

**A Critical Analysis of Dr. A.P.J. Abdul Kalam's Educational Philosophy in the
Context of NEP 2020**

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Abstract

Education is a major instrument of individual development, social transformation, national development, and the creation of a knowledge-based society. Dr. A.P.J. Abdul Kalam conceptualized education not merely as the acquisition of information or academic qualifications but as a process of developing creativity, scientific temper, moral values, self-confidence, problem-solving ability, and a sense of responsibility toward society and the nation. His writings, including *Wings of Fire*, *India 2020: A Vision for the New Millennium*, and *Ignited Minds*, emphasize the transformative potential of young minds, innovation, knowledge, technology, values, and nation building. The National Education Policy (NEP) 2020 similarly seeks to transform Indian education through holistic and multidisciplinary learning, competency development, creativity, critical thinking, vocational education, technology integration, research, Indian languages and knowledge systems, teacher development, and equitable access to quality education. The present paper critically analyses the philosophical convergence and divergence between Kalam's educational vision and NEP 2020. The study adopts a qualitative documentary research design and uses thematic analysis of selected primary and secondary sources. Four major areas of convergence are identified: holistic development and values, creativity and innovation, technology and future-oriented learning, and education for nation building and social transformation. At the same time, the analysis indicates that Kalam's vision was primarily aspirational, motivational, and humanistic, whereas NEP 2020 represents a comprehensive policy framework requiring institutional, financial, pedagogical, and administrative mechanisms for implementation. The paper argues that Kalam's philosophy can provide an ethical and motivational foundation for interpreting the transformative objectives of NEP 2020, but successful implementation requires attention to equity, teacher preparedness, infrastructure, regional diversity, and institutional capacity.

Keywords: A.P.J. Abdul Kalam, educational philosophy, National Education Policy 2020, holistic education, creativity, innovation

1. INTRODUCTION

Education occupies a central position in the development of individuals and societies. In contemporary India, the purpose of education has increasingly moved beyond examination-oriented learning toward the development of competencies, creativity, critical thinking, values, employability, citizenship, and lifelong learning. The National Education Policy (NEP) 2020 represents a major attempt to transform Indian education through holistic, flexible, multidisciplinary, competency oriented, and technology-supported learning. The policy emphasizes access, equity, quality, affordability, and accountability and seeks to develop India as a vibrant knowledge society. 1 Dr. A.P.J. Abdul Kalam occupies a distinctive position in Indian educational and intellectual discourse. Although he was primarily a scientist and technologist, his writings and interactions with students articulated a broad educational philosophy centred on creativity, scientific temper, values, knowledge, technology, youth empowerment, and nation building. Kalam's educational ideas are particularly evident in *Wings of Fire*, *India 2020: A Vision for the New Millennium*, and *Ignited Minds*. His vision emphasizes the development of young minds capable of dreaming, thinking, creating, innovating, and contributing to national development. The relationship between Kalam's educational philosophy and NEP 2020 is therefore worthy of systematic examination. The present paper attempts to critically examine the extent to which the educational ideals articulated by Kalam correspond with the principles and reform directions of NEP 2020.

2. OBJECTIVES OF THE STUDY

- I. . To analyse the major educational ideas and philosophical principles reflected in the writings and vision of Dr. A.P.J. Abdul Kalam.
- II. To examine the major educational principles and reform orientations of NEP 2020 in relation to holistic, innovative, value-based, and technology-enabled education.
- III. To critically analyse the areas of convergence and divergence between Dr. A.P.J. Abdul Kalam's educational philosophy and NEP 2020.
- IV. To examine the contemporary relevance and educational implications of Kalam's philosophy for the effective realization of the objectives of NEP 2020.

3. RESEARCH QUESTIONS

- I. What are the major philosophical and educational ideas reflected in Dr. A.P.J. Abdul Kalam's vision of education?
- II. To what extent do the principles and provisions of NEP 2020 correspond with Dr. A.P.J. Abdul Kalam's educational philosophy?
- III. What is the contemporary relevance of Kalam's educational philosophy for the effective realization of the objectives of NEP 2020?

4. REVIEW OF RELATED LITERATURE

- I. Renuka and Bhat (2016). Renuka and Bhat conducted a study entitled "Vision and Mission of Indian Education according to Dr. A.P.J. Abdul Kalamji." The study examined Kalam's ideas concerning the aims of education, curriculum, creativity,

innovation, entrepreneurship, management skills, science and technology, and the future of Indian education. The authors highlighted Kalam's belief that education is a major driving force for individual development and national progress. They also emphasized his vision of integrating science and technology with human and spiritual values. The study concluded that Kalam's educational ideas remained relevant to improving the quality of Indian education and addressing educational challenges.

Relevance: This study provides a conceptual foundation for understanding Kalam's educational philosophy, but it predates NEP 2020 and does not examine the relationship between Kalam's philosophy and the 2020 policy.

- II. Geelani and Shafiq (2021). In "Relevance of Educational Philosophy of K. G. Saiyidain and APJ Abdul Kalam with the Contemporary Education System," the authors examined the educational philosophies of K. G. Saiyidain and Dr. A.P.J. Abdul Kalam in relation to contemporary education. Their analysis considered the aims and purposes of education, teacher and learner roles, training, curriculum, teaching practices, and the significance of educational thought for contemporary society. They argued that Kalam's educational ideas continue to have relevance for directing youth energy toward constructive purposes and for developing a meaningful contemporary education system.

Relevance: The study establishes the contemporary relevance of Kalam's educational philosophy, but focuses on a broad comparison rather than a systematic comparison with NEP 2020.

- III. Dey (2022). Dey's "National Education Policy (NEP) 2020 on Transforming Education: A Critical Analysis of Recommendations on School, Teacher and Higher Education" critically examined the major recommendations of NEP 2020 concerning school education, teacher education, and higher education. The study highlighted structural and pedagogical changes proposed by NEP 2020 and examined the policy's vision for transforming Indian education.

Relevance: Dey's work provides an important analytical understanding of NEP 2020; however, it does not investigate the philosophical relationship between NEP 2020 and Kalam's educational vision.

- IV. Gurjar and Sharma (2025). In "Analysis of Dr. A.P.J. Abdul Kalam's Educational Philosophy in the Context of Modern Education System," the authors examined Kalam's educational philosophy in relation to contemporary educational requirements. The study highlighted his emphasis on character formation, hard work, honesty, patriotism, scientific education, moral education, curriculum development, women's education, and technological advancement. The authors characterized Kalam's philosophy as combining traditional values with modern scientific and technological orientations.

Relevance: This recent study strengthens the argument that Kalam's educational philosophy remains relevant in the contemporary educational context, while a systematic thematic comparison with NEP 2020 remains necessary.

5. RESEARCH GAP

The review of literature reveals three important gaps. First, existing studies have examined Dr. A.P.J. Abdul Kalam's educational philosophy and its relevance to contemporary education, but relatively fewer studies have systematically connected his philosophy with the specific provisions of NEP 2020.

Second, studies on NEP 2020 have extensively examined its structural, curricular, pedagogical, technological, and institutional dimensions, but the philosophical foundations and intellectual parallels between NEP 2020 and Kalam's educational vision have received comparatively limited attention.

Third, there is a need for a thematic comparative framework examining whether Kalam's ideas concerning creativity, scientific temper, values, technology, holistic development, youth empowerment, skills, and nation building correspond with the transformative objectives of NEP 2020. The present study addresses this gap through qualitative documentary analysis.

6. METHODOLOGY

The study adopts a qualitative, descriptive, analytical, and documentary research design.

Primary Sources: The major primary sources include Wings of Fire (Kalam & Tiwari, 1999), India 2020: A Vision for the New Millennium (Kalam & Rajan, 1998), Ignited Minds (Kalam, 2002), and the National Education Policy 2020 (Ministry of Education, 2020).

Secondary Sources: Secondary sources include peer-reviewed research articles, scholarly literature, government reports, and studies concerning Kalam's educational thought and NEP 2020.

Method of Analysis: The selected documents were analysed thematically. The following major themes were identified: holistic development and values; creativity and innovation; scientific temper and technology; skill and experiential learning; youth empowerment; education and nation building; equity and inclusion; and research and multidisciplinary education.

7. MAJOR AREAS OF CONVERGENCE

7.1 Holistic Development. Kalam's educational philosophy emphasizes the development of the whole person, including intellectual, moral, emotional, creative, and social dimensions. NEP 2020 similarly advocates holistic development rather than an exclusive focus on academic achievement. Thus, both perspectives challenge an overly narrow examination-oriented model of education.

7.2 Creativity and Innovation. Creativity is central to Kalam's educational vision. He regarded young minds as a major source of innovation and national transformation. NEP 2020 also places considerable emphasis on creativity, critical thinking, problem solving, research, and innovation.

7.3 Technology-Enabled Education. Kalam viewed science and technology as important instruments of national development. NEP 2020 also recognizes technology as an important component of educational transformation and proposes increased and equitable use of educational technology. However, technology must be combined with accessibility and teacher preparedness to prevent the digital divide from becoming an educational divide.

7.4 Values and Character. Kalam's philosophy gives considerable importance to integrity, discipline, responsibility, perseverance, and social commitment. NEP 2020 similarly emphasizes ethical, constitutional, social, emotional, and cultural development. This represents one of the strongest philosophical connections between the two frameworks.

7.5 Skill Development and Experiential Learning. Kalam's scientific career reflected the importance of experimentation, problem solving, teamwork, and practical application of knowledge. NEP 2020 promotes experiential learning, vocational education, internships, competency development, and integration of vocational and academic learning.

7.6 Youth Empowerment. Kalam consistently regarded young people as important agents of India's future. NEP 2020 similarly seeks to equip learners with competencies required for the twenty-first century and to develop their unique capabilities.

8. CRITICAL DISCUSSION

Although considerable similarities exist, Kalam's educational philosophy and NEP 2020 should not be treated as identical. Kalam's philosophy is primarily visionary, motivational, humanistic, scientific, and developmental, whereas NEP 2020 is a comprehensive public policy framework.

This distinction is important because philosophical ideals cannot automatically be converted into educational outcomes. Successful implementation requires appropriate infrastructure, teacher preparation, financial resources, institutional leadership, curriculum development, assessment reform, and continuous monitoring.

Therefore, Kalam's philosophy can be viewed as providing a humanistic and motivational foundation, while NEP 2020 provides a policy and institutional framework.

9. FINDINGS

- I.** Kalam's educational philosophy is humanistic, scientific, value-oriented, innovative, and nation-oriented.
- II.** There is considerable convergence between Kalam's philosophy and NEP 2020 regarding holistic development.
- III.** Creativity, innovation, critical thinking, scientific temper, and research represent important common elements.
- IV.** Both frameworks recognize the importance of technology and future-oriented education.
- V.** Kalam's emphasis on values and character complements NEP 2020's emphasis on ethical and holistic development.

- VI.** Both perspectives regard education as an instrument of individual empowerment and national development.
- VII.** NEP 2020 is more detailed than Kalam's philosophy regarding institutional mechanisms, equity, governance, curriculum, teacher education, and implementation.
- VIII.** The major challenge is converting the shared philosophical vision into effective classroom practice.

10. RECOMMENDATIONS

- I. Kalam's educational philosophy should be incorporated into teacher education programmes as a source of philosophical and ethical reflection.
- II. Educational institutions should promote creativity, innovation, scientific inquiry, and problem-solving through project-based learning.
- III. Technology-enabled education should be accompanied by measures to ensure digital equity.
- IV. Assessment should increasingly evaluate creativity, critical thinking, problem solving, collaboration, and application of knowledge.
- V. Teachers should receive continuous professional development in innovative pedagogy and technology-enabled learning.
- VI. Higher education institutions should promote multidisciplinary research, innovation, entrepreneurship, and community engagement.
- VII. NEP 2020 should be implemented with sensitivity to India's linguistic, cultural, geographical, and socioeconomic diversity

11. COMPARATIVE SUMMARY OF KALAM'S PHILOSOPHY AND NEP 2020

SL. NO	Dimension	Kalam's Educational Philosophy	NEP 2020	Interpretation
1.	Purpose	Human development and nation building	Holistic individual and national development	Strong convergence
2.	Learner	Creative, responsible, innovative	Competent, holistic, future-ready	Strong convergence
3.	Creativity	Central to learning and innovation	Explicitly promoted	Strong convergence
4.	Technology	Instrument of transformation	Integrated into education	Strong convergence
5.	Values	Character, integrity, responsibility	Ethical and constitutional values	Strong convergence
6.	Skills	Practical knowledge and problem-solving	Vocational and competency-based learning	Strong convergence
7.	Youth	Agent of national transformation	Future-ready citizens	Strong convergence

8.	Research	Science and innovation as development	Focus Research ecosystem	Strong convergence
9.	Implementa tion	Primarily inspirational	Institutional policy mechanism	Major difference
10.	Equity	Broad human development concern	Explicit access and inclusion framework	NEP more structurally detailed

12. CONCLUSION

Dr. A.P.J. Abdul Kalam's educational philosophy remains highly relevant to contemporary Indian education. His emphasis on creativity, scientific temper, values, technology, youth empowerment, skills, and nation building demonstrates substantial philosophical convergence with the transformative objectives of NEP 2020. The literature reviewed also demonstrates that Kalam's educational ideas have been examined in relation to contemporary education, while separate scholarship has critically analysed NEP 2020. However, a systematic examination of their philosophical convergence remains valuable. The present study therefore argues that Kalam's philosophy can serve as a humanistic and motivational lens through which the transformative objectives of NEP 2020 can be understood. Nevertheless, the realization of this vision requires effective implementation, trained teachers, adequate resources, inclusive institutions, technological accessibility, and sustained commitment to quality and equity. The study concludes that Kalam's enduring contribution lies in a conception of education that enables individuals to dream, think, create, serve, and contribute to the transformation of society.

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