

# EDUCATIONAL THOUGHTS OF DR. A.P.J. ABDUL KALAM WITH SPECIAL REFERENCE TO MODERN SYSTEM OF EDUCATION

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**Abstract:** This paper has tried to explore educational contributions of Dr. A.P.J. Abdul Kalam with reference to modern system of education. The findings of the study are: the educational thoughts of Abdul Kalam have a great relevance in the modern system of education. Education is a journey of knowledge and enlightenment so there is no scope for pettiness, disharmony, jealousy, hatred or enmity. Research and enquiry, creativity and innovation, capacity to use high technology, entrepreneurship, moral leadership, physically fit and academically sound & spiritually awakened should be the aims of education in modern system of education. Universities should focus on education with career training and value system for meeting the needs of our nation and should provide world-class vocational skills to the youth for making them internationally competitive, so that this will bridge the employable skill gap. The students should be equipped with knowledge on subjects like leadership, management, finance, marketing, inter-personal relationship, negotiation, entrepreneurship, IT/ITES applications, knowledge process outsourcing domain expertise and also adaptation of ethical values in all professional transactions. Teachers should inspire the youth to take up subjects of their interest be it poetry, music, art or philosophy, commerce, literature, finance and all the other disciplines of engineering. He says that the universities should be empowered and the colleges should be provided with autonomy and fund to transform them into world class institutions. Spirituality must be integrated with education and self-realization should be the focus. Everyone should be aware of his higher self.

**IndexTerms:** Concept of Education, Aims of Education, Curriculum, Methods of Teaching, Role of The Teacher, Moral Education, Research in Education, Social Transformation

## Introduction

Many personalities took birth in our mother land of India and motivate our youths and children. Dr. APJ Abdul Kalam is one of them. He played many roles from seven decades as a scientist, as a President, as an author and as a teacher. In honor of the scientist and former president, the southeast Indian state government of Tamil Nadu created a "Dr. A.P.J. Abdul Kalam Award," which recognizes exceptional individuals who promote the sciences, students and humanities. The government has also established Kalam's birthday (October 15) as "Youth Renaissance Day." Kalam liked to meet students and shared his experiences and motivated them to become something for nation. He is one of the great personalities who dominated the last moment of his life to students and youths (Trivedi, 2017). Kalam was a great scientist of the World. He invented many things which gave glory to India. He was a patriot, who dominated whole life for nation. He knew that children and young are power of nation so he always prepared to meet them and motivated them. His profession put more effect in educational thoughts. He knew the power of education so he wanted to increase literacy of nation. He wanted to arise a love in children for science. Because he believed that nation could develop through science and technology(Trivedi, 2017). He always gave the importance to dreams. He motivated to children and young to see a big dream, because a dream played very important role in his life. He recalled an incident, when he was studied in class 8th at the age of 13. His teacher, Shri Siva SubramaniaIyer was teaching about bird's flight. He drew a diagram of a bird on the blackboard depicting the wings, tails and the body structure with the head. He explained how the birds create the lift and fly. But many students including him could not understand the lesson. After knowing this, his teacher took all students to the sea shore of Rameswaram in evening. He showed the bird and taught the lesson. All students understood very clearly. But bird's flight entered in to him and created a special feeling. From that evening, he thought that his future study has to be with reference to flight and flight system. Thus, his life was transformed as a rocket engineer, and aerospace engineer and technologist (Trivedi, 2017). The central idea in Dr. Kalam's vision is to transform India into a developed nation(Dash,2018). Many authors have written about Dr. A.P.J. Abdul Kalam but in the area of research, not much work has been done on him (Dash,2018).Further there has been very limited study dealing with the educational contribution of Dr. A.P.J. Abdul Kalam in the present education system. Hence, it is thought of conducting the much-needed study. Thus, the present study assumes high significance.

## I. OBJECTIVES OF THE STUDY

1. To study the educational contributions of Dr. A.P.J. Abdul Kalam with reference to concept of education in modern system of education.

2. To study the educational contributions of Dr. A.P.J. Abdul Kalam with reference to aims of education in modern system of education.
3. To study the educational contributions of Dr. A.P.J. Abdul Kalam with reference to curriculum in modern system of education.
4. To study the educational contributions of Dr. A.P.J. Abdul Kalam with reference to role of the teacher in modern system of education.
5. To study the educational contributions of Dr. A.P.J. Abdul Kalam with reference to moral education in modern system of education.
6. To study the educational contributions of Dr. A.P.J. Abdul Kalam with reference to research in education in modern system of education.
7. To study the educational contributions of Dr. A.P.J. Abdul Kalam with reference to methods of teaching in modern system of education.
8. To study the educational contributions of Dr. A.P.J. Abdul Kalam with reference to immediate and concrete steps for improving the school education.
9. To study the educational contributions of Dr. A.P.J. Abdul Kalam with reference to societal transformation through education.

## II. RESEARCH QUESTIONS

1. What are the contributions of Dr. A.P.J. Abdul Kalam to modern system of education with reference to concept of education?
2. What are the contributions of Dr. A.P.J. Abdul Kalam to modern system of education with reference to aims of education?
3. What are the contributions of Dr. A.P.J. Abdul Kalam to modern system of education with reference to curriculum?
4. What are the contributions of Dr. A.P.J. Abdul Kalam to modern system of education reference to role of the teacher?
5. What are the contributions of Dr. A.P.J. Abdul Kalam to modern system of education with reference to moral education?
6. What are the contributions of Dr. A.P.J. Abdul Kalam to modern system of education with reference to research in education?
7. What are the contributions of Dr. A.P.J. Abdul Kalam to modern system of education Kalam with reference to methods of teaching?
8. What are the contributions of Dr. A.P.J. Abdul Kalam to modern system of education with reference to immediate and concrete steps for improving the school education?
9. What are the contributions of Dr. A.P.J. Abdul Kalam to modern system of education with reference to societal transformation through education?

## III. RESEARCH METHODOLOGY

In view of the nature of the study, the exploratory method was used in order to accomplish the present research work. The nature of the present study is qualitative as it studies the educational thoughts of Dr. A.P.J. Abdul Kalam.

### 4.1 Sources of Data

The present study is based on educational philosophy of Dr. A.P.J. Abdul Kalam. So, it is decided to collect the information from different sources. The researchers made extensive use of relevant literature to get the required information. Both primary and secondary sources of data were used.

### 4.2 Tools and Techniques Used for Collection of Data

As the present study was based on the educational thoughts of Dr. A.P.J. Abdul Kalam, thus content analysis was used as a technique to analyze his educational and scientific thoughts

### 4.3 Delimitations of the Study

The present study was delimited to the educational thoughts of Dr. A.P.J. Abdul Kalam and further it was delimited to the relevance of educational thoughts of Dr. A.P.J. Abdul Kalam in the present education system.

### 4.4 Variables of the Study

The study sought mainly to study the educational contributions (concept of education, aims of education, curriculum, methods of teaching, role of the teacher, moral education, research in education, social transformation) of Dr. A.P.J. Abdul Kalam and further it was delimited to the relevance of educational contributions of Dr. A.P.J. Abdul Kalam in the present education system.

## IV. RESULTS and DISCUSSION

The educational thoughts of Dr. A.P.J. Abdul Kalam are of great significance in the present educational system. The results of the present study have been presented as follows:

### 5.1 Concept of Education

According to Dr. A.P.J. Abdul Kalam, education in its real sense is the pursuit of truth. Education is a journey of knowledge and enlightenment so there is no scope for pettiness, disharmony, jealousy, hatred or enmity. It transforms a human being into a wholesome whole, a noble soul and an asset to the universe. Real education enhances the dignity of a human being and increases his or her self-respect. He is sure that If only the real sense of education could be realized by each individual, and carried forward in every field of human activity, the world would be so much a better place to live in. Education is all about forming beautiful minds that are creative. In turn, creative minds will make the world beautiful.

Table No1: Students Play Major Role in the Reformation of the Society

Dr. A.P.J. Abdul Kalam believes that students can play a major role to reform and re-mould the society. All revolutions begin in the minds of students. Schools and colleges are the nurseries of fresh and dynamic thoughts. He says that education is an endless

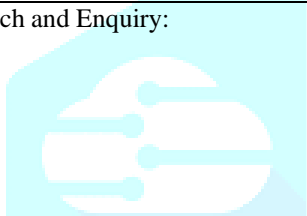
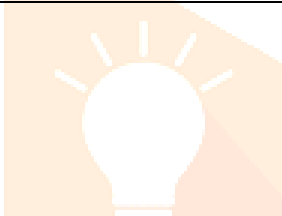
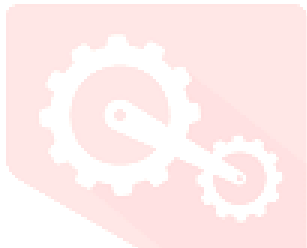

journey. In Kalam’s view an education that does not teach man something deeper than the mere knowledge of textbooks, is completely worthless. If our education does not make us good men and women, it is of no value. Education teaches us the right use of our body and brain. The parents give to their children their physical birth. The second birth is the process of education. He says that education is not a one-way process of receiving but also of giving. Education is not merely imparting the information and skill. It is a commitment to enhance the knowledge.

According to Dr. A.P.J Abdul Kalam, education is the most important element for growth and prosperity of a nation. As India is in the process of transforming itself into a developed nation by 2020, yet we have 350 million people who need literacy and many more who have to acquire employable skills to suit the emerging modern India and the globe. Education is indeed fundamental rights of every Indian child so we can’t allow this situation to continue in which millions of these children are forced into a life long poverty. He hopes that one day the parents should be able to go to any school nearby and admit their children and happily come back home with the confidence that their children will get a good and value based education in the school.

**5.2 Aims of Education**

Dr. A.P.J. Abdul Kalam says that any enlightened human being can be created through three unique characteristics. One is development of moral value system, second is building capacities in students to inquire, to be innovative and creative and become an autonomous life long learner and thirdly, creating the professional capability to design a system independently. Dr. A.P.J. Abdul Kalam says that a good educational system is the need of the hour to ensure that the students grow to contribute towards the economic growth of a nation. Normally, research, technology and performance in the three sectors namely agriculture, manufacturing and services lead to economic growth and prosperity of the nation. We can sow the seeds of capacity building among the students. There will be continuous innovation during the learning process. To realize this, special capacities are required to be built in education system for nurturing the students. The capacities that are to be built are research and enquiry, creativity and innovation, use of high technology, entrepreneurial and moral leadership.

Table No:2 Aims of Education

|   |   |  |
|---|---|--|
|   |   | <p>The 21st century is about the management of knowledge and information. The students should be taught the skills with which they find a way through the sea of knowledge that has been created and continues with life long learning. Today, everyone has the ability to teach himself to become the life-long learner through technology. This is required for sustained economic development.</p>  |
|  |  | <p>The management of knowledge in the 21st century is beyond the capacity of a single individual. The amount of information around us is overwhelming. The management of knowledge therefore must move out of the realm of the individual and shift into the realm of the networked groups. The students must learn how to manage knowledge collectively. When the information is networked, the power and utility of the information grows. Information that is static does not grow. In the new digital economy information that is circulated creates innovation and contributes to national wealth</p> |
| <p>Capacity to Use High Technology:</p>   |   | <p>Every student in our colleges should learn to know how to use the latest technologies for aiding their learning process. Colleges should equip themselves with adequate computing equipment, laboratory equipment, and Internet facilities and provide an environment for the students to enhance their learning ability. He personally believes that content generation in the multimedia mode is very important.</p>  |
| <p>Entrepreneurship:</p>  |   | <p>The aptitude for entrepreneurship should be cultivated right from the beginning and in the University environment. The students should be taught to take calculated risks for the sake of larger gain, but within the ethos of good business. They should also cultivate a disposition to do things right. This capacity will enable them to take up challenging tasks later.</p>   |
| <p>Moral Leadership:</p>  |   | <p>Moral leadership involves two aspects. First it requires the ability to have compelling and powerful dreams or visions of human betterment. Moral leadership requires a disposition to do the right thing and influence others also to do right things.</p>   |
| <p>Physically Fit and Academically Sound</p>  |   | <p>Dr. A.P.J. Abdul Kalam wants that the students should be groomed to be physically fit and academically sound.</p>   |
| <p>Spiritually Awakened</p>   |   | <p>Education should make them emotionally mature and spiritually awakened.</p>   |
|   |   |  |

In sum, inquiry, creativity, technology, entrepreneurial and moral leadership are the five capacities to be built among the students through the education process. If these five capacities are developed in all the students, they will become “Autonomous Learner” a self-directed, self-controlled, lifelong learner who will have the capacity to both, respect authority and at the same time is capable of questioning authority, in an appropriate manner. These are the leaders who would work together as a “Self-Organizing Network” and transform any State as a prosperous State. Dr. A.P.J. Abdul Kalam further says that true education should help the individual to understand daily events and to understand the permanent truth by linking man to his environment, human and planetary. Education should build in students the capacities to deal with the real world, particularly to grow in their professional career and participate in the national development. He suggests that they must be embedded right from the beginning of the students’ life from primary education. He further adds that the aim of the education system should be to create employment generators rather than employment seekers apart from building research capability. When the students complete the course from the educational institutions and enter into the world of opportunities he or she should have the confidence with indomitable spirit acquired from their teachers teaching and coming into contact with great minds. Education should make them emotionally mature and spiritually awakened. He says that the purpose of education is the creation of enlightened citizens. Education should develop children into good human beings with knowledge and value system. Education should develop righteousness in young minds. Dr. A.P.J. Abdul Kalam says that educational institutes should focus on education with career training and value system for meeting the needs of our nation.

### 5.3 Curriculum

Dr. A.P.J. Abdul Kalam says that India needs large number of talented youth with higher education for the task of knowledge acquisition, knowledge imparting, knowledge creation and knowledge sharing. There is a large gap in the availability of employable skill. To bridge the gap, an interface is needed between the school curriculum and the needs of the three sectors of the economy. Science, technology, engineering and math’s training is of utmost importance for technology dependent society and these disciplines represent compelling advances in human knowledge that all students should have the opportunity to appreciate. Dr. A.P.J. Abdul Kalam wants that in the schools and colleges, lectures on moral values should be given by great teachers of the institution once in a week for one hour. This may be called as Moral Science Class that will elevate the young minds to love the country, to love the other human beings and elevate them to higher planes.

Table No:3 Curriculum

|  |
|--|
| <p>Universities should focus on education with career training and value system for meeting the needs of our nation and should provide world-class vocational skills to the youth for making them internationally competitive, so that this will bridge the employable skill gap. The students should be equipped with knowledge on subjects like leadership, management, finance, marketing, inter-personal relationship, negotiation, entrepreneurship, IT/ITES applications, knowledge process outsourcing domain expertise and also adaptation of ethical values in all professional transactions. Teachers should inspire the youth to take up subjects of their interest be it poetry, music, art or philosophy, commerce, literature, finance and all the other disciplines of engineering. He says that the universities should be empowered and the colleges should be provided with autonomy and fund to transform them into world class institutions.</p> |
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Dr. A.P.J. Abdul Kalam stresses that educational authorities should facilitate provision of uniform quality education to children and youth along with soft-skills and value system integrated as part of course curriculum. Education system should promote innovation and concentrate more on knowledge application rather than simply studying for the sake of exams. Total education system must get oriented to achieve this goal. Proficiency in science must be enlarged with the reoriented framework of integrating education, research, innovation, entrepreneurship, venture capital leading to delivery competitive products in the global market. He further adds that young in the organization irrespective of their specialization, should be trained to systems approach and projects to prepare them for new products, innovation and undertaking higher organizational responsibilities. He wants that Universities should focus on education with career training and value system for meeting the needs of our nation and should provide world-class vocational skills to the youth for making them internationally competitive, so that this will bridge the employable skill gap. The students should be equipped with knowledge on subjects like leadership, management, finance, marketing, inter-personal relationship, negotiation, entrepreneurship, IT/ITES applications, knowledge process outsourcing domain expertise and also adaptation of ethical values in all professional transactions. The students should be provided a certificate or a diploma along with the professional degree. This type of education will equip the youth with employable skills needed by the industry and also give the confidence to the youth to take up entrepreneurship as an independent venture. He suggests the teachers to inspire the youth to take up subjects of their interest be it poetry, music, art or philosophy, commerce, literature, finance and all the other disciplines of engineering. He says that the universities should be empowered and the colleges should be provided with autonomy and fund to transform them into world class institutions. Dr. A.P.J. Abdul Kalam further suggests that the educational system should have 6 months entrepreneurship programme as part of the present 3 years graduation programme in humanities, commerce, arts, science and 4 years engineering programme and prepare the students to get oriented towards setting up of enterprises which will provide them creativity, freedom and ability to generate wealth.

### 5.4 Moral Education

Stressing upon the need of moral education for children, Dr. A.P.J. Abdul Kalam justifies that India has a mission of transforming itself into a developed nation with value system. This is a great challenge. This can be achieved through the youth power. Youth has got the power of ideas, ambition and ability. This resource of the youth is an important building block for transforming India into a developed nation. He says that the young generation does not need to fear about the future. They will definitely be partners in building the India of their dreams. Dr. Kalam says that it is important to instill values in children at the primary and secondary school level, as it is not easy to do so after they are 17. He says parents and teachers, schools and homes must have an integrated mission: to inculcate moral leadership amongst children. He recalls his school days saying, "While I was in college, I remember

the lectures given by the highest authority of the Jesuit Institution, Father Rector Kalathil of St. Joseph's College at Tiruchirappalli in Tamil Nadu. He used to take classes on moral sciences. In this class, he used to give lectures on personalities such as Buddha, Confucius, St. Augustine, Califa Omar, Mahatma Gandhi, Einstein, Abraham Lincoln, besides some scientific personalities and moral stories linked to our civilisational heritage. "Stressing upon the need for Education with a value system, Dr. Kalam says that the best part for a person is his or her learning period in childhood. The prime learning environment is from the fifth to the 16th year. Of course, at home love and affection are imparted. But most of the time in a day is spent in preparing school's homework and studying, eating, playing and sleeping. Hence, the school hours for children are the best time for learning and they need the best of environment and mission-oriented learning with value system. During this stage, they need value-based education in school and at home to become good citizens. If the child misses the value-based education of 25,000 hours in the school campus, no government or society can establish a transparent society or a society with integrity. Up to the age of 17 years, the father, the mother and the teacher lead a child to become an enlightened citizen. If the child misses the period of learning for the reasons as it is today, the nation loses an enlightened citizen. "It requires the ability to have compelling and powerful dreams or visions of human betterment, a state of things in which human beings could be better off in the future than they are now," he says.

Table No:4 Moral Education

Spirituality must be integrated with education and self-realization should be the focus. Everyone should be aware of his higher self.

### 5.5 Research in Education

Dr. A.P.J. Abdul Kalam gives much importance to research in education, as he believes that good teaching emanates from research. He says that the teachers' love for research and their experience in research are vital for the growth of any institution. Any Institutions is judged by the level and extent of the research work it accomplishes. This sets in a regenerative cycle of excellence. Experience of research leads to quality teaching and quality teaching imparted to the young in turn enriches research.

Table No:5 Research in Education

Knowledge is powered by science, technology and innovation. Science, technology and innovation are powered by investment in rich resources. Since Universities are the reservoir of knowledge and also the prime knowledge generation centers of the nation so in order to promote scientific research, the brilliant minds in the university should be identified and should be provided with the right type of scientific environment to pursue fundamental research of their choice. Secondly, large number of innovative researchers should be facilitated to carry out "Directed Research", particularly towards alleviation of human suffering and promoting good health.

According to Dr. A.P.J. Abdul Kalam, research is now becoming the driving force in the process of self-reliance of all cutting edge technologies. Research in certain universities has been the main contributor and the guiding force in realizing their core competence. Our road map for the next few decades will see many new frontiers in the areas of nano-science and engineering, space technology, advanced materials and composite technology, biotechnology in the fields of drugs and pharmaceuticals etc. It is imperative, that universities come together to realize the importance of these areas and the effect that they are going to have in shaping the future. Equal emphasis is needed in research in the areas of arts and literature, humanities, political science, law, economics, commerce, and management along with scientific researches to promote balanced growth of the societal system preserving the civilization heritage. Dr. A.P.J. Abdul Kalam is of the opinion that knowledge is powered by science, technology and innovation. Science, technology and innovation are powered by investment in rich resources. Since Universities are the reservoir of knowledge and also the prime knowledge generation centers of the nation so in order to promote scientific research, the brilliant minds in the university should be identified and should be provided with the right type of scientific environment to pursue fundamental research of their choice. Secondly, large number of innovative researchers should be facilitated to carry out "Directed Research", particularly towards alleviation of human suffering and promoting good health.

### 5.6 Methods of Teaching

Dr. A.P.J. Abdul Kalam observes that in the years to come, India has to graduate from industrial economy to knowledge economy with emphasis on empowerment of the people besides providing basic needs for all-round development. So, the education system has to be creative, interactive, self-learning and informal with focus on values, merit and quality instead of being textbook based teaching.

Table No:6 Methods of Teaching

Education system has to be creative, interactive, self-learning and informal with focus on values, merit and quality instead of being textbook based teaching. Computer education is must for the upcoming generations and says that children should learn through computers. Educational institutes should start a child friendly technology assisted school initiative in collaboration with State Governments and multilateral agencies. This holistic phenomenon of learning once ingrained in the primary stage, will led to voluntary learning by the students.

Dr. A.P.J. Abdul Kalam says that the best learning takes place when the teacher infuses a creative learning habit in the students and makes it an enjoyable part of life long quest for knowledge. He says that the real teaching is one where the teachers give theoretical lesson coupled with a live practical example available in nature. Dr. A.P.J. Abdul Kalam suggests that computer education is must for the upcoming generations and says that children should learn through computers. He emphasizes that the educational institutes should start a child friendly technology assisted school initiative in collaboration with State Governments and multilateral agencies. In these schools even the very small children should be taught how to use the computer so that creative learning environment can be created. In this task teachers should help the students. The programme should encompass a series of interventions to strengthen practices in the classroom and provide support to educational administration and community

empowerment to manage the educational process. This initiative should be based on the region of experimentation and go beyond cognizant learning and memory test. It should emphasize on intellectual, technical, physical, creative and spiritual learning using computers. This holistic phenomenon of learning once ingrained in the primary stage, will led to voluntary learning by the students. Dr. Kalam says that such a multi-pronged strategy will enable the nation to achieve 100% percent literacy by 2015 and develop employable skills among our youth.

**5.7 Role of the Teacher**

For the noble cause of imparting a good and value based education to the youth of nation, Dr. Kalam considers teachers very important and says that they are the backbone of the country who can create innovators which are relevant to society. He says that to enable the development of youth first and foremost, the teacher’s love for teaching is very essential, with teaching as the soul of the teacher. The teachers must realize that they are responsible for shaping not just students but ignited youth who are the most powerful resource under the earth, on the earth and above the earth. With their full commitment to the great mission of teaching, the teacher transforms himself or herself as a great teacher only when he or she is capable of elevating the average student to high performance. The teacher conducting himself or herself in a noble way itself is a lifetime message for students. Dr. Kalam suggests that the teachers should encourage the students and children to ask questions and develop the spirit of inquiry, so that they blossom into creative enlightened citizens. They should treat all the students equally and should not support any differentiation on account of religion, community or language and continuously upgrade the capacities in teaching so that they can impart quality education to the students. They should realize that by being a teacher that they are making an important contribution to the efforts of national development. The teachers must constantly endeavor to fill students mind, with great thoughts and spread the nobility in thinking and action among the students. The teachers should celebrate the success of their students. Dr. A.P.J. Abdul Kalam stresses the need of quality teachers when he says that teachers are the shapers of young minds and India requires large numbers of teachers at all levels with quality training. He suggests that with the available technological support, training of teachers can be enabled from all parts of the country. Dr. A.P.J. Abdul Kalam says that a great teacher evolves great citizens, as the teacher is the child’s window to learning. Teachers should create an environment in which there is nothing like a good student, average student or poor student. The whole school and teacher system should be involved in generating students who perform the best. This race of teachers and teacher of teachers should multiply. Stressing upon the teachers’ important contribution to national development, Dr. Kalam asks teachers to take an oath to not just shape students but also ignite them with values. Going down memory lane to talk about his primary school teacher, Mr. Kalam recalls, he had not only taught him how birds flew, but also had "injected" in him a "mission." He also remembers about his high school teacher Iyadurai Solomon who inspired him. Dr. A.P.J. Abdul Kalam says that the teachers should love teaching and should treat the students as their sons, grand sons or grand daughters. The children see the teacher, as a role model in teaching and how always they look pious through their daily way of life. The noble life practiced by the teacher indeed becomes a beacon light to the students. Young children studying in primary and secondary schools should be blessed with good teachers. Entry for primary school teacher should become competitive like IITs and IIMs and they should have a passion for teaching. Teacher’s profession should be treated as a noble profession. They should get good habitat, good quality of life and an opportunity to acquire knowledge continuously.

Table No:7 Responsibilities of The Teacher

|                                |   |
|--------------------------------|---|
| Eleven-Point Oath for Teachers | First and foremost, I will love teaching. Teaching will be my soul.   |
|                                | I realize that I am responsible for shaping not just students but ignited youths who are the most powerful resource under the earth, on the earth and above the earth. I will be fully committed for the great mission of teaching. |
|                                | As a teacher, it will give me great happiness, if I can transform, an average student of the class to performance exceedingly well.   |
|                                | All my actions with my students will be with kindness and affection like a mother, sister, father or brother.   |
|                                | I will organize and conduct my life, in such a way that my life itself is a message for my students.  |
|                                | I will encourage my students and children to ask questions and develop the spirit of enquiry, so that they blossom into creative enlightened citizens.  |
|                                | I will treat all the students equally and will not support any differentiation on account of religion, community or language.   |
|                                | I will continuously build the capacities in teaching so that I can impart quality education to my students.   |
|                                | I will celebrate the success of my students.  |
|                                | I realize by being a teacher, I am making an important contribution to all the national development initiatives.  |
|                                | I will constantly endeavour to fill my mind, with great thoughts and spread the nobility in thinking and action among my students.  |

### 5.8 Immediate and Concrete Steps for Improving the School Education

Dr. A.P.J. Abdul Kalam suggests that we should impart quality and value-based education in the schools. Particularly, primary education should be imparted in such a way that it becomes a pathway in the pursuit of higher education and capacity building. Dr. A.P.J. Abdul Kalam wants the universities and school educational systems in India to create two cadres of personnel:

- A global cadre of skilled youth with specific knowledge of special skills.
- A global cadre of youth with higher education.

These two cadres will be required not only for powering the manufacturing and services sector of India but also will be needed for fulfilling the human resource requirements of various countries. Thus, the universities and secondary school education system should work towards increasing the through put of the higher education system from the existing 11% to 30% by the year 2020 and 50% by the year 2040. The rest of our youth who are not covered by the higher education system should all have world class skill sets in areas such as construction, carpentry, electrical systems, repair of mechanical systems, fashion design, para-legal, para-medical, accountancy, sales and marketing, software and hardware maintenance and service, software quality assurance personals etc. No Indian youth should be without either a world-class higher education or without world-class skills sets. This is the mission, which must be undertaken by all our Universities and the educational system. The graduates who come out of Universities and the skilled youth from vocational institutions should have specialization linked to the employment potential. Dr. Kalam is convinced that it is possible to effect such a transformation through multi prolonged missions.

Table No:8 Transformation Through Multi Prolonged Missions

- Launching a “lighting the lamp of knowledge movement” and spreading the message of education among the entire population through formal and informal participation by all citizens who are keen to contribute to this mission.
- Adopting interim measures for enhancing school capacity through two shift operations of existing schools, enabling additional teachers drawn from volunteers all over the country and augmenting infrastructure through public private partnership.
- Formulation of a strategic plan for increasing the number of schools, colleges and universities within a five year time frame.
- Creation of IIM, IIT, IIIT and AIIMS as the institutions of excellence for engineering, medical and management education as a public-private partnership.
- Enabling specialists from all over the country to participate in the knowledge movement.
- Augmenting the education system with technology and with quality content generation.
- Creation of a web portal by the government for providing online data on all aspects of education including facilities available, expertise in different disciplines and such information which will facilitate any individual or organization to contribute to the education system. Apart from this, Dr. Kalam suggests that universities should be empowered and the affiliated colleges should be provided with funds and autonomy to transfer them into world-class institutions.

### 5.9 Societal Transformation through Education (Knowledge Society)

Dr. A.P.J. Abdul Kalam says that the whole purpose of education in a country like India is to develop and enhance the potential of our human resource and progressively transform it into a knowledge society.

Table No:9 Societal Transformation through Education

The real capital of this knowledge society will be its knowledge workers. The society will be highly networked to create knowledge intensive environment along with enabling process to efficiently create, share, use and protect knowledge. Education system should re-align itself at the earliest to meet the needs of the present-day challenges and be fully geared to participate in the societal transformation. Efficient utilization of existing knowledge can create comprehensive wealth for the nation and also improve the quality of life including better education, healthcare, infrastructure and other societal needs.

Talking about the knowledge society, Dr. A.P.J. Abdul Kalam says that it will be a society producing products and services that are rich in both explicit and tacit knowledge, thus creating value added products. The real capital of this knowledge society will be its knowledge workers. The society will be highly networked to create knowledge intensive environment along with enabling process to efficiently create, share, use and protect knowledge. Dr. A.P.J. Abdul Kalam suggests that the education system should re-align itself at the earliest to meet the needs of the present-day challenges and be fully geared to participate in the societal transformation. The networking of all departments is the first step towards creating the universities that could meet the demands of the knowledge era. Efficient utilization of existing knowledge can create comprehensive wealth for the nation and also improve the quality of life including better education, healthcare, infrastructure and other societal needs. The ability to create and maintain a knowledge society infrastructure, develop the knowledge workers, and enhance their productivity through the creation, growth, and exploitation of new knowledge, will be the key factors in deciding the prosperity of this knowledge society. Dr. A.P.J. Abdul Kalam says that the mission of any educational institution is to transform into knowledge society. This mission will have an impact on removing illiteracy, upgrading the educational system at various levels for providing employable education and enriching the teachers at all levels. It has to enrich not only the communication area, but provide the leverage to multiple sectors such as agriculture, construction, manufacturing and delivery of social services.

## V. MAIN FINDINGS

**6.1: Concept of Education:** - Education is a journey of knowledge and enlightenment so there is no scope for pettiness, disharmony, jealousy, hatred or enmity.

**6.2 Aims of Education:** Aims of education are research and enquiry, creativity and innovation, capacity to use high technology, entrepreneurship, moral leadership, physically fit and academically sound & spiritually awakened with reference to modern system of education.

**6.3 Curriculum:** Universities should focus on education with career training and value system for meeting the needs of our nation and should provide world-class vocational skills to the youth for making them internationally competitive, so that this will bridge the employable skill gap. The students should be equipped with knowledge on subjects like leadership, management, finance, marketing, inter-personal relationship, negotiation, entrepreneurship, IT/ITES applications, knowledge process outsourcing domain expertise and also adaptation of ethical values in all professional transactions. Teachers should inspire the youth to take up subjects of their interest be it poetry, music, art or philosophy, commerce, literature, finance and all the other disciplines of engineering. He says that the universities should be empowered and the colleges should be provided with autonomy and fund to transform them into world class institutions.

**6.4 Moral Education:** -Spirituality must be integrated with education and self-realization should be the focus. Everyone should be aware of his higher self.

**6.5 Research in Education:** - Knowledge is powered by science, technology and innovation. Science, technology and innovation are powered by investment in rich resources. Since Universities are the reservoir of knowledge and also the prime knowledge generation centers of the nation so in order to promote scientific research, the brilliant minds in the university should be identified and should be provided with the right type of scientific environment to pursue fundamental research of their choice. Secondly, large number of innovative researchers should be facilitated to carry out "Directed Research", particularly towards alleviation of human suffering and promoting good health.

**6.6 Methods of Teaching:** - Education system has to be creative, interactive, self-learning and informal with focus on values, merit and quality instead of being textbook based teaching. Computer education is must for the upcoming generations and says that children should learn through computers. Educational institutes should start a child friendly technology assisted school initiative in collaboration with State Governments and multilateral agencies. This holistic phenomenon of learning once ingrained in the primary stage, will led to voluntary learning by the students.

**6.7 Role of the Teacher:** -With their full commitment to the great mission of teaching, the teacher transforms himself or herself as a great teacher only when he or she is capable of elevating the average student to high performance. The teacher conducting himself or herself in a noble way itself is a lifetime message for students. Teachers should encourage the students and children to ask questions and develop the spirit of inquiry, so that they blossom into creative enlightened citizens. They should treat all the students equally and should not support any differentiation on account of religion, community or language and continuously upgrade the capacities in teaching so that they can impart quality education to the students. They should realize that by being a teacher that they are making an important contribution to the efforts of national development. The teachers must constantly endeavor to fill students mind, with great thoughts and spread the nobility in thinking and action among the students. The teachers should celebrate the success of their students.

**6.8 Immediate and Concrete Steps for Improving the School Education:** - the universities and school educational systems in India to create two cadres of personnel: A global cadre of skilled youth with specific knowledge of special skills and a global cadre of youth with higher education. These two cadres will be required not only for powering the manufacturing and services sector of India but also will be needed for fulfilling the human resource requirements of various countries.

**6.9 Societal Transformation through Education:** -The real capital of this knowledge society will be its knowledge workers. The society will be highly networked to create knowledge intensive environment along with enabling process to efficiently create, share, use and protect knowledge. Education system should re-align itself at the earliest to meet the needs of the present-day challenges and be fully geared to participate in the societal transformation. Efficient utilization of existing knowledge can create comprehensive wealth for the nation and also improve the quality of life including better education, healthcare, infrastructure and other societal needs.

## VI. CONCLUSION

The educational thoughts of Abdul Kalam have a great relevance in the modern system of education. Abdul Kalam, is the president- who has a lot of love for children and feels that the future of India lies in them. Today's young students want the education system to feed and challenge their innovative and creative minds. Educational institutions have to year up to evolve a curriculum that is sensitive to the social and technological needs of a Developed India. Ultimately, education is its real sense is the pursuit of truth. It is an endless journey through knowledge and enlightenment. Such a journey opens up new vistas of development of humanism where there is neither scope nor room for pettiness, disharmony, jealousy, hatred or enmity. It transforms a human being into a whole some whole, a noble soul and an asset to the universe. Real education enhances the dignity of human being and increases his or her self-respect. If only the real sense of education could be realized by each individual and carried forward in every field of human activity the world will be so much a better place to live in. The relevance of dr. A.P.J Abdul Kalam's educational thoughts in the present school system was identified through administering the opinionative to the expert teacher educators and school teachers (Asha, 2013).

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