics on poor learning at Elementary level in India, the hypothesis here assumes that there have been disconnect in the policy initiatives undertaken wrt Elementary education over time. Moreover, it is presumed that the variables (in EE) could not be influenced in the desired direction effectively. They are even not dealt at same time. (Education being a concurrent subject, and is primarily dealt by State Governments.) These variables include access to education, availability of education infrastructure including availability of trained teachers, budgetary allocation, family background of the child, community participation, innovations, etc that policy provisions over time have tried to influence in order to achieve UEE. The Research questions thereby include:

1. What has been the **focus of contemporary policy interventions** wrt EE so far?
2. What are the **missing links at the central level in monitoring the efficiency of states** wrt *policy implementation, and bring competiveness, uniformity in basic parameters*?
3. Is there any **mechanism to identify, adapt and mass-scale or work on best/worst practices** to deliver sustainable learning through elementary education (*Intra-national and International*)?
4. What is **extent of variance in ground-level policy implementation** wrt SSA and other related policy initiatives, *in the light of RTE*?
5. What are the **contemporary indices, practices and innovations** that ensure *learning and lay foundation for basic skills*, which should be incorporated in the existing policy framework?

2.3. Limitation and Scope: The study is limited to

- Elementary level of the education system(Age 6-14, Class 1-8)
- Covers schooling models in government, government-aided schools.
- Essentially covers role of MHRD and State education departments (including local governance), directives/initiatives of CBSE and State Boards, alongwith policy interventions/guidelines of NCERT-SCERTs, NCTE-DIETs, etc.

However, in order to develop a comprehensive understanding of the subject matter, the scope may cover pre-schooling (age below 6years) and learning models in private schools, international boards, etc as well.

2.4. Literature: Philosophy of Indian Education (Dr GR Sharma and Sh Kirit Joshi's work). DISE, NCTE, MHRD statistics, ASER, NUEPA, Azim Premji University studies, NCERT Research Journals, others and writings of Sukanta Mahapatra, Vimala Ramchandaran, R.Govinda, Karthik Murlidharan, Anurag Behar, Praveen Jha, Prof RP Pathak and others, including CABE and JRM reports, Committee reports, State reports, CBSE guidelines and findings of several studies conducted in regards to School Education (EE-level).

Figure 1: Present Elementary Education System in India

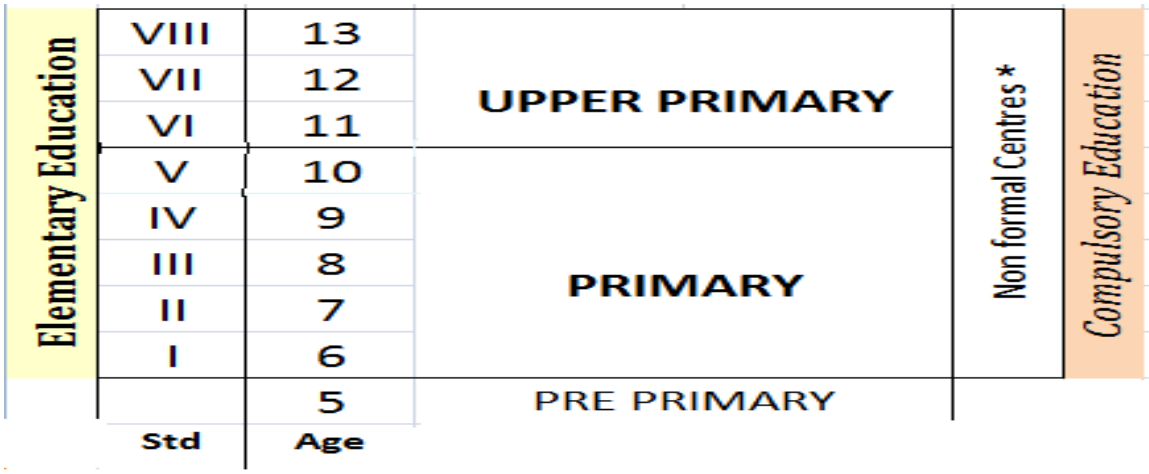


TABLE 1: List of States with different classification of Primary & Upper Primary level		
State	**Primary**	**Upper Primary**
Assam	I-IV	V-VIII
Goa	I-IV	V-VIII
Gujarat	I-IV	V-VIII
Kerala	I-IV	V-VIII
Maharashtra	I-IV	V-VIII
Meghalaya	I-IV	V-VIII
Mizoram	I-IV	V-VIII
Nagaland	I-IV	V-VIII
West Bengal	I-IV	V-VIII
Dadra & Nagar Haveli	I-IV	V-VIII
Lakshadweep	I-IV	V-VIII
Source: National University of Educational Planning and Administration (NUEPA, 2008)		
NOTE: Other States/UTs follow the general pattern- Primary from Std I-V and Upper Primary from Std VI-VIII.		

2.5. Research Methodology

The approach adopted for the study is both 'Qualitative and Quantitative' (more qualitative though), and it is primarily, ***Secondary descriptive research*** work**.**

Sampling Model: Mixed Sampling Model (more purposive sampling).

In order to understand the needs of the subject matter and find answers to the research questions the study requires being more *analytical and applied* in nature. The facts and information already available on the related issues are collected, experts are interviewed and data are critically analyzed. Inferences are derived through *qualitative data analysis* and *comparative study* of two-models of States (less developed-Bihar, UP and more developed states-Kerala, Himachal). The method used to collect information is *library research*,

observational analysis and sample interview. For comparative study, *participant observation method* was also incorporated. *Evaluation research* is too an essential methodology of the study. The study is oriented to find solutions to the problems in its course.

3. Education- Philosophy in India:

Education is the index of nation's sustainable development apparently. Just as GDP reflects prosperity of the nation at a point of time, the level of education in a country reflects its ability to sustain development over time. Developing nations should not devalue the importance of education. It not only provides knowledge to people, but also renders the ability to acquire skills, techniques, information and broaden their horizon/outlook. It empowers the population of the country and strengthens the society.

The Indian concept of education, since early Vedic period has been that it emancipates (सा विद्या या विमुक्तये), that it develops art of life in an individual. Dr Radhakrishnan defined education philosophy as critical exposition of reality. Considering theories of Education, from Existentialism to Cognitivism, and from Social Constructivism to Idealism, the expected learning outcome of all was to enable conscious decision making, critical thinking, logical reasoning and comprehensive understanding. For Swami Vivekanand, education was meant for self-development and character building. While for Sri Aurobindo, education was for self realization, self-growth and knowledge for existence.

In the words of G.D.H Cole[6], *"The education system which we attempt to set-up must depend on the kind of society we mean to live in, on the qualities in men and women on which we set the highest value, and on the estimates which makes educability both of those who are endowed with the higher intellectual or aesthetic capacities and of ordinary people."* Primarily, as common man understands, education aims at imparting knowledge. It is this knowledge that requires a global outlook and a synthesis of various types of information and experiences. This relates to the philosophical aspect of education that forms of the base of any education system across the globe. As Plato defines, "*True education, whatever that may be, will have the greatest tendency to civilize and humanize in their relation to another',* which is still the most widely accepted theory of education based on humanism[7].

The Indian education system ever since the Vedic age was propounded on same humanist principles essentially, extending it to the path of salvation. Historian Altekar has rightly remarked in this context that in India education has been '*regarded as a source of illumination and power that transforms and ennobles our nature by progressive and harmonious development of our physical, mental, intellectual and spiritual powers*[8].' In historical review of Indian education system Dr G.R. Sharma[9] aptly remarks that both ancient and medieval Indian philosophy of education 'exhibited trends of humanism, pragmatism, utilitarian, materialism, pluralism and democratic values.' Education is certainly meant to impart skills for life and livelihood both.

[6] Cole, G.D.H, '*Essays in Social Theory'.* 1950.
[7] Sharma, G.R. '*Trends in Contemporary Indian Philosophy of Education- A Critical Evaluation'.* 2003.
[8] Altekar, A.S. *'Education in Ancient India'.* 1934.
[9] *Ibid 7*

The contemporary Indian philosophers of education have also furthered the same essence of education. Their theories also seem to be based on the ancient *Upanisadic* thought, extending to *Neo-Vedanta* philosophy. Whether it was Sri Aurobindo, Vivekanada, Tagore or Gandhi, 'all these philosophers with minor differences among them have maintained what can be called *Integral Humanism*, which is the philosophy of our age.' (G.R Sharma, 2003). The doctrine was advocated by educationist Pt Madan Mohan Malviya. In his view, 'education must be given to all as he believed that poverty lies in the ignorance of people. He realized the importance of education for social and economic development.' He advocated compulsory primary education in India and universal elementary education for overall development. He linked importance of elementary education with agriculture and industrial education, mentioning that it provides the base for technical and specialized education. Malviya's philosophy of education based on Integral Humanism emphasized education to be a tool for overall development of personality.[10]

The Gandhian exposition on aim of education is remarkable here. It mentions that 'education is ought to be a kind of insurance against unemployment'[11]. In his words, "*The child at the age of 14, that is, after finishing 7years course should be discharged as an earning unit. … Even so the State takes charge of the child at age-7, and returns it to the family as an earning unit. You impart education and simultaneously cut at the root of unemployment."* The 'Wardha Scheme of Basic Education' postulated by Gandhi reflecting the same ideals contained education through handicraft for skilling children in order to make them self-reliant later in life, establishing direct relationship of knowledge and life. It advocated mother-tongue of the child to be the medium of instruction, and child to be the centre of education system while teachers to be the main pillars of the entire system. It was focused on overall development of the child--his body, mind and soul. It provided for systematic and organized knowledge delivery to the child. It adequately provided for teachers' training as well[12].

It is evident here, that the Indian Philosophy of Education looks at education as a path towards salvation, primarily based on Integral Humanism, which is further based on the attributes of life-- body, mind, intellect and soul, related to *kama*, *artha*, *dharma* and *moksha*, respectively. And since, elementary education--the founding level of education is the only compulsory channel of education in India, it is relevant to emphasize 'skills for life and livelihood' through Elementary education.

4. The Skill component

Since there is a wide possibility in developing countries that compulsory basic education is the last level of education to be accessed by most of its population. So it becomes highly essential to impart quality education that forms the foundation for life as well as livelihood. For developing nations, the developmental process for maximizing demographic dividend shall begin with career awareness at the elementary school level, which is initiated to broaden the student's knowledge about careers, ability to connect academic learning to the workplace and self-realization. It establishes school as a foundation for education-workplace connections and

[10] Tiwari, Jyotsna. *'Madan Mohan Malaviya: Statesman, Parliamentarian and Educationist.'* 2013. (Bundelkhand University)
[11] Gandhi, M.K, *'Harijan'.* 1937.
[12] Pathak, R.P. *'Education in Emerging India.'* 2007.

requires community involvement and support (*Oklahoma School-to-Work System 1996*). Because young children come to school with preconceived ideas of work and several other perspectives of life, based on their youthful observations, experiences, and imaginations, an elementary-level 'School to Work and Life' approach serves to expose these students to a broad range of careers in the real world, occupations that may be unfamiliar to them and/or nontraditional for their gender, race, or ethnicity[13] alongwith empowering them with skills for life-long learning. The Indian philosophy of education discussed previously in this report, also reflects a similar emphasis wrt development of skills for life and livelihood through basic education.

It is noteworthy here that we are not advocating child labour or emphasizing creating labour immediately after elementary education, but only creating a concrete base for developing quality human resource for the economy and human being for the society in near future. The skill component hence necessary for basic education may comprise the following:

4.1. Employability skills:

These include basic numeracy, arithmetic and reading, writing skills in local as well as a global language (which is considered to be English). It is deemed necessary that these skills are imparted to the child by the end of lower primary level (Class 1-5). On these essential skills, other skills will stand on, as this skill-set is the basic building block in the process of learning. Further in the Upper primary level, the child must be imparted skills of critical thinking, logical reasoning and knowledge of general awareness (including general science, history, geography, civics) and even that of general contemporary technology.

Table 2: Categorical Representation *General Employability skills*

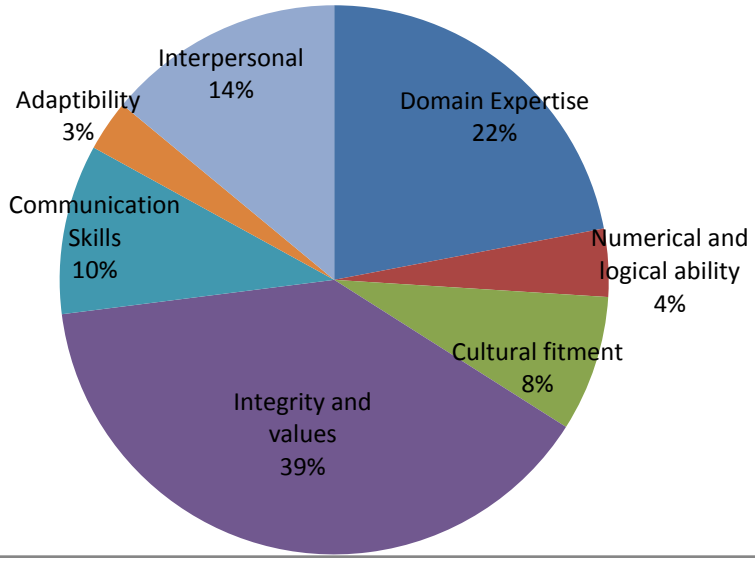
Skill head	**Sub skill set**	**Education Level**
Basic numeracy	Identifying and understanding numbers, their types and features, real world application of numbers.	Lower primary
Arithmetic	Addition, Subtraction, Multiplication, Division and their real world applications (like percentage, average, etc) with understanding.	Lower primary (c/f to next level)
Language skills	Reading, Writing, Listening And Speaking (Indentifying and understanding Letters, word formation, sentence formation, comprehension, functional grammar, translation, etc.) Ability to express in regional as well as English language.	Lower primary (c/f to next level)
General Awareness	General Science (Life science, physics and chemistry), General History, Civics, Geography.	**Elementary** (c/f to next level)
Cognitive ability	Applied academic skills, developing and presenting information/knowledge, basic organizational skills (team work, problem solving, negotiation, etc through Art-craft and Sports), ability to use and understand clock, calendars, money, and time/money planning also.	**Elementary** (c/f to next level)
Technology	Identify contemporary technologies; comprehend basic computer applications, utility software (Ms-office, etc) and general understanding of programming concepts.	Upper Primary (c/f to next level)

[13] Brown, Bettina L. (1999). '*School to Work and Elementary education*', Practice Application Brief no.5. Available at http://www.calpro-online.org/eric/docs/pab00013.pdf

Career Planning skills	Identify opportunities and relate it to their abilities/preferences, understand overall importance of the work in society and for the nation, ability to understand the dynamics of the work, ability to explore related skills required through the course of education.	Upper Primary (c/f to next level)
Source(s): *Extracts from (a) NCERT-MLLs(1990) (http://wikieducator.org/images/6/61/The_MLL_Document.pdf)* *(b) National Curriculum Framework 2005* *(c) Career & Employability skills, Michigan Dept of Education(2001)* *(https://www.michigan.gov/documents/Career&Employ_Standards_12_01_13760_7.pdf)*		

These skill sets lay the basis of employability and developing quality human resource, basically after graduation in our country. The India Skills Report 2015 by CII (with Peoplestron and Wheebox)[14] summarizes '*Skill sets desired by the employers'* in a pie chart as below:

Figure 2: Skills required by Employers (%age)
(Source: India Skills Report 2015)



Most of these skill sets represented in figure 2 are obtained and developed through higher education. But further considering some findings of the report that finds lack of English, logical and numerical ability and computer skills in Indian graduates. Also, the National Employability report 2014 by Aspiring-Minds has been consistently reporting dearth of English, quantitative ability, computer skills and logical ability[15] in Indian graduates. This directly reflects the weak foundation of fundamental skills imparted through our education system, and this foundation is laid at the Elementary level.

4.2. Life skills

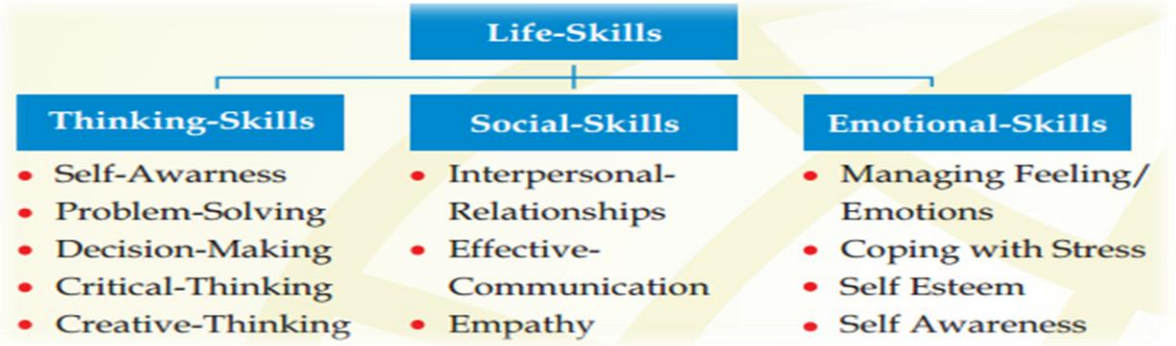
After mentioning basic employability skills in Table 2 that are essential for better living, there are few other skills which should be inculcated through Elementary education, and are necessary for a better life. The skills envisioned to be imparted to

[14] India Skills report 2015 available at https://wheebox.com/logo/India%20Skills%20Report2015.pdf
[15] National employability report (Graduates) 2014 available at http://www.aspiringminds.in/docs/national_employabilityReport_engineers_annual_report_2014.pdf

the age-group focused through Compulsory Elementary education can be broadly identified as Literacy, Language, Vocational, Cultural and Life skills (Nayak, P. 2013). **World Health Organisation (WHO)** has defined life skills as '*abilities for adaptive and positive behavior that enable individuals to deal effectively with the demands and challenges of everyday life'*.[16] Thereby, the expected learning outcomes include a combination of general knowledge, values, attitudes and skills with a particular emphasis on those skills that relate to critical thinking and problem solving, self-management, communication and inter-personal skills.

Primary curriculum of CBSE international judiciously incorporates Life Skills aspect to education quoting that it would help students lead balanced, happy and successful lives. It covers *Creative and Critical Thinking Skills, Interpersonal Skills, Effective Communication Skills, Problem-Solving and Decision Making Skills, Conflict Resolution Skills, Collaborative Skills, Leadership Skills, Self Esteem, Empathy and Dealing with Emotions as well as Coping with Stress*. It aims at developing perspectives, research skills and stress management abilities.[17] The major components of life skills defined are as depicted below:

Figure 3: Life Skills Components (CBSE i Curriculum)



The National Curriculum Framework (NCF) also emphasizes Life Skills, comprising *Self awareness, Problem Solving, Decision Making, Critical Thinking, Creative Thinking, Interpersonal Relationships, Effective Communication, Empathy, Managing Emotions and Dealing with stress*[18]. Inspite of having so much clarity and focus on the concept of Life skills in our curriculum and framework, their delivery is so compromised in the classrooms. The rising cases of juvenile crimes, crimes in school premises itself are evidence to this. Even the rising suicidal tendency in children, due to inability to cope up with failure and stress is a result of poor life skills. We need to emphasize efficient and effective life skills delivery through our education system as defined in the framework and curriculum rationale, for it lays a strong foundation for a healthy society through each child. Afterall, children are the future of any nation.

Both life skills and employability skills is a must for leading a balanced and resourceful life. Since elementary education lays the base for a civilized life and it is also made compulsory

[16] WHO 1999. '*Partners in Life skills Training: Conclusion from UN Inter Agency meeting'*. See: http://www.who.int/mental_health/media/en/30.pdf

[17] CBSE International Curriculum for Primary classes. See http://www.cbse-international.com/cbse-iportal/documents/upload/22f23fs23fs/level-1/l-1_c-91_1347248928655.pdf

[18] Hemshell, Rod. *'The National Curriculum Framework 2005 and Integral Education'*. 2012. See http://www.universityofhumanunity.org/bibliodetail.php?biblioid=2252

in India. Thereby made more accessible as a right to all children (6-14years), the delivery of these skills through the elementary education system becomes an indispensible objective.

5. Contemporary Issues and concerns

This section of the study portrays several issues and concerns in the education system present within the existing framework. These may listed as below:

5.1. Focus of Policy interventions:

In public schooling sector, the issues are from two sides. One related to the '*essentials of education'* that includes textbooks, evaluation systems and classroom practices, while the other is related to the '*governance aspect'* including what is delivered and how, funds allocation and their flow, monitoring and accountability mechanisms, decentralization, data/information systems, state capacity, community participation, etc. The policy intervention so far has been more on infrastructure development (i.e the essentials part) in order to raise the quality of education and these efforts have also been commendably successful in so many years.

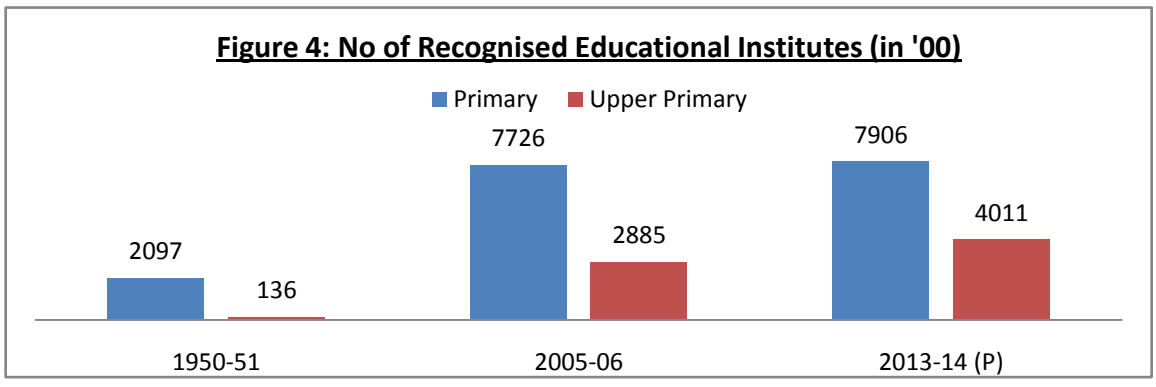
Ever since *Sarva Shiksha Abhiyan* (SSA) was rolled out in 2001, the universalization of elementary education (UEE) in India caught speed. SSA is being implemented in partnership with state government to reach every nook and corner of the country with education infrastructure. Thereby, ensuring universal access to education with equity.

TABLE-3: Number of Recognized Educational Institutions (in '00)

Year	Primary (I-V)	Upper primary (VI-VIII)
1950-51	2097	136
2000-01	2063	877
2005-06	7726	2885
2009-10	7788	3656
2013-14 (P)	7906	4011

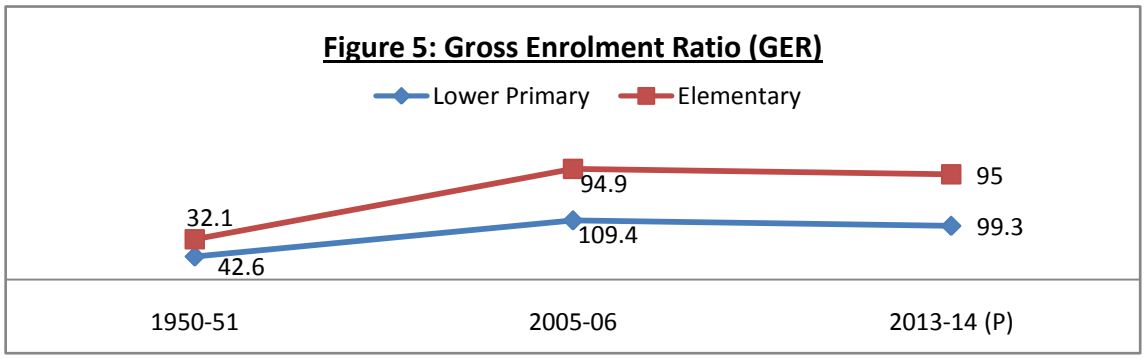
Source: Education Indicators 2014 available on MHRD website http://mhrd.gov.in/statist?field_statistics_category_tid=30

Note: P-Provisional



There has been tremendous increase in number of schools in our country, while gross enrolment in the elementary education also shot up many-fold. The Right to Education (RTE) being enforced since 2010, including provisions for free and compulsory education for all children of age 6-14yrs in their neighbouring school, certainly access to education for all has been successfully achieved on a large-scale on grounds. GER trends reflect the same.

TABLE-4: Gross Enrolment Ratio (GER) (All categories of students)		
Year	**Lower Primary Level (I-V, Age 6-10yrs)**	**Elementary (I-VIII, Age 6-13yrs)**
1950-51	42.6	32.1
2000-01	95.7	81.6
2005-06	109.4	94.9
2009-10	113.8	101.5
2013-14 (P)	99.3	95.0
Source: Education Indicators 2014 available on MHRD website http://mhrd.gov.in/statist?field_statistics_category_tid=30		
Note: P-Provisional		



However, with universal access to basic education being ensured, the issue of universal retention and delivery of learning still remains a grieving area. The learning in classrooms has been put to question on grounds of basic arithmetic and reading abilities of students.[19] Moreover, the micro statistics portray lop-sided development picture. For instance, the National Elementary Education Report Card 2013-14 published by District Information System for Education (DISE) gives the **ratio of Primary schools to Upper Primary schools** to be 2.04, which has implications like more single classroom schools and single teacher schools at Primary level (Std 1-5). In this context, the DISE further reports that there are 7.1% **Single classroom Primary schools** in 2013-14 while **Single teacher Primary schools** are 11.5% in same timeline.[20]

Presently, the scenario is such that due to excessive focus on providing the tangible essentials of education and less focus on governance aspects, there have been leakages in the education system from where we are losing the fundamental idea of education, i.e 'learning'. It is certainly, '*sab padhe'* but a long way to go to achieve '*sab badhe'*.

[19] ASER report 2014
[20] DISE report available at http://dise.in/Downloads/Elementary-STRC-2013-14/All-India.pdf

5.2. Drop-outs and Absenteeism: Leakage in Universal Retention

Though we have students enrolled for compulsory education, but trends for drop outs are worrisome. Higher levels of enrolment are not an absolute index of success for Universal Elementary Education (UEE), if the same %age enrolled does not complete compulsory education, as required under the RTE Act. Along with this, the absenteeism of children from school is also a bothering issue. This not only hinders their learning process but is also a leakage in the channel delivering required compulsory education. The RTE Act report in 2011 reported that only 57% children enrolled are going to schools regularly.[21] The EFA review report 2014 reported the average student attendance at the primary stage was 68.5% in 2006-07 and 76.2% in 2012-13, while the average student attendance at the upper primary stage was 75.7% in 2006-07 to 77.8% in 2012-13.[22] Reaching out to children who are child labours, bonded labours, migrant children or those being trafficked is still a huge problem. According to National Crime Records Bureau, every year around 65000 children fall victim to trafficking. Only 10% of such cases are registered with the police. Besides, around 43.5lac child labour in India (2011 Census), reflecting most of them must to be out-of-school (OOSC). Poor attendance, retention and transition ratios are caused due to these reasons essentially.

TABLE-5: Dropout rates (All categories of students)

Year	Classes I-VIII	Classes I-X
1960-61	78.3	NA
2000-01	53.7	68.6
2005-06	48.8	61.6
2009-10	42.5	52.7
2013-14 (P)	36.3	47.4

Source: Education Indicators 2014 available on MHRD website http://mhrd.gov.in/statist?field_statistics_category_tid=30

Note: P-Provisional

TABLE-6: Transition rate from Lower Primary to Upper Primary Education (in %)

Year	Transition rate
2007-08	81.1
2009-10	83.5
2012-13	86.7

Source: EFA review report 2014, available at *http://mhrd.gov.in/sites/upload_files/mhrd/files/upload_document/EFA-Review-Report-final.pdf*

There is a noteworthy fall in drop outs, but the figures in proportion to the current enrolment rate are still huge and bothering. With these figures, it is disappointing that though our children have got to see school unlike the past, but are still devoid of education. Here comes the plot of Child Labour, Child trafficking, etc. We cannot ignore these aspects when it comes to design the education policy, until we have concrete measures to tackle these evils in our society simultaneously. Further, it is also considerable here that different studies present different percentages of drop-outs, OOSC due to difference in their definitions. There is no standard definition for proper estimation of these indicators.

[21] http://indiatoday.intoday.in/story/only-57-per-cent-children-going-to-school-rte-act-report/1/134270.html
[22] http://mhrd.gov.in/sites/upload_files/mhrd/files/upload_document/EFA-Review-Report-final.pdf

The government has come up with several schemes for retaining children in schools, most important one being the Mid-Day Meal scheme (MDM). Under MDM scheme every child in every government, government aided, local body elementary schools and also children studying under Education Guarantee Scheme (EGS) centres, etc is served a cooked Mid day meal with minimum content of 300calories of energy and 8-12 gram protein per day for a minimum of 200 days in a year.[23] MDM scheme is a success to retain children in schools to some extent. Several studies have shown that MDM has encouraged enrolment and retention. However, the retention part is not yet adequate[24].

5.3. Guidelines on Learning and Learning outcomes:

Learning outcomes are statements that describe significant and essential learning that learners should achieve, and can reliably demonstrate at the end of a course or program. In other words, learning outcomes identify what the learner will know and be able to do/act accordingly by the end of a course or program. These are observable and measurable knowledge, skills and attitude in general (Lesch, 2012).

The efforts to define the learning aspects in the elementary education at the National level took place in our country since NCERT proposed the Minimum Learning levels (MLLs) in 1978. Thereafter, NCERT after using evaluations of the 'primary education renewal project' (1984) and guidelines of National Education Policy 1986 came up with '*Minimum Learning levels at Primary stage'*. These can be defined as expected learning outcomes described as observable terminal behaviours, and/or as learning competencies expected to be mastered by every child by the end of a particular class or stage of education. Now the important vision behind developing the MLLs way back in 1986 is noticeable here and is very relevant presently as well. It mentions that since 'there is a large fraction of population who do not get an opportunity of education beyond elementary level, it is necessary that they learn essentials of life and whatever they learn at this stage is sustained throughout their lives. Hence making them permanently literate, socially useful and contributing in the society'[25]. The MLLs were developed class-wise and subject wise later in 1992 for the elementary stage.

The National Curriculum Framework (NCF) since 2005 provides guidelines for making syllabi, textbooks and teaching practices[26]. The NCF 2005 is based on five basic principles, viz., connecting knowledge to life outside of school, ensuring that learning shifts away from rote methods, enriching the curriculum so that it goes beyond textbooks, making examinations more flexible and integrating them classroom life, and nurturing an overriding identity informed by carrying concerns within the democratic polity of the country[27]. Now, because elementary education is more a state subject[28] and considering the diversity among

[23] http://mhrd.gov.in/mid-day-meal
[24] http://mdm.nic.in/Files/OrderCirculars/Findings_of_Research_studies.pdf
[25] The 'Minimum Learning levels' Document available at http://wikieducator.org/images/6/61/The_MLL_Document.pdf or http://www.teindia.nic.in/mhrd/50yrsedu/r/2S/99/2S990301.htm
[26] NCF 2005 has been translated in 22 languages and influenced syllabi in 17 states of India. This exercise in States performed by SCERTs and DIETs.
[27] http://www.ncert.nic.in/rightside/links/pdf/framework/english/nf2005.pdf
[28] Education initially was a state subject, until 42nd Amendment 1976, when it was brought under the concurrent list. While the roles and responsibilities of the States in elementary education remained largely unchanged, the Central Government accepted a larger responsibility for Higher education, alongwith reinforcing the national and integrated character of education, promoting excellence at all levels of the educational pyramid.

Indian states, the efficiency and effectiveness of the exercise performed by State Councils for Educational Research and Training (SCERTs) and District Institutes for Education and Training (DIETs) to make the syllabi and textbooks based on NCF guidelines differs from state to state. Further there is no rigorous follow-up mechanism at the centre that effectively makes it meet the required essence. Here comes another disconnect in policy and practice, like there are *evidences of textbook based teaching pedagogies and more focus on completing syllabus in classrooms, thereby encouraging rote-learning and/or complex learning system irrespective of the five basic principles of NCF 2005 that holds syllabus and textbooks as mere tools for quality learning.* Due to such discrepancies in the system, the essence of MLLs and NCF 2005 gets diluted on grounds and restricts learning. Here the ability of teachers to comprehend the essence of MLLs and NCF in the classroom becomes very essential, where a massive failure in practice has been seen over time. When the RTE mandates to prepare professionally trained persons as school teachers, about 640,000 teachers in government schools across the country are yet to acquire qualifications prescribed by the National Council for Teacher Education (NCTE)[29](EFA review 2014). Moreover, there is huge shortage of teachers in many states, especially in states like Bihar, Uttar Pradesh, along with West Bengal, Odisha, Chhatisgarh and Jharkhand[30]. There is no *responsive mechanism* to identify the discrepancies wrt basic learning alongwith understanding the problems faced by teachers (the real actors) in the classrooms, in order to enable the defined essence of learning find practice.

5.4. Language Disadvantage:

One of the educational failures all over the world is primarily related to mismatch of between home language and language of formal instruction. State policies often recognize importance of educating in regional languages in learning but their efficacy in practice is generating the problem of exclusion of languages. With this, there is a hegemonic position of dominant languages and eventually pushing the other local languages and dialects to inferior status, assuming that since the script is same the language is same (Mohanty *et al* 2009: 281). World Bank rightly pointed out: *'Fifty percent of the world's out of school children live in communities where the language of the schooling is rarely, if ever, used at home. This underscores the biggest challenge to achieving Education for All (EFA): a legacy of non-productive practices that lead to low levels of learning and high levels of dropout and repetition"*[31].

When several studies report a huge percentage of children unable to perform basic arithmetic calculations, there is a wide scope of possibility that most of these children could not comprehend the problem questions due to language constraints, who otherwise do perform these arithmetic calculations in daily life.

Delivery of education in the local language and dialect of the students not only ensures their retention but learning also. This will certainly bring parents' participation, especially where the child is the first generation learner. Moreover, the child will develop his/her thinking and analytical skills. Making learning more user-friendly for children can come

[29] http://mhrd.gov.in/sites/upload_files/mhrd/files/upload_document/EFA-Review-Report-final.pdf
[30] http://www.hindustantimes.com/india-news/acute-shortage-of-primary-teachers-in-india-up-bihar-worst-hit-states/article1-1296549.aspx
[31] The World Bank, 2005: "Education Notes: In Their Own Language, Education for All". Available at: http://siteresources.worldbank.org/EDUCATION/ Resources/Education-Notes/EdNotes_Lang_of_Instruct.pdf

through the connection brought by the language of instruction. Once they develop an understanding to the basic learning components, preparing them for better communication skills in dominant languages and global languages shall be easy.

Now this cannot be met directly through central or state policy designs but ofcourse through policy implications. For instance, making regional language compulsory medium of instruction in schools is not a concrete way-out (eg, Karnataka govt, 2015[32]), rather teaching pedagogies in the classroom and ability of teachers to deliver the learning essentials in a child-friendly manner shall help. Certainly, SCERTs also play a crucial role while designing the curriculum for the State schools. There is a remarkable lack of phonological awareness and dearth of innovative practices in our schools to meet the required in this context. This Language disadvantage deters learning and also UEE.

5.5. Teacher's availability and training :

The prime component of education is a Teacher. They are the real actors on the fields. Several initiatives have been taken, basically wrt teachers' availability. SSA has spent substantially over-time on recruitment of teachers and additional teachers, but the absence of effective monitoring in this process has brought lop-sided development amongst states. Some districts have achieved apt **Pupil-Teacher Ratio** (PTR) while some are way behind. The average PTR in 2006-07 was 36:1 and reached 25:1 in 2013-14[33]. Out of 19.78lac sanctioned teacher posts under SSA, 15.59lac teachers have been recruited by States/UTs upto 31-03-2015.[34] Bihar and U.P are worst hits, requiring 1.75lac and 1.24 lac teachers to be recruited respectively, by the end of September 2013.[35]. Bihar has the highest of all PTR at 53:1, followed by Uttar Pradesh and Jharkhand at 39:1 in 2012-13[36]. Bihar, Jharkhand, Madhya Pradesh and Uttar Pradesh have largest **percentage of schools with higher PTR** (>30 at Primary level and >35 at Upper Primary level). Bihar is not only the worst case on grounds of the PTR but also in terms of student-classroom ratio.

Engagement of teachers in non-teaching assignments (including contractual teachers) in all states has gone down in recent years. Overall, %age of teachers engaged involved such activities 2011-12 was 10.13 with 19days of average involvement, which went down to 2.48% in 2013-14 with 16days of average involvement[37]. However, again in states like Bihar, Uttar Pradesh and West Bengal the situation is worrisome, when already they have shortage of teachers. Since teacher recruitment and management entirely depends on State governments, there is no lead taken by Centre to induce uniformity of essential norms in this regards. There is lack of competition amongst states and then, there is unequal development in the field of EE amongst states.

Further quoting here NSDC's findings on Skill-gaps amongst teachers in School Education[38] as below:

[32] http://timesofindia.indiatimes.com/india/Karnataka-schools-set-to-take-language-policy-to-court-policy/articleshow/46790948.cms
[33] *Ibid 14*
[34] Information given in Lok Sabha by Minister MHRD on 22-7-2015 (http://pib.nic.in/newsite/PrintRelease.aspx?relid=123511)
[35] Lok Sabha Starred Question No. 188 Answered on 18.12.2013
[36] http://www.azimpremjifoundation.org/pdf/PTR%20report.pdf
[37] DISE 2013-14: Flash statistics
[38] NSDC Report, Vol 8. 2015. '*Human Resource and Skill Requirement in Education and Skill Development Sector (2013-17, 2017-22)'.*

"*There is a sense of prevalent low quality of talent entering training institutions in recent years, and subsequently joining schools. There is a severe talent demand-supply mismatch, i.e lack of interest in joining the teaching profession, combined with a mushrooming demand for teachers."*

This report highlights the skill-gaps wrt quality of teaching--what and how to teach, gender sensitivity in classroom, understanding adolescence, child psychology and adaption to technology to blend learning in classrooms.

Apart from combating language struggle in teaching pedagogy, another challenge for our teachers in our elementary classrooms is that they are multi-age, multi-grade and multi-cultural, and hence the challenge is multi-dimensional, in the light of RTE. The only way to better outcomes can be seen through efficient and able teachers. Therefore, teachers' professional development has to be emphasized. Teachers' training in India is primarily governed by NCTE. It lays down norms and standards for various teacher education courses, minimum qualifications of teacher educators, course, content, duration, etc. For in-service training, India has large network of government-owned teacher training institutions (TTIs). The **%age of professionally trained regular teachers** is 80.06 in 2013-14 (78.58 in 2012-13), while that of **contractual teachers** is 55.55 in 2013-14 (54.01 in 2012-13). Bihar, Uttar Pradesh and West Bengal again present a sorry figure in this context. In the light of these statistics, India's rate of **teachers' absenteeism** must be considered here, which is 25% on an average, while the global average is 20%.[39] Absenteeism, when we already have shortage of teachers (both quantitatively and qualitatively), is like a pit in a half filled bucket.

Now, the other lacunae in the system come from the qualitative aspect pertaining to teachers' training, where there is lack of uniformity in the training imparted. Then there is pressure to implement RTE provisions in classrooms on the teachers when they are not duly empowered with the know-how of the same and their implications. The **in-service training** received by teachers is very low. **%age of teachers received in-service training** has gone down from 34.23% in 2011-12 (including contractual teachers) to 22.03% in 2013-14[40], simply implying that they are not equipped to meet the contemporary needs of children and education in the classrooms.

Indeed, we need more teachers, more professionally trained and equipped teachers to meet the aspirations of sustainable development of the country where certainly education is the key.

5.6. Decentralization- Top-down and Bottom-up linkages :

It is desirable that all children must have learnt basic reading, writing and numeracy skills by the end of primary schooling, and then RTE u/s 4 provides to admit out-of-school children in **age-appropriate class**. However, the provision is well supported by the facility of **Special Training** for maximum 2-years to enable the child to be at par with other

[39] http://infochangeindia.org/education/news/25-of-indian-teachers-bunking-school-world-bank-report.html
[40] *Ibid 22*

children[41]. This special training is like ladder to help the child climb the learning levels, especially for out of school children and first generation learners[42].

When a considerable percentage of school dropouts reflect lack of child's interest in school, negative experience in schools and a sense of under-achievement, the provision for special training u/s 4 of RTE is a measure to bridge the gap. Moreover, the **non-detention policy** (**NDP**) u/s 30(1) of RTE removes the de-motivation caused due to demotion or detention or expulsion of the child[43]. The NDP is though supported by **Comprehensive and Continuous Evaluation (CCE)** u/s 29(2(h)).

All these policies are indeed commendable but seem fancy when viewed from the ground-level. In practice they lose fervor as they are not backed by practical support systems to yield desired outcomes, neither there is any responsive system to tackle the real-time issues in their implementation. Considering the given realities of Indian schools, these provisions are seen to hinder the quality of learning at the ground level, since they are not finding proper practice. When NDP comes to remove the de-motivation to study, it turns out to motivate children and parents not take studies seriously (Geeta Bhukkal Committee Report, 2014). In addition to this, the Special Training provision to Out-of school children doesn't find effective practice. There are evidences in form of persistent repetition rates in several states post 2010, i.e. RTE enforcement[44], indicating that there is divergence in NDP policy implementation through states' policies. Similar, divergence is reported from schools in different states wrt provision of admission to age-appropriate class or CCE[45]. Significant aspect here is that several stakeholders in elementary education in different states have reflected issues in implementing several RTE provisions, for eg, NDP, practicing CCE[46], etc. There is resistance and lack of clarity at the ground level, and we are missing on the zone of dialogue needed to develop consensus and understanding on these issues. Hence, there is a strong need to find such missing links in the chain for efficient implementation of the policy initiatives and link the top-down and bottom up approaches.

6. Studying two models of states:

From the contemporary issues presented in the previous section, it is evident that there is lack of uniformity in basic indicators in the delivery of UEE across states in the country. Not only inter-state, there are intra state differences also. The **hypothesis** derived from these observations is that '*there have been disconnect in the policy initiatives undertaken wrt*

[41] For example, if a 10-year old child was admitted to class IV, and received two years of Special Training till age 12, an assessment may be made as to see whether the child could cope better in class V or VI in the formal school, and then the child is appropriately placed. If such child is found suitable for class V, she/he will be placed in class V, rather than mechanically being placed in class VI – because if she/he is mechanically placed in class VI, she/he might again drop out, and that would defeat the whole purpose of this provision. That is the rationale for the provision that allows the child to be provided free and compulsory education even beyond age 14. Even after a child is appropriately placed in the formal school she may continue to receive special attention by the teacher to enable her to successfully integrate with the rest of the class, academically and emotionally.
Also, child above 10years of age and never enrolled to a school is advised to be provided with residential Special Training (ST). Even so for children whose home environment is not conducive for learning, ST is advisable. Eg, for migrating families children seasonal option for ST is advisable.

[42] http://ssa.nic.in/rte-docs/Guidelines%20for%20Special%20Training%20_2_.pdf

[43] http://indiacode.nic.in/amendmentacts2012/The%20Right%20to%20Free%20and%20Compulsary%20Education%20Act.pdf

[44] DISE report 2013-14.

[45] Several studies conducted give evidences on divergence from RTE provisions in several states post RTE enforcement in 2010. For eg. Mohanty 2010, Nawani 2013, Singh 2013, Sharma 2014.

[46] Singh, A.K (2013). Teachers' inhibition and child's democratic right: CCE and NDP under RTE Act 2009.

Elementary Education over time. The variables (in EE) could not be influenced in the desired direction effectively and were not even dealt at the same time.' School education primarily being more a state-subject, the SSA and RTE provisions could not reach the grounds uniformly and there is difference in the level of development wrt indictors of school education across Indian states.

To prove the hypothesis, in the light of the contemporary issues and concerns presented in the previous section, we are comparing relevant variables of **two least developed states (Bihar, Uttar Pradesh) and two most developed states (Himachal, Kerala)** wrt to their performance in Elementary Education, over-time after enforcement of RTE:

TABLE-7: Comparison of EE Indicators and other relevant Socio-Economic Indicators (in selected states of India; Mean of averages between 2010-2014)

Sl	*Sources*	Variables[47]	Least Developed States (LDS)[48]	Most Developed States (MDS)[49]
1	*MHRD, SSA & DISE*	**Gross Enrolment Ratio (GER)**	89.39	99.62
2	*-do-*	**Pupil-Teacher Ratio (PTR)**	55.88	16.63
3	*-do-*	**%age of Trained Teachers (including Para teachers)**	71.46	96.53
4	*MHRD, SSA, DISE & Planning Commission*	**DROPOUTS**	28.64	0.62
5	*ASER*	**%age of Schools' Classroom-Teacher Ratio (CTR) complying RTE norms**	67.95	81.01
6	*ASER*	**READING (% of Children Class I-VIII reading Std II Text)**	34.57	58.38
7	*ASER*	**ARITHMETIC (% of Children Class I-VIII can divide)**	22.96	37.18
8	*Planning Commission, SRS*	**Infant Mortality Rate (IMR)**	51.00	25.17
9	*RBI, Planning Commission*	**POVERTY (% population BPL)**	38.52	9.16
10	*ASER*	**Not in PRE-SCHOOL (% of Children 3-6 yrs of age)**	24.27	5.06
NOTE: LDS- UP and Bihar; MDS- Himachal and Kerala.				

[47] Variables in the column are ARITHEMTIC MEANs of averages of respective data from 2010-2014 in the respective states under each head.
[48] Least Developed States here include Arithmetic Means for averages of respective data in *Bihar and Uttar Pradesh*.
[49] Most Developed States here include Arithmetic Means for averages of respective data in *Himachal and Kerala*.

Let us study the above data in three-parts:

6.1. ***Inputs:*** *Function X*

In this sub-section we study trends in **GER, PTR and % of Trained Teachers (including Para teachers)** in the respective states for comparison. The data above clearly portrays disconnect in policies in different states, and thereby yielding different results. When the most developed states (Himachal, Kerala) have average GER around 99.62 over time (2010-2014), the least developed states (Bihar, Uttar Pradesh) are at 89.39.

TABLE 8: Comparison of Gross Enrolment Ratio (GER) over time (2010-2014) (in selected states of India)

Year	Least Developed States			Most Developed States		
	Bihar	Uttar Pradesh	Average	Himachal	Kerala	Average
2010	102.90	109.50	**106.20**	111.00	96.20	**103.60**
2011	87.8	74.40	**81.10**	102.10	90.90	**96.50**
2012	76.0	87.10	**81.55**	101.40	97.30	**99.35**
2013	92.60	84.80	**88.70**	101.14	96.90	**99.02**
2014	-	-	-	-	-	**-**

Sources: MHRD, SSA and DISE Statistics.

Table-8 above clearly portrays the inconsistency in GER in the least developed states (*Standard Deviation being 11.74*), while the most developed states have been consistent (*Standard Deviation is 2.94*). It is noteworthy that the latter had high GER since RTE implementation, while the former states reported high enrolment at the time of RTE enforcement, but thereafter the GER in these states went considerably down. However, these states (Bihar, UP) seem to climb high GER trends lately, reflecting state activity to induce enrolment over time.

Further considering the Pupil-teacher ratios in these states, when the most developed states have kept the ratio low since the beginning (Kerala reduced it further from a low at 24 in 2010 to even lower at 15 in 2013), the least developed states have teacher-constraints (especially, Bihar, which consistently has very high PTR).

TABLE 9: Comparison of Pupil Teacher Ratio (PTR) over time (2010-2014) (in selected states of India)

Year	Least Developed States			Most Developed States		
	Bihar	Uttar Pradesh	Average	Himachal	Kerala	Average
2010	64	74	**69.00**	15	24	**19.50**
2011	65	58	**61.50**	13	24	**18.50**
2012	54	43	**48.50**	12	19	**15.50**
2013	51	38	**44.50**	11	15	**13.00**
2014	-	-	-	-	-	**-**

Sources: MHRD, SSA and DISE Statistics.

However, both the least developed states have considerably brought down their PTR from a very high level, after RTE enforcement. These states have appointed Para teachers to meet the

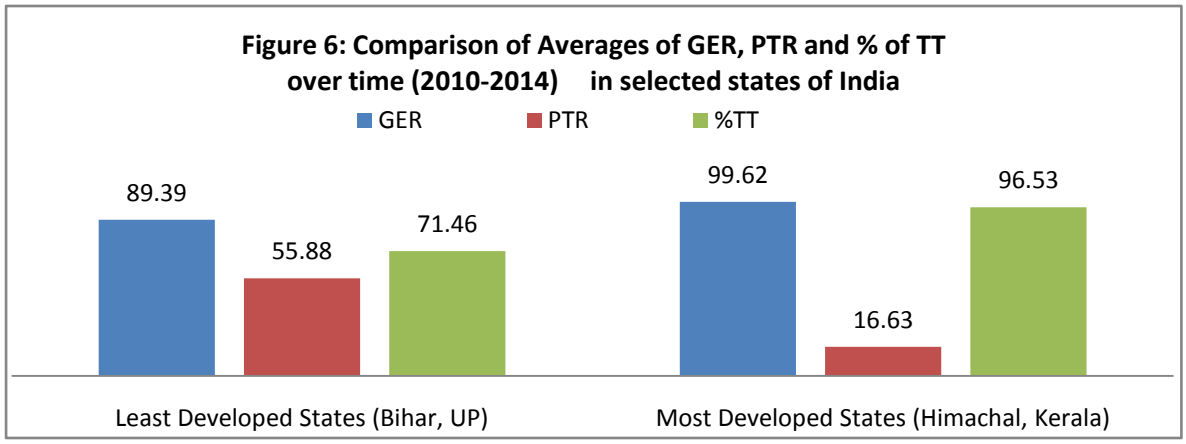
dearth of teachers, as a cost-effective way to meet the requirements. With this, it becomes significant to view % of trained teachers in these two groups of states.

TABLE 10: Comparison of % of Trained Teachers (including Para teachers) over time (2010-2014) (in selected states of India)

Year	Least Developed States			Most Developed States		
	Bihar	Uttar Pradesh	Average	Himachal	Kerala	Average
2010	88	97	**92.50**	100	100	**100**
2011	88	97	**92.50**	100	100	**100**
2012	46.30	54.40	**50.35**	90.80	89.10	**89.95**
2013	42.50	58.50	**50.50**	92.40	99.90	**96.15**
2014	-	-	-	-	-	**-**

Sources: MHRD, SSA and DISE Statistics.

While the most developed states always focused on providing professionally trained teachers for EE, the least developed states could not provide for the same. Moreover, they failed badly when RTE provisions raised the GER and created requirement for more teachers. The standard deviation for least developed states in this time period for % of Trained Teachers was critically high at 24.29, while the most developed states tried best to maintain consistency and their standard deviation stood at 4.74 only.



The Function X presented here, can be summarized as:

- Least Developed States (Bihar, UP): While the GER is rising, there is inadequacy of teachers. PTR is sick. Further, there is acute dearth of trained teachers. There is inconsistency in meeting the requisites.
- Most Developed States (Himachal, Kerala): While the GER is rising, there are adequate provisions of having professionally trained teachers, at the same time.

This portrays the difference in approaches of state policies that deter the guidelines provided by the Central policies on critical subjects like education, while the centre misses linkages to ensure basic uniformity in the policy framework.

*6.2. **Desirable Output**: Function Y*

After discussing the inputs function, it is viable to consider the function of desirable outputs, which includes here **Reading and basic Arithmetic skills** of children in these two groups of states. Annual Status of Education Report (ASER) conducts a study in elementary schools in India to assess various parameters since 10years. Considering their data here for comparison, as below:

TABLE 11: Comparison of Reading Skills (% of Children Class I-VIII CAN READ Std II Text) over time (2010-2014) (in selected states of India)

Year	Least Developed States			Most Developed States		
	Bihar	Uttar Pradesh	Average	Himachal	Kerala	Average
2010	41.90	32.20	**37.05**	58.30	63.50	**60.90**
2011	35.50	32.60	**34.05**	57.00	60.80	**58.90**
2012	33.50	30.80	**32.15**	56.70	55.80	**56.25**
2013	34.40	33.20	**33.80**	57.30	60.00	**58.65**
2014	37.60	34.00	**35.80**	59.80	54.60	**57.20**

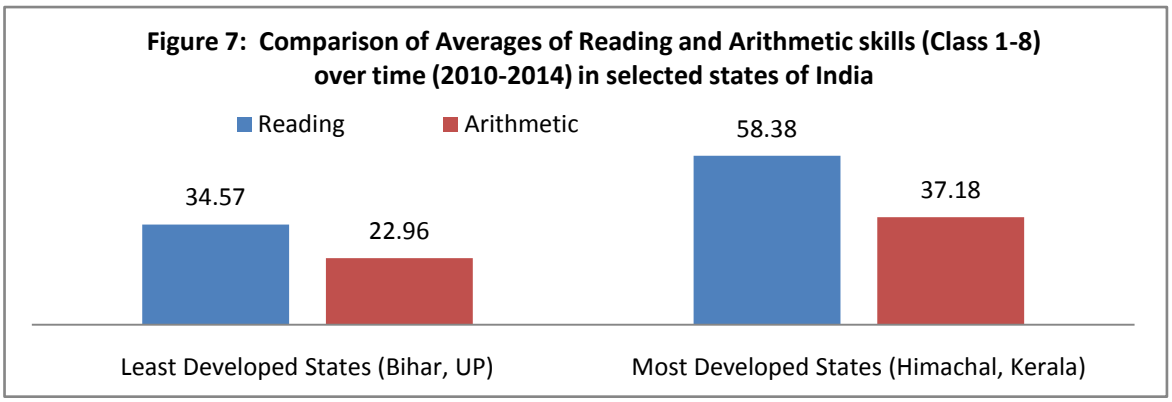
Sources: ASER Statistics

TABLE 12: Comparison of Arithmetic Skills (% of Children Class I-VIII CAN DIVIDE) over time (2010-2014) (in selected states of India)

Year	Least Developed States			Most Developed States		
	Bihar	Uttar Pradesh	Average	Himachal	Kerala	Average
2010	37.90	19.60	**28.75**	46.00	42.20	**44.10**
2011	27.30	16.10	**21.70**	43.60	33.50	**38.55**
2012	24.80	14.10	**19.45**	37.40	39.10	**38.25**
2013	26.90	18.30	**22.60**	36.40	30.60	**33.50**
2014	26.70	17.90	**22.30**	34.30	28.70	**31.50**

Sources: ASER Statistics

On comparing the variables in function Y of *desirable outputs*, it is seen that reading and basic arithmetic skills in both groups of states are not remarkable. The Most developed states (Himachal, Kerala) also have low averages in reading skills over time (2010-14) at or below 60%, while the least developed states (Bihar, UP) perform even worse with reading skills over time (2010-14) being below 40%. Same goes with respect to basic arithmetic skills, where the most developed states have a low average over time (2010-14) below 45%, and the least developed states have even worse averages over time (2010-14) below 30%. It is noticeable here that both the groups of states, inspite of policy interventions do not considerably deflect their performance in terms of these basic learning parameters. This also reflects the lack in policy focus, which is more on tangible aspects. The standard deviation for reading skills in least developed states over time (2010-14) is 1.90, then in most developed states also it is 1.78, while that for arithmetic skills in least developed states are 3.46 and for most developed states are 4.92. Still the most developed states have considerably higher averages for both these variables (reading, arithmetic) than the least developed states.



The Function Y presented here, can be summarized as:

- Least Developed States (Bihar, UP): Poor reading and arithmetic skills.
- Most Developed States (Himachal, Kerala): Low reading and arithmetic skills, but considerably higher than the least developed states.

The comparison here portrays that when the most developed states are around 68% higher than the least developed states in reading skills, and in arithmetic skills also they are around 62% higher than the least developed states, they are still considerably low on an average. This marks the huge hollow in our education system, especially when several reports question the employability skills of Indian graduates. These statistics reflect that basic compulsory education in our country is not empowering our children with basic skills of understanding, articulation, communication and critical thinking. In the section on Education philosophy of India and that on Skill component in this report, the importance of these skills through the EE has already been mentioned. Therefore, it becomes critically vital for the system to establish an education system that delivers these essential skills through the compulsory level of education.

*6.3. **External factors**: Function Z*

It would be biased if the two groups of states here are judged only on variables directly related to EE. There are certain external factors related to the socio-economic status of the state that affect the state policies and performance thereby. In this section for comparison, certain closely related variables have been taken into consideration, viz., **Infant Mortality Rates (IMR), Poverty rates (% of population BPL) and Not in Pre-school (% of children 3-6years not in pre-school).**

TABLE 13: Comparison of IMR (2010-2014) (in selected states of India)

Year	Least Developed States			Most Developed States		
	Bihar	Uttar Pradesh	Average	Himachal	Kerala	Average
2010	48	61	**54.50**	40	13	**26.50**
2011	44	57	**50.50**	38	12	**25.00**
2012	43	53	**48.00**	36	12	**24.00**
2013	-	-	**-**	-	-	**-**
2014	-	-	**-**	-	-	**-**

Sources: Planning Commission Databook, Sample Registration System Reports.

TABLE 14: Comparison of Poverty rates (2010-2014) (in selected states of India)						
Year	**Least Developed States**			**Most Developed States**		
	Bihar	Uttar Pradesh	Average	Himachal	Kerala	Average
2010	53.24	37.66	**45.45**	9.47	12.03	**10.75**
2011	33.74	29.43	**31.59**	8.06	7.05	**7.56**
2012	-	-	**-**	-	-	**-**
2013	-	-	**-**	-	-	**-**
2014	-	-	**-**	-	-	**-**
Sources: Planning Commission Databook, Reserve Bank of India Reports.						

The least developed states have high IMR, than the most developed states of India selected here for comparison. This can be directly related child health and productivity in their later age in these states. However, states like Himachal are not doing extensively well in controlling IMR, but still doing considerably well wrt education parameters, thereby paving way for sustainable development. Similarly, the least developed states have considerably higher %age of BPL population than the most developed states. This can be taken as an indicator reflecting that children in least developed states are more devoid of access over resources than those in most developed states in India. It must be noted here that when the poorer states face more quality education issues, it is a vicious circle of poverty, because poor education is a preservative for poverty. Education must be viewed as a resource that shall surpass poverty.

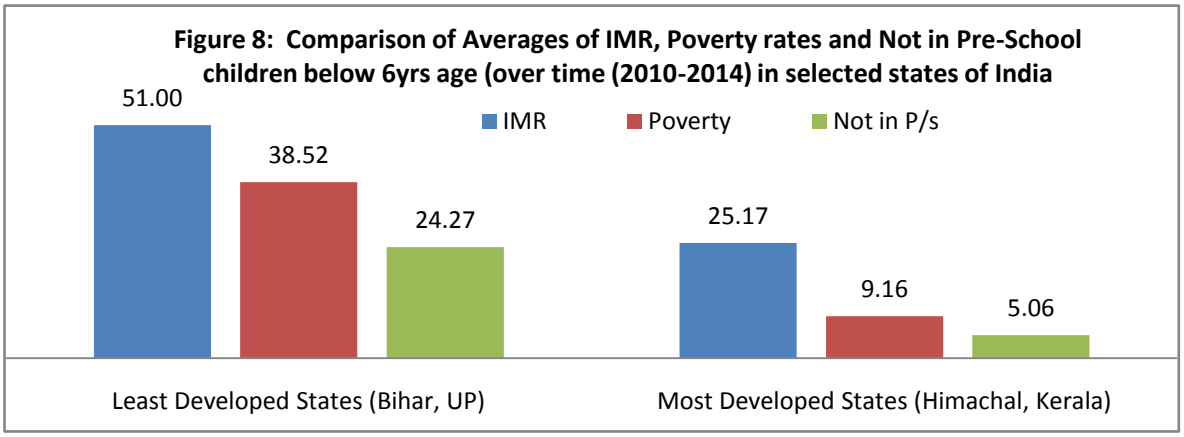
TABLE 15: Comparison of Not in Pre-School (2010-2014) (in selected states of India)						
Year	**Least Developed States**			**Most Developed States**		
	Bihar	Uttar Pradesh	Average	Himachal	Kerala	Average
2010	13.65	34.80	**24.23**	4.80	5.65	**5.23**
2011*	3.50	11.90	**7.70**	0.60	0.80	**0.70**
2012	18.30	42.20	**30.25**	7.10	0.70	**3.90**
2013	22.40	36.30	**29.35**	7.25	4.00	**5.63**
2014	25.43	34.18	**29.81**	6.90	12.82	**9.86**
Sources: ASER Statistics. **Data for2011 accounts % of children not in pre-school from age 5-6years, while rest cover data for age 3-6years.*						

The data for variable taken in Table-15 might not seem closely related to quality of elementary education, but might play a very significant role in delivering variables of desirable outcomes (Function Y). The least developed states here have higher % of children below 6years of age not in pre-school (around 30%), while that in most developed states is very less (below 10%).

Since, pre-schooling in India is not compulsory and looked after by Ministry of Women and Child Welfare under National Early Childhood Care and Education Policy (ECCE), different states have implemented the policy with different approaches which is primarily seen to focus on the health. The preamble of ECCE policy document itself mentions: "*Early Childhood Care and Education (ECCE) is an indispensable foundation for lifelong learning and development, **and has critical impact on success at the primary stage of education.** It therefore becomes imperative to accord priority attention to ECCE and invest adequately by providing*

commensurate resources.''[50] The same is evident by the performance of the states compared here, when the most developed states having most of the children below 6years of age in pre-school, performance is better wrt learning indicators (Table 9, 10) at Elementary Education level. It is to be noted here that in Kerala, RTE covers children pre schooling also. At the same time, the least developed states which have a higher % of children below 6years out of pre-school, have poor performance wrt to learning indicators covered in Function Y in the previous sub-section.

Figure 8: Comparison of Averages of IMR, Poverty rates and Not in Pre-School children below 6yrs age (over time (2010-2014) in selected states of India



The Function Z presented here, can be summarized as:

- Least Developed States (Bihar, UP): Poor IMR, High Poverty rates and higher % of children below 6years not in pre-school.
- Most Developed States (Himachal, Kerala): Better IMR, Low Poverty rates and lower % of children below 6years not in pre-school.

There can be other external factors as well, like Under five mortality rates, Infrastructural development of the state, Political stability in the state, Child labour in state, etc, which are likely to influence the states' policy of education and impact of these policies.

The figures above evidently prove the subject hypothesis, that all the variables (in EE), considering first, the input (function X) variables (GER, PTR and % of TT) here, could not be influenced in the desired direction over-time, inspite of policy provisions providing for them. This can be seen as a major reason for uneven learning variables (Reading, Arithmetic) of desirable outcomes (function Y). Also, we cannot miss the influence of external factors (functions Z) that seem to considerably affect the variables in function X and Y both indirectly, which further influence the practices and policy implications at the ground level.

Hence, it can be concluded that there is a gap in policy and practice thereby, reflecting several linkages being missed. While the central guidelines provides for a comprehensive picture it misses out practical loopholes, and there is no mechanism for states to constantly resolve application related issues effectively, and see a larger picture.

[50] http://wcd.nic.in/schemes/ECCE/National%20ECCE%20Policy%20draft%20(1).pdf

7. Possible road-map

As seen through the study so far, indeed both Sarva Shiksha Abhiyan and Right to Education are great landmarks in the policy timeline of basic education in India. Ever since these initiatives were rolled out major developments in this sector have occurred. Though there is still a long way to go and meet aspirations of this huge nation through education and skill development essentially through Elementary education. The contemporary challenges so far can be seen in regards to the governance aspects of the policies. Since implementation of elementary education policies vastly depend on state governments and the decentralized mechanisms, the guidelines issued from the central level do not reach the grounds in the desired form. Hence there is unequal development across states, and further there are huge gaps reported in learning levels of children in our classrooms which further differs from state to state, district to district. Thereafter, the education system is not able to efficiently create a strong base for general employability skills in children which can build their capacities for acquiring professional skills after completing compulsory elementary education.

Considering the education policies framed post-independence, the idea of developing a comprehensive and sustainable education system has been consistent. However, the implementation mechanisms/efforts of these policies in order to reach the last child in the country could not be consistent and aptly balanced. The hypothesis demonstration in the study comparing two models of states reflects the same.

The new education policy framework is in pipeline[51], trying to assimilate all such discrepancies comprehensively from all stakeholders from all levels of the education system. Considering the failure of elementary education to deliver basic learning to children in schools, the central government has also come up with a national sub-programme to SSA '*Padhe Bharat, Badhe Bharat'* targeted to improve learning wrt 'Early Reading and Writing with Comprehension' and 'Early Mathematics'[52], and '*Pandit Madan Mohan Malviya National Teacher's Training Programme'* to fill gaps wrt teachers' training[53].

After understanding the backdrop of education policy wrt to elementary education in India post-independence and the contemporary issues, diversity of Indian states (primarily, socio-economic), needs of developing India, along with collating these with the Indian philosophy of education in this study, there is a list of possible suggestions to bridge the disconnects between the policies and practice on grounds, advocating providing a strong base for 'skills for life and livelihood' through Elementary Education. These can be mentioned under three broad heads, which are inter-dependent on one-another in certain aspects. These categories are:

1. Policy Reforms
2. Governance through 'Mission based Approach'
3. Innovation

These recommendations are categorized for better presentation. However, none of the category can be considered in isolation from other categories. These are closely inter-dependent. Beginning with the first category of recommendations wrt policy reforms, as below:

[51] http://mhrd.gov.in/consultation-framework
[52] http://ssa.nic.in/pabminutes-documents/Padhe%20Bharat%20Badhe%20Bharat.pdf
[53] http://pib.nic.in/newsite/PrintRelease.aspx?relid=107984

7.1. Policy Reforms :

"Policy guidelines should consider Education as a resource to transcend poverty."

Ever since RTE was enforced, there have been debates on several provisions under the Act in the academia and political circles. Other than this, the existing debates of that time over education policy framework still continue to create logjam which needs to be resolved. During this study, several such issues were noticed and collected from expert forums, participation, observation and readings. In this sub-section of the report, most of them are considered alongwith most feasible and viable way-forward as learnt through the study.

7.1.1. Need for a **paradigm shift in policy focus** wrt Universalization of Elementary Education from focus on bringing universal access through investment in civil work to focus on bringing universal access through investment in developing better learning based infrastructure and teaching aids. This directly implies to spend more on providing adequate number of trained teachers, including sufficient arrangements for in-service training. Also, it includes spending on innovative teaching techniques and research to develop new pedagogies. Inducing State reporting and incentive mechanism through this perspective.

7.1.2. The contemporary issues related to certain RTE provisions and others needs to be resolved through a comprehensive dialogue with relevant stakeholders of EE. This also signals need for establishing a **Pan India Responsive Mechanism (PIRM)** at the centre to perceive implementation constraints of various policy provisions henceforth to the last level of the system and to provide real time problem solving assistance in a cost effective way. Presently, these mechanisms are at varied levels, and there is no spontaneous synchronization amongst them. The proposed mechanism shall certainly include the related existing mechanisms at CBSE, NCERT-SCERTs, NCTE-DIETs, MHRD (SE&L) and State Education Departments, involving all kinds of teachers' associations, State Resource Persons (SRCs), Parents' communities, and other civil society components working extensively on the grounds, considering findings of CABE ofcourse.

7.1.3. **Non Detention Policy under RTE** has become one of the most controversial clauses, quoting that it deters learning in classrooms and discourages teachers. Considering the provision in the light of existing facts that most children enrolled are first generation learners, and then also considering the provision for Age-appropriate admission (supported by Special Training provision) under RTE, NDP is certainly contradictory to the viable learning process for children from vulnerable sections. However, it is very well supported by Continuous and Comprehensive Evaluation (CCE). Not detaining children throughout the learning channel (Std I-VIII) is definitely giving way to producing huge quantity of children with poor knowledge base and skills for the secondary level of education or even for the market as a poor human resource.

It is better to detain children at upper primary levels, and restrict NDP to lower primary level. The study concludes this after interviewing several stakeholders and experts in the field of elementary education.

7.1.4. AVAILIBILITY of TRAINED TEACHERS:

The biggest lop sided development wrt to delivering UEE is seen in providing adequate numbers of professionally trained teachers along with providing adequate infrastructure. States suffering shortage of teachers resorted to mass-scale employment of para-teachers to meet the requisites of RTE Act. Firstly, the legislation needs to **provide maximum ratio of Regular to Contractual teacher alongwith Pupil-teacher ratio (PTR) based on the capacity of schools.** It is necessary for obligating the states to meet minimum requirements, and bring uniformity in fundamental input indicators for teachers across states. Secondly, there is need to **revamp teacher's training** (pre-service and in-service both) to include updated pedagogical methodologies, tools and skills**.** Most underdeveloped states in India have been seen to lag behind in quality teacher's training. Quality of B.Ed and M.Ed colleges across India is also very poor. We support abolishing present distance learning mode for B.Ed. It could be made available through Open schooling for working candidates.

Thirdly, stringent screening of candidates who take TET will ensure best candidates to get into the profession of teaching. Teacher training curriculum also need to be updated and made more comprehensive, contemporary and coherent**.** Infact, quality of teacher assessment needs to be improved. We back the recommendation of NSDC[54] in this regards that mentions to establish a **National level academic body for periodic assessment of teacher education programmes across states**, both pre and in-service. Then other governance related issues wrt availability of trained teachers are covered in next sub-section.

7.1.5. PRE SCHOOLING:

Though RTE provides for compulsory education for all children age between 6-14 years, states like Kerala have implemented the RTE for children age 0-14years. The RTE Rules of Kerala (2010)[55] covers the provisions of RTE Act 2009 and provisions of Integrated Child Development Services and Early Childhood Care and Education of Ministry of Women and Child Development. It also includes compulsory education for children with disability upto 18years of age. The RTE rules of Kerala are most comprehensive ones in India, thereby, providing compulsory education to children since their birth.

World Conference on Education for All (1990)

The pledge taken to ensure education for all by year 2000 at this conference by 155 countries in Thailand, including India, promised:

1. *Care for development and early education of children in age group 0-6years;*
2. *Life skills for youngsters;*
3. *Education to improve overall quality of life; etc.*

(Source: Rai, Ramakant. May 2012)

We hence advocate **extending compulsory education in form of pre-schooling** within the existing framework of Early Childhood Care and Education by Ministry of Women and Child Development, across all states through *Anganwadis*, for children atleast 3-6years. This recommendation falls within existing infrastructure, only seeking provisions for availability of Trained Instructors for these pre-schools.

[54] NSDC Report. Volume 8. 2015.
[55] http://www.education.kerala.gov.in/Downloads2011/rte/Final_RTE-Rules_14.1.2011.pdf

Pre-schools or Anganwadi centres would be incubation centres for children providing for 'long term development and learning by facilitating an enabling and stimulating environment for lifelong learning'[56]. It is a known fact that children learn most during their growing tender age. This compulsory pre-schooling model will certainly provide ground to curb child-labour, instill quest for learning in childhood and tap the child's mind at a very tender age for lifelong learning.

However, we do not advocate extending RTE beyond age14/elementary level to secondary level at this point of time in India. Instead, it is better to provide compulsory open schooling for children dropping out after age14 beyond elementary level that too focusing on vocational education through NIOS.

7.1.6. **Critical Age group:** After proposing compulsory education to cover pre-schooling for children in age-group 3-6years, and restricting NDP to Lower Primary Level, we also propose to identify a 'critical age-group' covering say age-group 6-10years (Lower primary level essentially) and pursue strict, continuous monitoring based on well defined learning indicators in schools for this age group under the policy framework. This can come through central guidelines and applied through states with adaptations based on their classification of lower-upper primary level.

7.1.7. Miscellaneous: When the policymakers are worried to bring the Out-of School Children (OOSC) to schools, it is more worrisome that different studies give different percentages of such children. It is hence advisable that there should be centralized well defined definition of 'dropout' for proper estimation of OOSC. The new sub-committee formed under CABE for OOSC[57] must consider this. Also, there is strong need for defining enrolment monitoring norms. The high Gross Enrolment figures are very likely to include large numbers of fake entries, double entries and even drop outs. Hence it is advisable to define norms and/or allocate autonomy to Headmasters in Schools to strike off names from the registers in these cases.

7.2. Governance through 'Mission based Approach' :

"Governance should be more target-based, responsive and democratic."

Apart from above policy reforms this study has discovered numerous governance and institutional loopholes in the system, leading to '*cumulative learning deficit'*. These issues might also seem to overlap with policy related issues. In this sub-section of the report strategies to combat such issues are covered. The governance aspects essentially cover the existing monitoring models. Since education mechanisms in India are primarily looked after by the states, the centre is vested with responsibilities of issuing relevant guidelines and policy framework from time to time.

7.2.1. As mentioned in Policy reforms sub-section, there is need for **paradigm shift** in Universalization of Elementary Education from focus merely on investment on building infrastructure for universal access, wrt to governance it requires need to move on to **monitoring through new set of indicators** like Retention rates, Attendance rates, transition rates in a phased manner and shift from monitoring based

[56] http://wcd.nic.in/schemes/ECCE/curriclum_draft_5[1]%20(1)%20(9).pdf
[57] http://pib.nic.in/newsite/PrintRelease.aspx?relid=126181

on gross enrolment rates. Moreover, the states need to use these indices to rank districts than using indicators of 'expenditure on civil work' to measure performance of districts. This certainly provides for more concrete monitoring and strives to extend uniformity in distribution of resources based on delivery.

UN-Development Goals

Even the United Nation's goals have shifted from Millennium development goals (2007-2015) that focused on '*Achieving Universal Primary Education' through net enrolment ratios, literacy rates* to present Sustainable development goals (2013-2030) that focus on '*Ensuring inclusive and equitable quality education and promote lifelong learning opportunities for all' through effective learning outcomes, early childhood development, supply of qualified teachers, etc.*

(Source: http://www.unmillenniumproject.org/goals/gti.htm#goal2
https://sustainabledevelopment.un.org/sdgsproposal.html)

7.2.2. There is strong need to **bring uniformity of basic norms under RTE** to create a level playing field for states, ensuring right to education essentially. It is seen that states follow significant provisions, like age-limit, NDP, CCE, etc differently. It is required that there is uniformity in states providing for these basic norms. Central guidelines ensuring uniformity of essential variables across states are necessary. For this, participation and empowerment of School Management Committees (SMCs) through State Education Departments shall play a significant role. This also requires equipping District Officers/Block resource persons/School resource persons and their timely training.

Keeping the central guidelines at core, it is necessary for each state to frame a set of rules for implementing RTE, involving participation of community and other stakeholders. This diversity in policy implementation framework is equally important along with providing for uniformity in essential indicators across states, considering the diverse Indian fabric and existing inequality amongst states.

7.2.3. Competition is the driving force for performance. The Central authorities need to induce **competition amongst States** for better delivery. For this, as mentioned in the previous point about states defining set of rules for policy implementation, they should also be responsible for conducting regular base-line and endline surveys, and performance should be based on well defined and set targets.

Performance and achievement of one state in terms of pre-designed indicators must inspire the other to yield more positive results. Infact, within states, one high achieving district should inspire other. For this, use of technology is also essential, which is covered in the next sub-section. Achievement must be directly linked to incentives, with some reservations considering the existing inequality amongst states.

7.2.4. **DISE** plays a very vital role in data collection and dissemination for planning and hence target based policy designing at ground level. However, it is seen that across states not all schools have been covered under the 'Unified District Information System' and that the user friendly, comprehensive data disseminated by DISE is not much at the district planning levels. Thereby, it is advisable to make U-DISE cover all schools across states so that there is a pan-India, micro-level data for policy

makers to influence macro-level indicators in desired direction in time. Further, States need to ensure that District Planning Units are using this data.

DISE can be an information dissemination platform across states and feed real time data requirements for grassroot policy intervention. BRC/SRC should also be trained to use this platform in this context.

7.2.5. **Best practices-mass scaling.** In the process of inducing performance based competition, bringing uniformity of basic indicators and monitoring through new set of indicators, it would be possible to identify best practices across states, and districts. These practices shall be real-time practical learning lessons for updating National Policy on Education, making the system more enriched. Though the diverse Indian fabric brings forth diverse implementation mechanisms, but these best practices can be adapted and mass-scaled for better performance and inspirational tools, ultimately leading to unity in diversity through education.

7.2.6. **Teachers' governance:** It is evident through the study that major set-back to learning in schools is caused due to inadequate availability of trained teachers. Compliance to RTE provisions (u/s 23(1)) related to teachers across states is not met effectively. States must take steps to employ more trained teachers and not merely rely on para teachers to provide quality education. Para teachers can be an aid but not sole absolute solution to the problem of shortage of teachers. There has to be presence of minimum number of trained regular teachers in schools. States should design a ratio of trained regular teachers to para teachers in each school, depending on the school's capacity for students. This can even come in similarity to Finland model for providing few trained instructors to more general teachers in each school. However, both the kinds of teachers in Finland are well trained.

With this we also recommend timely and regular training to both regular teachers and para-teachers. Further in regards to governance, since it is observed that teaching is no more seen as a lucrative and worthy profession, we recommend timely payment of their salaries and add student-performance based incentive model to boost their performance in classrooms. Also their attendance (based on number of classrooms) should be linked to incentives. However, the salary hikes after 6th pay-commission made this applicability difficult when the states already claim shortage of funds. Although it is very necessary to apply such incentive models considering the poor performance of teachers when there is already a shortage in their availability. Here Para-teachers could be a rescue option, provided they are well equipped with training.

It is noted that quality of degree colleges offering B.Ed and M.Ed, or training institutes for TGTs/PGTs across in India is also very poor. *Then most states claim dearth of funds to recruit teachers, which is absolutely shocking when RTE Act implementation mandates Centre-State contribution in ratio of 68:32 and SSA costs are shared in ratio of 85:15 respectively, and further that now after approval to recommendations of 14th Finance Commission more funds will be devolved to states.* It reflects that education is not a priority subject of states and that there is mis-management of funds at state level. Like Rajasthan has started clubbing components of RMSA-SSA to get through the financial constraints. Such innovations in governance are appreciable, and must be taken forward by other states and centre too. Thereby we advocate looking education as resource/investment to transcend poverty.

In order to resolve issues there is need for a channel of continuous dialogue and real-time problem solving between SMC, Block Resource Persons, District Planning Units and State Education Department, and also between DIETS-NCTE, SCERT-NCERT, including CBSE, for timely training and empowerment of teachers in States, **imparting need based training**. It is required for democratically centralizing training programs across states and ensuring standardized delivery.

7.2.7. **Mission based Approach:** In order to influence learning in a desired direction it is important to adopt a strategy in a time bound manner. Hence we propose a Mission based approach to achieve basic learning levels through compulsory elementary education. First from the Central Level, missions for achieving certain high levels in new set of performance indicators like retention rates, attendance rates, teachers' performance evaluation based on CCE, etc could be launched across states, within a time frame. Second, based on the baseline and endline surveys the States can also adopt a mission based strategy to achieve certain high levels in the districts, based on these and other performance linked indicators.

The current performance of Swachh Vidyalaya under Swachh Bharat Mission wrt construction of toilets, spreading awareness to make people use toilets, etc., in a time bound manner is inspiring. Mission based approach makes the implementation process more effective and rigourous at all levels. For essential sectors like Education, such strategies are very important in order to produce timely results.

7.2.8. This study notes that certain critical aspects of RTE like 'Special training u/s-4' for children admitted to age-appropriate classes, application of CBSE's CCE, etc is not finding proper practice in schools. The governance and monitoring system needs to check loopholes in practice of such provisions, and also ensure that the SMCs, BRCs/SRCs and Teachers are well equipped and trained in this regards.

7.2.9. There are certain observation wrt to Joint Review Mission (JRM) and Quality Monitoring Tools (QMTs) of SSA, which should be updated and made more comprehensive and contemporary. First, there is need for JRM process of monitoring and evaluation to overcome the limitations of data sources, and QMTs of SSA to broaden its perspectives wrt learning outcomes. It must consider quality of learning beyond curriculum, textbooks availability, pedagogy, etc, focusing on real time outcomes too. Second, there is need for JRM recommendations to find more effective consideration in policy reforms. For instance, JRM has been recommending defining 'dropout', states to refine the differential teachers' training and academic support systems, etc[58], but these have yet not been converted into policy reforms or interventions on grounds, or the process of consideration is too delayed/slow. The first recommendation here comes out of this mismatch, which actually fails the purpose of the monitoring mechanism of SSA. The monitoring needs to target-based.

7.3. Innovation :

By and large, this sub-section would cover the technological revolution required in the field of Elementary education. However, we are here looking towards innovation in education and not purely technology. Use of ICT and innovation doesn't solely imply to application of genext

[58] http://ssa.nic.in/page_portletlinks?foldername=monitoring

devices. In reference to elementary education it includes innovation in teaching pedagogy at large in order to influence learning.

No doubt, l**arge scale use of ICT methods and innovations** are required to make elementary education more interesting and experiential. The government is already working in this context. Investment in ICT and related Teacher Training in schools in this context should go hand-in-hand. This cannot be a step-by-step process. Here, innovations in certain aspects of elementary education which could be directly related to learning are covered.

7.3.1. **Language based learning:** Since most children entering elementary level of education are like blank slates, it is likely for these children to learn only in their home-language. However, by the end of this level it is also necessary for them comprehend a global language (English), and for non-hindi speaking states to comprehend Hindi language, along with their regional language. The existing language disadvantage has been already covered in this study in the previous section. This calls for innovation in teaching pedagogy for language based learning. We advocate the 'Multi-Lingual Education Programme' of MHRD, and back the provision for investment in appointment of language teachers[59]. Further, it is recommended to invest in school libraries for children and language based extracurricular activities for children, through community participation. These little innovations in education will help children overcome language disadvantage. Para-teachers in schools have been observed to teach in the language of children, coming from the same background. These teachers if well trained in language based teaching shall play key-role in the system. Development of scientific as well as general aptitude in a child is based on how well versed he/she is in his/her language of understanding. Forcing other languages at initial stages of learning deters learning.

7.3.2. **Activity based learning (ABL)/ Experience based learning:** Since this report focuses on providing base for 'skills for life and livelihood' through Elementary education, ABL methodology is a great innovative approach in education in this context. The idea of activity-based learning is rooted in the common notion that children are active learners rather than passive recipients of information. If child is provided the opportunity to explore by their own and provided an optimum learning environment then learning becomes long-lasting[60]. The success of UNICEF supported Tamil Nadu's ABL is an inspiration for rest of the states. Few other states like Andhra Pradesh, Karnataka, Chhatisgarh are also endeavouring to adopt ABL. Proper teacher training in this direction and related investment can definitely influence learning in schools, and provide base for skills for life and livelihood through elementary education. CCE is a vital tool to support such innovative models. With this we also advocate encouraging NCC/NSS and sports in Schools. Such learning models provide base for vocational education after elementary education.

7.3.3. Andra-Toll free helpline preventing drop out: **Vidya helpline** is an innovative initiative of Nirmaan NGO in Andhra Pradesh, working since 2005 to provide a conveniently accessible platform for career counseling and education aid counseling

[59] http://pib.nic.in/newsite/PrintRelease.aspx?relid=124899
[60] http://www.ssa.tn.nic.in/Docu/ABL-Report-by-Dr.Anandhalakshmi.pdf

including financial aid counseling as well, to rural children through a toll-free helpline number.[61] Presently the initiative covers Andhra, Telangana, Odisha and Assam. Such initiatives can be backed by the government in a decentralized manner to control drop-outs and ensures retention and attendance rates. Even Teachers should have access to such helpline systems to get teaching aids in time.

Similarly, innovative state level initiatives like that in Jharkhand to provide free coaching to children in subjects like science, mathematics, etc through raising volunteers and within existing infrastructure, to control drop outs is appreciable. Such practices should be identified and presented as inspiration for other states.

7.3.4. **Technology for monitoring and Policy dialogue forum**: As proposed in earlier sub-section that inducing competition and mass scaling best practices is required for better governance, use of technology will make this proposition more feasible, contemporary and effective. Even so is applied for building the '*Pan India Responsive Mechanism (PIRM)*' as a dialogue channel between centre-state authorities and stakeholders. Technology is an answer for all real-time effective solutions to problems arising due to complex communication system. We need technological set up for effective monitoring of students' and teachers' attendance and other performance rates. And also, in order to update strategies in accordance to real time data. '*Shala darpan' and 'Shala Unayan'* are right tools developed[62] in this regards. The States must pitch in for involvement in development of these tools and these must be applied to all government schools/boards.

7.3.5. **Digital India and Education:** The Digital India scheme launched recently has a lot in reservoir to offer to the Indian schools in terms of free broadband wifi connections, etc. Nevertheless, technology has the potential to improve learning outcomes, provided it is well integrated into the learning processes. Quoting here the results of Abdul Latiff Jameel Poverty Action Lab research that shows large effects on basic literacy and numeracy from carefully designed ICT interventions. Further, success of computer assisted learning programme in Gujarat by Pratham showed improvements in Math scores of children.

7.3.6. **Participation of private stakeholders and civil society components** is this context has proved to be very instrumental is various states. In reference to the point of language based learning, the *Vanche Gujarat Programme* promoting reading skills is a role model example[63]. Similarly, several NGOs like Education Innovations, Asha for Education, CARE, Smile foundation, Azim Premji Foundation, etc. and many other organizations like ERU Consultants, Centre for Policy Research, Centre Square Foundation, Vidya Bharti, etc. are involved in research on education, validating RTE provisions on grounds, providing academic support to teachers and helping children in learning process, and are engaged in involving new technologies, methodologies, pedagogies in this series. The policy making must include a comprehensive approach and consider their findings, useful practices, tools and interventions.

7.3.7. **Spreading Awareness:** Policy making shall never meet practice unless the target group is aware of their takeaways from the policy framework. Fuller utilization of

[61] http://yousee.in/documents/Nirmaan_VHL_4.0_Aug_Oct_2012.pdf
[62] http://www.dnaindia.com/india/report-smriti-irani-unveils-plan-to-help-parents-to-monitor-wards-in-kv-schools-2092828
[63] http://vanchegujarat.in/eng/default.aspx

the framework should also include a source for spreading awareness and disseminating relevant information at appropriate intervals, alongwith strengthening the implementation mechanism. With this reference, in the field of education, a nationwide campaign should be launched spreading awareness of the existing provisions (RTE, etc), the benefits, requirements and achievements so far of SSA, the spirit of nation building through education, etc. Moreover, Akashwani used to run *'Gyanwani'* educating people on air on several subjects. Such initiatives should go-on and can be used by states to disseminate state-based schemes, data, trends and culture through such platforms, and even call for community participation.

Also, a campaign reflecting the importance of teachers and pride and worth of teaching profession is required to instill the respect towards the profession again and bring more passion in the candidates joining it.

Other than these, there are few more aspects to be considered in the new policy design. For instance, in order to cater to the needs of children assisting their families in work, first-generation learners, etc, we call states to consider their education needs and meet it through provisions like arranging classes in two shifts, including special training provision. We also call policymakers across the nation to design a concrete framework extending RTE to children of migrants, those in remote areas, disaster-hit/civil-strife hit areas, etc.

With these recommendations, we are trying to put forward a possible road-map to enable better delivery of designed policies to meet the required essence of education in terms of basic learning levels. The idea is to build a strong base for skilled India to meet the aspirations of developing India, and also for a value-based society. After all, compulsory education lays the foundation for education for life, and each life makes up the society. The way forward of the study also intends to contribute to the framework of School Education under the new National Education Policy in pipeline. By the end of this study, it is expected to provoke the readers to undertake follow-up researches on numerous themes covered, and all the related institutions, government bodies, stakeholders to emphasize compulsory elementary education as a resource for transcending poverty and view it as a channel for sustainable development.

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