Relevance of Educational Thoughts of M.K. Gandhi and A.P.J. Abdul Kalam in NEP 2020

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Abstract: This research paper is made for finding the educational thoughts of M.K. Gandhi and Dr. A.P.J. Abdul Kalam and its relevance with current education policy. The researchers found that NEP 2020 is made to bring digital transformation in education system which is the dream of Dr. A.P.J. Abdul Kalam described in book "Vision 2020" for making India a developed nation as good education is necessary to make any country well develop and help students in competing in this competitive era. Also, NEP aim is to inculcate value education which both the thinker wants to be in a child, which is lacking in our student present time. The researcher also like to find the similarities of M.K. Gandhi and Dr. A.P.J. Abdul Kalam thoughts with NEP 2020. This policy is comprehensive and effective education policy of the 21st century and for developing 21st century skills in students, so its effective implementation is necessary for achieving the fruitful result.

Index Terms: Educational thoughts, M.K. Gandhi, Dr. A.P.J. Abdul Kalam, NEP 2020, Digital Transformation, Value education.

I. INTRODUCTION:

Education is the basic tool for the development of human being. It is a lifelong process as it starts from birth and goes till death. During this process human innate abilities, increment in knowledge & art and behavioural change took place to make human civilized, cultural and able citizen. Education is the process by which human mind works out into completion of its own inner nature. It is a man's means of realizing his destination; of reaching his goal of largest power, joy and service and enables one to grow to one's full height. Mahatma Gandhi quotes education as "By education I means an all-round drawing out of the best in child and man-body, mind and spirit." According to Dr. Abdul Kalam," Education is a fundamental right of every child and education means making child creative, imaginative and innovative, it is the most important element for growth and prosperity of a nation." He stresses on 'Developed India' as mention in his book "Vision 2020" which can be achieved through the development of science and technology.

Education is a dynamic and innovative experience of the life as it is a continuous process in which teaching-learning process goes on till our last breath and we innovate and gain experiences throughout life. Education gives direction to a person to make efforts for transforming his/her dreams into realities and also enhances the man's personality by improving his multiple dimensions at cognitive level, affective level as well as psycho-motor levels to make an individual more competent physically, emotionally, mentally as well as making skilful.

Education has prominent place from the ancient time and education is very essential tool for development and understanding the mystery. The educational thinkers of the world and India tried to understand, to get and to lighten the mystery of education. Indian educational thinkers such as Swami Dayanand Saraswati, Swami Vivekananda, Shree Arvind Gosh, Rabindranath Tagore, Mahatma Gandhiji, J. Krishnamurthy, Dr. Radhakrishnan, Acharya Vinoba Bhave, Dr. Zakir Husain, A.P.J. Abdul Kalam have given important educational thoughts by keeping different fields in their mind. As a consequence, by their thinking and by their educational work they are able to identify particular solution to everyone and to the educational problem of the world.

II. NATIONAL EDUCATION POLICY 2020

Education is the highway leading to the solution of all our problems. In our history, many education policies came in India from time to time dealing with the purpose of education, methods of attaining them and measuring the success or failure of the policy. In this era, we see many persons are jobless all over the world due to the insufficiency and inadequacy of education. Also, due to the advancement in science and technology such as machine learning and artificial intelligence, there is lack of skilled labour who can't be able to operate this, for fulfilling this demand there is urgent need of transforming the education towards digitalisation and multidisciplinary to make the people skilful, so that they can compete in this era. Recently, the Union Cabinet has approved the new National Education Policy (NEP), 2020 which is the first education policy of 21st century with an aim to introduce several changes in the Indian education system - from the school to college level. The NEP 2020 aims at making "India a global knowledge superpower". It is a milestone documents for bringing transformation in education after a long period of 34 years. Its policy lays specific importance on the development of the creative potential of each individual. Its principle is based on that education must not only develop cognitive capacities - both the 'foundational capacities 'of literacy and numeracy and 'higher-order' cognitive capacities, such as critical thinking and problem solving - but also social, ethical, and emotional capacities and dispositions. This policy recommend for education should be more experiential, holistic, integrated, inquiry-driven, discovery-oriented, learner-centred, discussion-based, flexible, and, of course, enjoyable. According to this, the curriculum must include basic arts, crafts, humanities, games, sports and fitness, languages, literature, culture, and values, in addition to science and mathematics, to develop all aspects and capabilities of learners; and make education more well-rounded, useful, and fulfilling to the learner.

III. RELEVANCE OF EDUCATIONAL THOUGHT OF M.K. GANDHI IN NEP 2020

M.K. Gandhi is the great personality, greatest leader of nation, a preacher, an educator, implementor and contributors in the field of education. He made countless efforts and worked directly as well indirectly and touched every field of education for restructuring the education system. Mahatma Gandhi, the father of the nation gave the scheme of basic education (Wardha Scheme) also known as Nai Talim or Buniyadi Talim in 1937 for modern India, which can be called as the first blueprint of a national system of education, which is job-centered, craft-centered, value-based, mass-oriented, self- supporting and self- sufficient. It is the first model of vocationalisation of education in India. In this Gandhian scheme of education, knowledge must be related to activity and practical experience. The foundation of basic education is very useful because its goal is to impart such skill to the children by which they can become self-dependent earning hands. According to Gandhiji "My idea is not merely to teach a particular profession or occupation to the children, but to develop the full man through teaching that occupation".

Similarities of M.K. Gandhi's basic education with NEP:

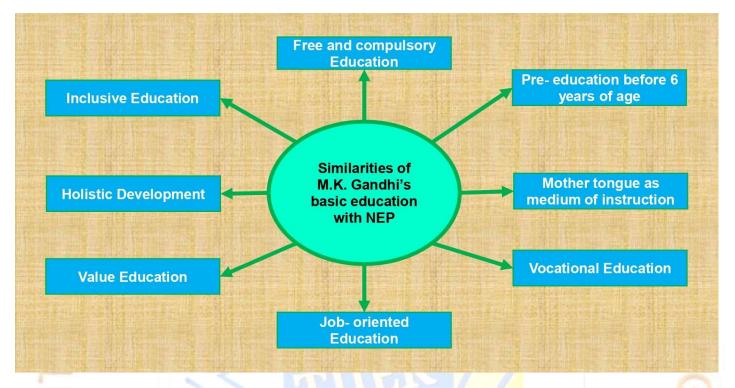


Figure -1: Similarities of M.K. Gandhi's basic education with NEP

- Free and compulsory Education: M.K. Gandhi advocated free and compulsory universal primary education with-in the ages 7 to 14 and NEP 2020 also recommend free and compulsory education from 3 to 18 years. Free and compulsory education is necessary to increase the literacy rate of the country and bringing the children into mainstream of education.
- **Pre- education before 6 years of age:** Gandhi's Basic Education related to education had three broad components- Pre-Basic (Upto 6 years), Basic (7 to 14 years) and Post Basic education (after 14 to 18 years). According to timeline of basic education also known as New Education or Nai Talim, Pre-Basic education start prior to age of seven and the post-Basic education began after the age of 14. This timeline corresponds to the timeline of NEP 5+3+3+4 broadly (3-8, 8-11, 11-14, and 14-18 years respectively). Basic education advocated pre –education upto 6 years and NEP also recommended for pre education / aganwari from 3 to 6 years of children in their preparatory stage of education as they recognized this stage as the crucial stage for development of mental faculties of a child.
- Mother tongue as medium of instruction: M.K. Gandhi stressed on mother tongue both as a subject of study and a medium of instruction and our NEP 2020 also emphasis on mother tongue or home language because it develop interest and clarity of subjects in the student. NEP recommend the medium of instruction should be the home language / mother tongue/ local language/regional language until at least Grade 5, but preferably till Grade 8 and beyond both for private and government schools. Gandhi ji believe mother-tongue would enable the children not only to understand clearly the rich heritage of people's ideas, emotions and aspirations but would also enable the children to express themselves effectively, clearly and logically, thus enable students to appreciate and enjoy literature.
- Vocational Education: M.K. Gandhi gave a clear and explicit emphasis on making vocational crafts, arts, physical education etc. an intimate component of regular classroom teaching. According to Gandhi, skill training and vocational education was important as it makes a student self-reliant and capable of leading her life independently. He believed that this kind of education is self-serving, sustainable, and long-lasting. Also, according to New Education Policy2020 report MHRD mention on page 16 that "Every student will take a fun course, during Grades 6-8, that gives a survey and hands-on experience of a sampling of important vocational crafts, such as carpentry, electric work, metal work, gardening, pottery making, etc., as decided by States and local communities and as mapped by local skilling needs. A practice-based curriculum for Grades 6-8 will be appropriately designed by NCERT while framing the NCFSE 2020-21." In this way both gave stress on vocational education.

- Job- oriented Education: M.K. Gandhi emphasised on job-oriented education by giving children vocational education and making them self- supporting. NEP also recommend for vocational education to be start from class 6 with internship to make student able to earn their livelihood by choosing their job. Gandhiji wanted the child at the age of 14 that is after finishing seven years course of basic education, to be an earning unit because poor people's children cannot afford to depend too much on their parents after this age.
- Value Education: NEP stress on values education which is similar to Gandhi's emphasis on character building. Good character can be built by adopting good values. Gandhiji had full faith and respect for Indian values, that is why he wanted to introduce in education also. New Education Policy 2020 also have provision of value-based education. According to Gandhiji "the end of all knowledge must be the building of character. What is education without character and what is character without elementary personal purity" (M.K. Gandhi, 1962). Gandhiji emphasised building of qualities of truthfulness, non-violence, celibacy, tastelessness, non- stealing, non- hoarding and fearlessness in all children. His aim of education was also to create a classless society based upon love, truth, justice, equality, brotherhood, co-operation and national solidarity.
- As mentioned in NEP 2020 report MHRD, "Students will be taught at a young age the importance of "doing what's right", and will be given a logical framework for making ethical decisions. In later years, this would then be expanded along themes of cheating, violence, plagiarism, littering, tolerance, equality, empathy, etc., with a view to enabling children to embrace moral/ethical values in conducting one's life, formulate a position/argument about an ethical issue from multiple perspectives, and use ethical practices in all work. As consequences of such basic ethical reasoning, traditional Indian values and all basic human and Constitutional values (such as seva, ahimsa, swachchhata, satya, nishkam karma, shanti, sacrifice, tolerance, diversity, pluralism, righteous conduct, gender sensitivity, respect for elders, respect for all people and their inherent capabilities regardless of background, respect for environment, helpfulness, courtesy, patience, forgiveness, empathy, compassion, patriotism, democratic outlook, integrity, responsibility, justice, liberty, equality, and fraternity) will be developed in all students.
- Holistic Development: M.K. Gandhi's education meant, "An all-round drawing out of the best in child and mind and body, mind and spirit" (M.K. Gandhi, 31-7-37). The chief goal of Gandhian education was harmonious development of all power-innate and acquired and also said that harmonious development can take place by developing all the four aspects of the human personality- body, heart, mind and spirit. According to him, "true education must stimulate the spiritual, intellectual and physical faculties of the children" (Tendulkar-1951-54). Also, by NEP 2020, the aim of education should be not only cognitive development, but also building character and creating holistic and well-rounded individuals equipped with the 21st century skills.
- Inclusive Education: M.K. Gandhi wanted to attached all children to the education system, so he gave ideas of 'Lok-vidya' and education for all irrespective of caste and creed. He emphasised on the idea that education should be accessible to every individual as it very necessary for our democratic country). His mainly focussed on including the vulnerable and marginalized groups which include women, untouchables and other socially and culturally disadvantaged groups into the mainstream of Education by providing them with equal access to education and other educational opportunities that their more privileged counterparts in the society enjoyed. Also, in the present NEP, his views were taken into consideration in the bigger domain of The Socially and Economically Disadvantaged Groups (SEDGs). NEP set the highest priority of the education system is to achieve universal foundational literacy and numeracy in primary school by 2025 by attaching all children to the school.

IV. RELEVANCE OF EDUCATIONAL THOUGHT OF A.P.J. ABDUL KALAM IN NEP 2020

Avul Pakir Jainulabdeen Abdul Kalam was a Scientist, Educationist and the 11th President of India from 2002 to 2007. A.P.J. Abdul Kalam's contribution towards Science, Education & Society is immeasurable and occupied with unbelievable efforts during his life journey. He was the first educational thinker who had provided the idea of teaching students to be autonomous learners, so that they will continue as enduring learners. Dr. Kalam believes in creativity and innovation. According to him, human creativity will always be superior to machine intelligence.

PM Modi also remembered the former Indian President's vision for India: a knowledge superpower. "Bharat has lost a Ratna, but the light from this jewel will guide us towards APJ Abdul Kalam's dream destination: India as a knowledge superpower, in the first rank of nations," said PM Modi. The aim of making the policy of NEP 2020 is to make India Knowledge Superpower which was the dream of A.P.J. Abdul Kalam.

Dr APJ Abdul Kalam's aim of education is to build character, cultivate human values, develop scientific attitude with spiritual foundation, build confidence to face uncertain future, and to develop a sense of dignity, self-respect, and self-reliance. Prof. Raghavendra P. Tiwari, the Vice Chancellor of Central University of Punjab said that "India's learning system needed urgent reforms to inculcate these attributes which Abdul Kalam mentioned in aim of education in our youth and to develop global competencies to make them socially and economically relevant and finally, to capitalize on the geographic dividend."

Dr. Kalam also visualizes that there is the need for a strategy that could make education more attractive, skill oriented and employment generating. He suggests that the syllabus should be structured in such a manner that it should meet changing societal needs, fulfil the needs of the occupation and inculcate high moral values among students in addition to learning skills. He emphasizes that the education system is concentrating to build the curriculum which will emphasise the convergence of technologies and remove the inter-disciplinary barriers.

Similarities of A.P.J. Abdul Kalam educational thought with NEP 2020:

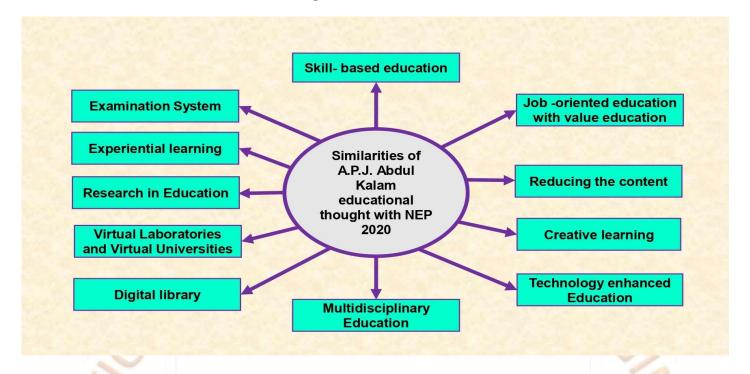


Figure -2: Similarities of A.P.J. Abdul Kalam educational thought with NEP 2020

- Skill- based education: According to Dr. Kalam education is a fundamental right of every child and education means to make child creative, imaginative and innovative. He said that education serves as a base for a developed and strong country. Dr. Kalam believed that education can make a child to be an entrepreneur or a skilled worker, who can perform any task with full confidence to get assured success. Dr. Kalam stressed on education based on science along with values and spirituality. He also promoted on computer education with creativity and innovation. According to Kalam skill-based education plays a vital role in implementing the Mission 2020 of Developed India. NEP recommend that the aim of education will not only be cognitive development, but also building character and creating holistic and well-rounded individuals equipped with the key 21st century skills.
- Job-oriented education with value education: Dr. Kalam always stresses upon the job-oriented education, which provides a strong economic base to our younger generations; and he believed that this education must couple with value education which is needed to conserve our civilizational heritage. NEP suggest that the school curriculum will include, early on, material on human values such as respect for all persons, empathy, tolerance, human rights, gender equality, non-violence, global citizenship, inclusion, and equity. It would also include more detailed knowledge of various cultures, religions, languages, gender identities, etc. to sensitize and develop respect for diversity. In this way both suggest for education should be job oriented with value education.
- Reducing the content: According to A.P.J. Abdul Kalam, "Creativity in the education system can be promoted by reducing the theoretical burden at primary level, progressively increasing it at the secondary level, and finally leading to higher level teaching and creation of self-reliance among students to undertake entrepreneurship and be employment generators rather than employment seekers." NEP 2020 also suggest for reducing the content of curriculum to enhance essential learning and critical thinking. According to NEP reducing the curriculum content in each subject to its core essentials is necessary to make space for critical thinking and more holistic, inquiry-based, discovery-based, discussion-based, and analysis-based learning; and also, it will help in focusing on key concepts, ideas, applications, and problem solving.
- Creative learning: A.P.J. Abdul Kalam suggested creative learning which is also supported by NEP 2020. According to A.P.J. Abdul Kalam "At the primary stage, education must nurture the child's curiosity about the environment and integrate the thinking process with the skill of hand, limb and body. Primary education needs renewal of the syllabus, the teaching methods and the examination system, so that the children's creativity is enlightened and allowed them to grow. Emphasis should be on exploration, innovativeness and creativity through activities. At the secondary stage emphasis should be on experiments, problem solving and team work." This is also suggested by NEP.
- Multidisciplinary Education: A.P.J. Abdul Kalam emphasizes that the education system has to build the curriculum which will emphasise the convergence of technologies and remove the inter-disciplinary barriers. NEP suggest for the multidisciplinary Education, as in this student have a large amount of flexibility in choosing their individual curricula, certain subjects, skills, and capacities which would help them become a good, successful, innovative, adaptable, and productive human beings in today's rapidly changing world.
- Technology enhanced Education: Dr. APJ Abdul Kalam proposed the frame work for the future education for the country by converging science and technology with spirituality Dr. A.P.J. Abdul Kalam emphasizes the use of science and technology in the day-to-day life so that India could develop as a progressive and technologically advanced nation. NEP 2020 suggest integration of

technology in education for improving different aspect of education. It also suggests of framing an autonomous body, the National Educational Technology Forum (NETF), which will provide a platform for the free exchange of ideas on the use of technology to enhance learning, assessment, planning, administration. It recommends for integrating of technology-based education platforms, such as DIKSHA/SWAYAM, across school and higher education. According to Prof. Raghavendra P. Tiwari, the Vice Chancellor of Central University of Punjab "Transformational reforms proposed in NEP-2020 cannot be implemented without the use of technology. For this, teachers and students should be empowered to use technology in teaching-learning.

- Digital library: His suggested the awareness as well as application of digital library to promote educational connectivity. Dr. Abdul Kalam (2005), writes that libraries need to be digitized and the books should be available seamlessly across the universities and distance learning programmes for universal access. He further writes "When a student desires to read a certain book, he or she could be given online access. Tele- education software can be an important tool for the digital library. NEP 2020 suggest for a digital repository of content including creation of coursework, Learning Games & Simulations, Augmented Reality and Virtual Reality to be developed and these contents of digital repository need to be reached to the teachers and students in their medium of instruction as far as possible.
- Virtual Laboratories and Virtual Universities: Dr. A.P.J. Abdul Kalam suggest for Virtual Laboratories and Virtual Universities. According to him, the rich knowledge institutions should be connected through Internet because it is essential to remove the barriers and open up the gates of innovation. Further he said that collaboration to Virtual Experimentation leading to the establishment of Virtual Universities and Laboratories is essential as can be helpful in providing the education in a creative learning experience at anytime and anywhere with collaborative interaction as a way of learning over the borderless world. The Virtual Universities will provide the equitable access across the world. The virtual universities and virtual laboratories can be used as a platform to excite the students to take to learning in the new pattern. According to NEP 2020 written in point 24.4 (f) of Online Education, "Existing elearning platforms such as DIKSHA, SWAYAM and SWAYAMPRABHA will also be leveraged for creating virtual labs so that all students have equal access to quality practical and hands-on experiment-based learning experiences. The possibility of providing adequate access to SEDG students and teachers through suitable digital devices, such as tablets with pre-loaded content, will be considered and developed." And also written as under section Digital infrastructure "There is a need to invest in creation of open, interoperable, evolvable, public digital infrastructure in the education sector that can be used by multiple platforms and point solutions, to solve for India's scale, diversity, complexity and device penetration. This will ensure that the technology-based solutions do not become outdated with the rapid advances in technology." NEP also suggest for conducting virtual classes.
- Research in Education: Dr. A.P.J. Abdul Kalam emphasise on importance to research in education as it leads to quality education, identify the brilliant minds and provide them with right type of scientific atmosphere to pursue fundamental research of their choice as research is a very significant means of renovation and renewal of education as well as the society. NEP 2020 also give emphasis on quality research in education, for this it recommends for establishment of a National Research Foundation (NRF) to fund outstanding peer-reviewed research and to actively seed research attitude in universities and colleges.
- Experiential learning: Dr. A.P.J. Abdul Kalam stresses on Practical education i.e. teaching with practical examples related to our lives and surroundings and by sharing experiences and learning by doing. He stresses on questioning method, so teacher have to encourage the students to ask questions and develop the spirit of enquiry. He also stressed on imparting theoretical subjects matters with live and practical examples so it will be well and easily understood and retained for a longer period. NEP 2020 recommend experiential learning to be adopted at all levels, which can include hands-on learning, arts-integrated and sports-integrated education, story-telling-based pedagogy. It suggests the teacher to adopt such method in which child can explores and learn on his own activities and experiences.
- Examination System: Dr. A.P.J. Abdul Kalam suggests that system of examination, evaluation and reporting should be more transparent and reliable. The evaluation should be not on the basis of bookish knowledge and memory but it should cover all aspects of personality development. NEP 2020 also suggest class 10 and 12 board examinations to be made easier, to test core competencies rather than memorised facts. It also suggests for 360-degree Holistic Progress Card, tracking Student Progress for achieving Learning Outcomes.

V. CONCLUSION

Education is our human right and important for changing the behaviour of the students. It is an essential and crucial element for the all-round development of any society and country. So, many educational thinkers gave their thoughts related different aspects of education such as the aim of education, curriculum framing, method of teaching, teacher role and students etc. In India different education policies are made by taking these thoughts of the different educational thinkers. M.K. Gandhi and Dr. A.P.J. Abdul Kalam are the eminent educational thinkers whose educational thoughts are valuable for our education system. The researcher feels there is lacking of value in students in present era and other problem is unemployment due to lack of skills in students. National Education Policy (NEP), 2020 which is the first education policy of 21st century is approved for transforming the education towards digitalisation and multidisciplinary to make the people skilful, so that they can compete in this era. The researcher found much similarities to the Wardha Scheme or Basic education given by M.K. Gandhi and also find that this policy is copy of the "Vision 2020" given by A.P.J. Abdul Kalam for transforming the India from developing into the developed nation. The aim of both NEP 2020 and A.P.J. Abdul Kalam is similar to make "India a global knowledge superpower" through digital transformation. As it is progressive shift towards a more scientific approach to education so this prescribed structure will help to develop scientific attitude and good moral values in child and make them capable to compete in this competitive era. It is very comprehensive and effective education policy for bringing transformation in education system and making India a developed nation which is the dream of A.P.J. Abdul Kalam. For taking full benefit from it, proper implementation of this policy is very necessary.

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