



# Universal Foundational Literacy – Numeracy and Access to Quality Education for All

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## ABSTRACT

The present study comprised primarily of a conceptual discourse on highlighting the essence of National Education Policy 2020 from a specific perspective to realize its objectives. The major objectives of the study were –

- to give a clear and comprehensive view of foundational literacy and numeracy.
- to delve out major barriers vis-a-vis strategic solutions to attain the universal foundation literacy and numeracy. Methodology used here mainly the various governmental and non-governmental document analysis relating to the new Education Policy 2020. By analysing different pertinent documents interpretations were made and derived the conclusion as for attaining quality universal foundational literacy and numeracy along with integrate and coherent five fold action plan, participation from different sectors of society is a must.

**Keywords:** National Education Policy, 2020, Foundational literacy and numeracy, Five fold action plan, Quality education

In the history of this globe, India as a free nation occupies a special position with a unique and complex cultural diversity and also a commitment to democratic values for the well being of all. For the purpose, India has given the enormity and importance to the task of educating its each and every child. It requires a specific strategy. So, since the adoption of constitution in 1950, Education holds the pivotal role in Indian developmental priorities. Through the

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successive policies and five year plans with well defined and futuristic educational reforms India is trying to respond to the requirement of fast changing, knowledge based societies with its diverse population, culture and tradition.

In its long journey after independence, the pathway of educational planning and development in India has witnessed some noteworthy milestones –

On the recommendations of the Education Commission (1964–1966) in 1968 first Education Policy in India rolled out, subsequently the National Policy of Education 1986 was declared which was followed by its Programme of Action (POA 1992) and provided the road map for its implementation.

In between 1986 and 2020 almost 34 years have passed. In the mean time, globalisation and the insistence of knowledge economy call for emphasis on the need for an emerging national development goals.

As a result, under the chairmanship of Dr. Kasturirangan, a committee was set up in June, 2017. This committee considering the suggestions of various section of the society prepared a draft policy and published on 31<sup>st</sup> May, 2019. With the further suggestions reviewed, National Education Policy 2020 was brought to light on July 2020.

India's new education policy has envisaged an India centred education system that contributes directly to transforming our nation sustainably into an equitable and vibrant knowledge society by providing high quality education to all as India aspires to take its place as third largest economy by 2030 – 2032 which may not be driven by natural resources but by the knowledge resources. To accomplish this goal there is a need of knowledge society based on strong and powerful education system.

Now, the obvious question is “Are we really ready to accept the challenge ?”

As National Education Policy drafts (2019) puts it “A large proportion of students currently in elementary school perhaps over 5 crores in number have not attained foundational literacy and numeracy, i.e. the ability to read and comprehend basic text and the ability to carry out basic addition and subtraction with Indian numerals”. It can be easily assumed that, “we are in a severe learning crisis with respect to these most basic skills” (NEP Draft 2019).

Astonishingly, this observation of NEP 2019 draft is not just a bolt from the blue rather a cumulative upshot of various government and non-government survey reports made in this regard.

From the above discussion, it may be pertinent to say that, if we look back in the recent past some major initiatives were taken to advance the theme of “Education for all”. The overall goals of which was –

## **Elementary education of satisfactory quality**

The principal programme for universalization of primary education is the Sarva Siksha Abhiyan launched in 2001, a centrally sponsored scheme being implemented in partnership with State / UT governments, revolving around the issues of all children in school and their retention.

The national resolve to achieve universal elementary education gained further momentum with the adoption of constitution 86<sup>th</sup> Amendment Act, 2002 which inserted Article 21-A in the Constitution of India to provide free and compulsory education for all children in the age group of 6 – 14 years as a Fundamental Right in such a manner the state may by law, determined. (EFA – towards quality with equity India 2014).

After these drastic successive measures relating to educational development specially designed for the grassroot level for two decades while there is no doubt that access and equity have increased remarkably in India – world's most extensive primary education system with more than 200 million children but at the same time we have to accept a severe learning crisis still persists.

In search of the justification of the above, we found the view of Dr. K. Kasturirangan, the chairman of the committee for Draft NEP 2019 most significant. As he puts it “In the decades since independence, we have been preoccupied largely with issues of access and equity and unfortunately dropped the batons with quality of education”.

To wrap up, it may be said that to carry forward the constitutional commitment expansion of universal access to education has almost been achieved quantitatively but qualitative expansion remains yet a dream to the nation. The NEP 2020 has given the ample stress on attaining that qualitative dimension. The policy designers have realised that if the most basic learning requirements of reading, writing and arithmetic are not achieved then the rest of policy will become irrelevant for a major population of India. So, the new policy document, i.e. NEP 2020 gives the highest priority for achieving universal access to quality education for all, the pivot of which is to achieve universal foundational literacy and numeracy in primary school beyond by 2025.

## **Review of related studies**

Various government as well as non-government surveys clearly indicate the learning crisis regarding the foundational literacy and numeracy of the rural children, a few of which may be presented in this section to give an indepth view of the above facts.

1. Effective provision of education in rural areas of the developing world is an issue which has troubled policy makers, activists and scholars for decades. (Psacharopoulos, Patrinos 2004 and Sachs, McArthur, 2005). India is also no exception and so has struggled with

this problem since its independence and despite recent progress, there remains a persistent crisis of learning. We are struggling even with basic literacy and numeracy which hold us back far from becoming an educated nation (Chavan, 2018).

2. In 2005, Pratham, an Indian NGO focused on education, decided to go and find out what children were really learning under the banner of Annual Status of Education Report (ASER), Pratham formed volunteer teams to test more than 1000 children in randomly chosen villages in every district – 700,000 children overall – and came up with a report card. Close to 35% of children in the seven-to-fourteen age group could not read a paragraph (first grade level) and almost 60% of children could not read a simple story (second grade level). Only 30% could do second-grade mathematics (basic division).
3. The mirror image of this crisis has also thrown back by Dr. Abhijit V. Bandhopadhyay and Esther Duflo in their famous book 'Poor Economics' (2011) where they put it on as "In India, 95 percent of children now have a school within a half mile or so .... getting children into school is a very important first step : This is where learning starts. But it isn't very useful if they learn little or nothing once they're there."
4. ASER has now been witness to changes in India's school education landscape over more than a decade. Year after year they tried to reflect / find out the actual educational scenario of India. As Banerjee and Duflo (2011) quotes it, "These days in India, in an annual ritual in Jaunary, ASER results are released ... and very little changes."
5. In 2010 – 2011, the ASER released its 5<sup>th</sup> annual report (Annual Status Education Report – Rural, 2010) on the status of education in India, which showed that, there is an increase in the number of five year olds enrolled in schools from 54.9% in 2009 to 62.9% in 2010, but also reports that even after five years of schooling more than half (53.4%) of all children surveyed still attending school at the fifth class could not read, write or solve arithmetic problems expected of children in the second class.
6. 2014–15 was the tenth year of the survey and partnered with about 250 DIETS and other NGOs to conduct the survey. ASER 2014 findings show us that India is close to universal enrolment for the age group 6 – 14, with the percentage of children enrolled in school at 96% but overall the situation with basic reading continues to be extremely disheartening in India. In 2014, in Std. III, only one fourth of all children can read a Std. II level text fluently. The all India (rural) figures for basic arithmetic have remained virtually unchanged over the last few years. In 2012 26.3% of Std. III children could do a two digit subtraction. This number is at 25.3% in 2014. The percentage of children in Std. II who still cannot recognise numbers upto 9 has increased overtime from 11.3% in 2009 to 19.5% in 2014.

7. The latest annual report, i.e. Annual States of Education Report (Rural) was published for the year 2018 – 2019 on January 2019. The overall picture is more or less persistent with those previous years. It showed that, percentage of all children in Std. III who are able to read at Std. II level is 27.2%. The corresponding number of preparation of children who can at least do subtraction is 28.1. So, it is much obvious that percentages are not high which it should be. The total scenario is being implicated by Madhav Chavan. President and members of the Board of Directors, Pratham Education Foundation (2018) as – “This means that not only are we not creating a sufficiently literate population, but that most of our population is functionally illiterate.”

The ASERs are not only the one report card giving us the wake up call but there have been a many more – assessment done by NCERT, i.e. NAS, Educational initiatives and several other smaller scale study shows us that children are going to school but not learning.

So, keeping all the above facts in focus, it is very obvious that there is an urgent need to respond flexibly the present circumstances to lift up the learning trajectory of those primary learner by ensuring quality foundational literacy and numeracy to fulfill the mission and vision of NEP '20. It leads the researcher to take this present study. Hence the study aims to give a comprehensive and succinct view of Foundational Literacy and Numeracy with the root causes of the barriers in attaining universal Foundational Literacy and Numeracy and also the plan of action to win over those hurdles as portrayed in NEP '20 policy and Draft NEP '19 policy. So the problem may be stated as: “*Universal Foundational Literacy – Numeracy and Access to Quality Education for All*”

### **Objectives of the study**

The objectives of the study enumerated as below :

- (i) To give an intelligible and succinct view of foundational literacy and numeracy. (with significance and implication)
- (ii) To delve out the major hindrances in attaining the universal foundational literacy and numeracy.
- (iii) To explore the probable strategic solutions in attaining the aim of universal foundational literacy and numeracy.

### **Research questions of the study**

Based on the above objectives the following research questions may be formulated as below :

- (i) What is meant by foundational literacy and numeracy ?

- (ii) What are the major hindrances in attaining the universal foundational literacy and numeracy?
- (iii) What are the probable plan of actions in attaining the aim of universal foundational literacy and numeracy?

## **Methodology**

The methodology adopted here is analysis for various documents relating to National Education Policy 2020 and also the National Education Policy Draft 2019. The variety of documents includes various governmental as well as non-governmental survey reports, different newspaper articles, essays and write-ups by eminent persons and also the gist of many debates and discourses on NEP 2020 organised in the digital platforms. Sources of data here basically secondary in nature. This study primarily consists of a conceptual discussion on highlighting the essence of National Educational Policy 2020 framework from a specific perspective to realize its objectives.

## **Analysis and Interpretation :**

### **(i) Foundational literacy and numeracy**

From the very birth, a child goes through the different phases of development acquiring different life experiences to be a fully functioning person. Exposure to the experiences of reading, writing and numeracy is one of them and may act as the foundation stone for the life of a child. As these early experiences not only the first step of the future life long learning rather those are the means of discovering, connecting and making sense of the world to a child.

So, these basic abilities of reading, writing and numeracy which is very much vital to be functioning in today's knowledge society may be conceptualized as foundational literacy and numeracy. Foundational literacy and numeracy is the first and foremost step in educating a child – an urgent and necessary prerequisite to learning.

The major policy documents of past have always recognizes the primacy of foundational literacy-numeracy more seriously. A good foundational literacy numeracy helps the child in her natural growth in education and drives her interest in the right way to fulfil the educational goal. This is also reflected in the present National Education Policy 2020 as "The ability to read and write and to perform basic operations with numbers is a necessary foundation and indispensable prerequisite for all future school and lifelong learning."

Pertinent to the above discourse, now if we look into the term foundational literacy and numeracy, although it is a comprehensive idea yet the term is a composite one. Foundation literacy and numeracy is the assimilation of two interconnected but individual idea i.e.

Foundational literacy and foundational numeracy.

Now, these two terms may be elaborated as below:

The term Foundational literacy can be conceptualized as the ability and skills involved in listening and speaking, reading and writing to interpret thoughts with comprehension.

Similarly, the term foundational numeracy refers to the development of number sense, mathematical thinking and application basic operations on numbers for problem solving.

### **Foundational literacy and numeracy as portrayed in NEP 2020**

In continuation of previous discussion and result of the various studies it is found in our current educational system many students have flat learning curve for year after year as they are lagging in foundational literacy and numeracy and this reason has become one of the major for dropping out of students from the school. As NEP draft 2019 reiterates “so many capable students have found themselves in this unfortunate black hole, unable to emerge. For many students this has become a major reason for not attending school.”

In NEP 2020, the idea i.e. addressing the issue of foundational literacy and necessary is very much imperative has reverberated once and again. Policy has shared that the attainment of universal foundational literacy and numeracy is the highest priority of the state; its reflection in NEP draft 2019 as – “Attaining foundational literacy and numeracy for all children must become an immediate national mission.”

### **(ii) Major hindrances in attaining the universal foundational literacy and numeracy**

The new Education Policy 2020, identified the long due snag in the area of quality foundational literacy and numeracy and has given extensive stress on attaining the same. But there are several major barriers in the path of attaining the goal.

In this section, we shall try to delve out a few of the as per the NEP draft 2019.

1. Lack of school preparedness	It implies the early experience of learning including the pre-literacy and pre-numeracy required for formal schooling. This type of barrier mostly affects the first generation learning and learners from disadvantaged socio-economic background.
2. Lack of proper curricular emphasis	Early grade curricula are mostly designed to emphasize on mechanical academic aspects which leads to rote learning. There is no / very little scope to get a solid foundation in reading, writing, speaking, counting, logical thinking, problem-solving etc. The curriculum for these early grades should be designed in such a way in which a child will be a happy learner and motivated towards life long learning.

3. Teacher capacity and teacher deployment	<p>Teacher capacity is urgent and must be emphasized through proper training to attain the goal of universal foundational literacy and numeracy as it affects the early grade learning of the child.</p> <p>Also the issue of teacher deployment can create the learning crisis specially in the disadvantaged area where pupil teacher ratio exceeds the minimum standard. Sometimes this teacher deployment issue can create language barriers also where the teachers and students are not from the same local area.</p>
4. Health and Nutrition	<p>This aspect also plays a vital role for the early grade learning experiences. Malnutrition and poor health has a crucial impact on the child's cognitive functioning as well as mental health.</p> <p>So, this issue can not be overlooked to attain the goal.</p>

**(iii) Probable plan of action to attain the universal foundational literacy and numeracy**

At this point of discussion, it is very much clear to us NEP 2020 has given the major thrust in quality foundational literacy and numeracy. In attaining that goal overcoming the previously said hindrances NEP draft 2019 has also suggested a few probable solutions. We will try to delineate those along with some other in a comprehensive and coherent way.

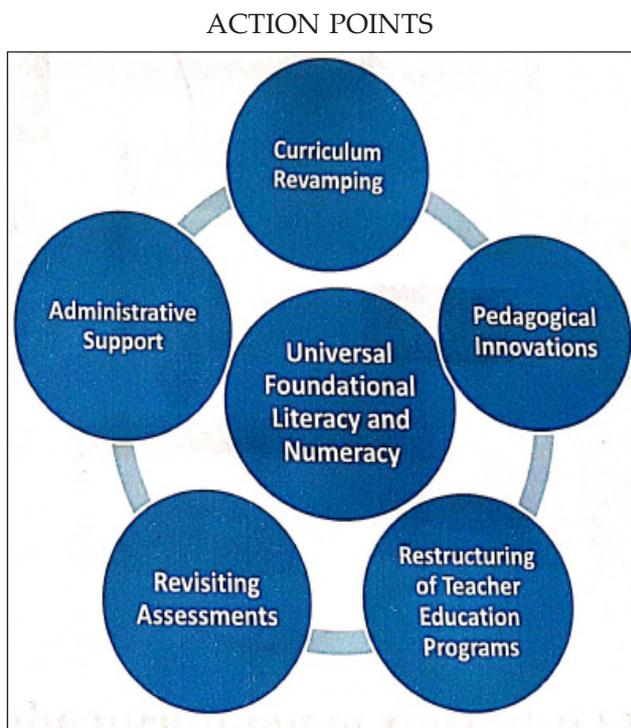
(i) To ensure school preparedness	<p>Early experience of learning, i.e. early childhood care and education can play utmost key role in ensuring school preparedness. As NEP draft 2019 puts it "Once access to ECCE is instituted across the country the problem of school preparedness and of students falling behind so quickly in grade school will be greatly mitigated for future generation of students."</p>
(ii) Focussed curricular emphasis	<p>From the curricular aspect, it must be designed in a more child centric way keeping a view with age appropriate child development.</p> <p>It should have the much scope to be a happy and creative child also with due focus on age appropriate reading, writing, numeracy, problem solving etc. In this way the mechanical rote learning may be replaced by interactive and activity base learning which can open the doors for all future learning.</p>
(iii) Building teacher capacity and ensuring proper teacher deployment	<p>Capacity building programs are very much essential to address this issue faced by the teachers in their classroom which will help them to aid the attainment of universal foundational literacy and numeracy.</p> <p>This programs can be developed through personal interaction or digital mode and create a common platform for sharing pedagogies and researches in this specific area.</p> <p>Regarding teacher deployment teacher vacancies to be filled in by employing local and female teachers specially in the disadvantage zones and there should be a special focus on the area also where the teacher pupil ratio is high.</p>

(iv) Assuring health and nutrition of children	<p>Finally, the health and nutrition of children will be given utmost importance.</p> <p>Regular health check-ups, energizing breakfast in addition to mid-day meal may act as the booster to child’s health profile and cognitive development.</p> <p>There should be a scope to ensure the proper mental health of a child for the holistic development of her.</p> <p>Various continuing health related measures must be integrated with school programs to attain our aim.</p>
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Five fold strategic action points for attaining the aim of universal foundational literacy numeracy.

In addition to those solution to overwin the major barriers provided by NEP Draft 2019, a five fold strategic plan of action may be suggested to attain the universal foundational literacy and numeracy.

Diagrammatic representation of five fold action plan is as below :



*Source: Foundational Literacy and Numeracy, Prof. Anup Kumar Rajput*

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Action Point	Delineation	Needed steps for action point
1. Curriculum revamping	Being one of most vital aspect for school education curriculum for early grades need to be remodelled with child at the nucleus. It should be formulated at par child's development and should contextualized in nature. An innovative and inclusive curriculum can play the pivotal role for developing foundational literacy and numeracy of learners.	<ul style="list-style-type: none"> <li>i. Contextualized curriculum development.</li> <li>ii. Pre school and primary grade curriculum continuum.</li> <li>iii. Child centric curriculum design</li> <li>iv. Multiple resource material development with Econtent.</li> </ul>
2. Pedagogical innovation	Aim of universal foundational literacy and numeracy can not be attained without a sound pedagogical intervention. It must be focusing on appropriate classroom process including requirement of the child. A conducive environment must be created for the teacher-pupil interaction and multiple points of pedagogical techniques must be interlinked to address the issue of Functional Literacy Numeracy development.	<ul style="list-style-type: none"> <li>i. Multiple classroom practices.</li> <li>ii. Ample space design for the child to explore and elaborate.</li> <li>iii. Interactive classroom environment development.</li> <li>iv. Emphasize on pedagogical researches.</li> </ul>
3. Teacher Education Program – Restructuring	Development of thoughtful and all-inclusive teacher education program for both pre-service and in-service is very much urgent as teachers are the torch-bearers in this rigorous task.	<ul style="list-style-type: none"> <li>i. Redesigning the existing pre-service programmes.</li> <li>ii. New pre-service program launching</li> <li>iii. Capacity building program for teachers with proper training modules.</li> </ul>
4. Revisiting Assessments	There is a pressing need to reconceptualize the idea of 'assessment'. As today's learning science considers it as a part of learning rather the final testing of some memorized skills. Proper assessment tools also help to rebuild the curriculum for early grades.	<ul style="list-style-type: none"> <li>i. Multiplicity of assessment tools and techniques.</li> <li>ii. Audio-visual assessment tool development</li> <li>iii. Model question bank development.</li> </ul>

5. Administrative support	Last but not the least of fire point action plan, administrative support is critical as all the stakeholders related to education system should work together to fulfill that big dream.	i. Development of community participation. ii. Integration of central, state and local administration.
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So far we have discussed the probable way outs and fire fold action plan for achieving the universal foundational literacy and numeracy in its way. But for proper implementation of these plan of actions will need a coherent, integrative and all-inclusive model interlinking the administration in hierarchy. For the purpose NEP Draft 2019 has recommended some more valuable suggestions which are as follows :

1. Technical intervention and resource development. (a) Setting up of school and public library i) by schools ii) by community iii) by local bodies (b) Digital libraries for all (i) DIKSHA (ii) National Repository of Open Resources. (iii) e-pathsala	2. Programme Development and its Management (a) (i) National Tutor Programme (NTP) (ii) Remedial Instructional Aids Programme (RIAP) (iii) Management & the NTP and RIAP programmes
3. Participation of stakeholders (i) Encouragement of large scale local volunteers (ii) Parental participation (iii) Mobilisation of social workers and local community.	

## CONCLUSION

Appraising the incredible influence that an educational venture has on society and vice-versa, The National Education Policy 2020 brings forth “A framework for the transformation and reinvigoration of the education system in order to respond to the requirements of fast changing knowledge based societies while taking into account the diversity of the Indian people, their tradition culture and languages” (NEP Draft 2019).

In this transformation process human capital plays the central role so the highest priority is to make sure “universal access to an education of high quality and breadth” the kernel of which is universal foundational literacy and numeracy.

As it has been discussed throughout this study, these high quality educational opportunities actually mould the future of Indian children. So, to make sure the quality foundational literacy and numeracy access to every children has become an immediate National Mission for which

along with five fold plan of action including curriculum revamping, pedagogical innovation, restructuring teacher education system, revisiting assessment and administrative support – the resource and programme development, technological intervention and participation of various stakeholders must be considered with a pressing need. Besides, to accomplish this Herculean task, a platform is needed where from the different parts of society people viz. stakeholders, parents, teachers, headmasters, policy-makers can share their views and experiences in developing more in-depth and elaborative strategies for attainment of the universal foundational literacy and numeracy.

## REFERENCES

- Aithal, P.S. and Aithal, S. 2020. "Analysis of the Indian National Education Policy 2020 towards Achieving its Objectives". *International Journal of Management, Technology, and Social Sciences (IJMTS)*, 5(2): 19 – 41.  
<https://indianexpress.com/article/explained/reading-new-education-policy-india-schools-colleges-6531603/>.  
[https://www.education.gov.in/sites/upload\\_files/mhrd/files/Draft\\_NEP\\_2019\\_EN\\_Revised.pdf](https://www.education.gov.in/sites/upload_files/mhrd/files/Draft_NEP_2019_EN_Revised.pdf)  
<https://www.hindustantimes.com/education/nep-2020-implementation-of-new-education-policy-in-our-education-system/story-bw4OiekFCam17NPoNkgAoJ.html>.  
<https://www.indiatoday.in/education-today/featurephilia/story/nep-2020-what-are-the-career-growth-opportunities-in-commerce-stream-by-introduction-of-new-curriculum-1731131-2020-10-13>.  
[https://www.mhrd.gov.in/sites/upload\\_files/mhrd/files/NEP\\_Final\\_English\\_0.pdf](https://www.mhrd.gov.in/sites/upload_files/mhrd/files/NEP_Final_English_0.pdf).
- Jha, P. and Parvati, P. 2020. "Long on Rhetoric and Short on substance of National Educational Policy, 2020". *Economic and Political Review Journal*, 55(34).
- New Education Policy 2020, Ministry of Human Resource Development, Government of India, English version.  
[https://www.mhrd.gov.in/sites/upload\\_files/mhrd/files/NEP\\_Final\\_English\\_0.pdf](https://www.mhrd.gov.in/sites/upload_files/mhrd/files/NEP_Final_English_0.pdf) retrieved on 30<sup>th</sup> August 2020.
- New Education Policy a analysis report <https://www.studyiq.com/blog/new-education-policy-2020-complete-analysis-free-pdf/retrieved> on 30<sup>th</sup> August 2020.
- Sha, M. 2020. "National Education Policy 2020", *International Journal of Research*.