

A Bibliometric Portrait of Dr. A.P.J. Abdul Kalam: Assessing Contributions to Knowledge and Society

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Abstract: This study investigate the Bibliometric Portraits of Bharat Ratna Dr. APJ Abdul Kalam, Former president of India, his publication productivity encompassed by Biography, Autobiography, Literatures, Poems, Songs, Oaths, Speeches & Lectures, Conferences and Research papers, publications works about Kalam done by others. He has published 61 authentic original literary works and identified the 165 translation of the same works in regional and international languages, 21 poems and 14 oaths, 4 songs 2866 speeches and Lectures are identified. Apart this 17 research articles three conference proceeding paper are also identified, Wings of fire, Ignited minds and India 2020 are the most translated books from of his works, and they are translated in Chinese, French, Korean, Sinhalese, Japanese, Spanish, Romanian, Russian, Thai and Bengali Languages. 67 books of Biography and Memoirs and 84 Magazine reports were identifies about the Kalam. 8 Documentary and films are also identified about the Bharat Ratna Dr. APJ Abdul Kalam.

Keywords: Dr. A P J Abdul Kalam, Missile man of India ,Bibliometrics, Collected works.

1. INTRODUCTION:

Certain exceptional men and people whose ideals have left an imprint upon this earth continue to affect those about us still by their words and thoughts. Thanks to APJ Abdul Kalam 's genius, because India managed to gain such renown that she is looked up at by an entire world. As an eminent scientist, he was a great source of knowledge and inspiration for many Indian students this great man realised the dreams for making missiles for India. A world renowned intellectual personality with multifaceted genius, Dr. A.P.J. Abdul Kalam is regarded as one of the most charismatic presidents that India ever had; no other public personality in India has endeared himself to all regions of the country quite like Abdul Kalam, with his childlike curiosity, simplicity, and optimism. He raised his arms in favour of space research as a means of advancing India. He did more than simply create something new; he also made something useful out of the science and technology India had at his disposal. His viewpoints on higher education in India will have a significant impact going forward. He was a very devoted person who was well-liked by his co-workers. This phrase of Kalam explains his humble nature. But most of all he was a gentleman, a perfectly imperfect man, a poetizer, and a writer. He was an artist at heart, and read the Gita, the Quran, Tamil poetry, and dabbled in Veena music. His books, full of Scientific and philosophical ideas, became famous all over the globe. The journey of Dr. A P. J. Abdul Kalam was watched by the entire world. It was really a dream come true to see the transformation from a son of a fisherman to the President of India. This is an important milestone and example of how potential within Indian people can be used to inspire individuals across the world. These bibliometric portraits study, therefore, is significant as it elaborates the intellectual outputs of Dr. Kalam in countless forms of literature and serves an important source of insights on the global canvass of his works enabling researchers and practitioners to explore this multifaceted legacy of inspiration and knowledge to cheers to all moral and pragmatic issues raised for further study.

2. LITERATURE REVIEW:

Gopal Prasad Dixit and Suresh Jange (2017) conducted a blibilometric study on The academic accomplishments of Prof. S. Sreenivasa Murthy, Fellow of the Indian National Academy of Engineering (INAE), the study reveals that who

was authored 105 articles in scholarly journals and 182 articles in conference proceedings, have been highlighted in an effort. His publications with two or three authors account for approximately 48% of the overall authorship, while those with only one author account for just under 17%, with H-index is 15, and 739 people have cited his academic work. Bidyarthi Dutta(2019) studied the Biobibliometric portrait of B.K Sen: A librarian, information scientist and scientometrician, the study find out that BK Sen has produced 390 writings. He produced an average of seven writings per year. 184 of the 390 writings are research articles; therefore he consistently produced around three papers annually throughout the course of his career. His contributions include popular and technical writings (55, 14%), terminology writings (48, 13%), course materials (37, 10%), books (12, 3%), letters (12, 3%), book reviews (9, 2.5%), catalogue reviews (9, 2.5%), review articles (5, 1.3%), and reports (5, 1.3%), in addition to research articles. Koley and Sen (2006) examine the main facets of the professional life of Indian librarian and information scientist Bimal Kanti Sen are highlighted in this bio-bibliometric study the significant efforts to improve Indian practical scientometric programmes in his capacity as a professional librarian. From 1964 to 2018, spanning almost 55 years of his service and retirement, he contributed 390 writings, averaging seven writings per year. 184 of the 390 writings are research articles; therefore he consistently produced around three papers annually throughout the course of his career. The contributions include popular and technical writings (55, 14%), terminology writings (48, 13%), course materials (37, 10%), books (12, 3%), letters (12, 3%), book reviews (9, 2.5%), catalogue reviews (9, 2.5%), review articles (5, 1.3%), and reports (5, 1.3%), Mulla et.al (2010) examines Prof. C. N. R. Rao's publications in the fields of Chemistry using bio-bibliometrics. Over 2000 articles throughout his 45 years of scientific experience have been published. The investigation is restricted to 452 published popular research articles. In nine major topics of various fields, such as Nanotechnology, Solid State and Materials Chemistry, etc., he wrote 42 books and edited conference proceedings. Prof. Rao is a fellow of 25 science academies and has obtained 46 honoris causa doctorate degrees from various universities over the world (12 foreign and 34 418 Indian).

3. RESEARCH PROBLEM:

Bibliometric analysis of the published literature of an eminent scientist or a writer creates the portrait of those authors and indicates the quality and quantity of the productivity complete works any field of area. It also informs us about the literature orientation that it supports to disseminate and its influence on author's choice as a channel to communicate or retrieve information for their writing needs. Taking these advantages of presenting bibliometric portrait of DR. APJ Kalam.

4. OBJECTIVES

1. To analyse quantitatively Dr. APJ Abdul Kalam contribution of literature and research
2. To identify literary forms of wise distribution of Publication
3. To identify the translated books from the original works
4. To Analyse the language wise distribution of translated works
5. To examine the Honors and Awards received by Dr. Abdul Kalam

5. RESEARCH METHODOLOGY:

The present study is based on complete literary works by Dr. APJ Kalam and the data for this collection is much challenged one, any of the source does not give the complete information about the collected works of Dr. Kalam. Data collected from 2023 September to 2024 January. 2024 October though literature a comprehensive literature survey. The sources utilized for this data collection include survey the data collected from various sources, Google books, DC Books publication Catalogue, Official website of Dr. Abdul Kalam, Library of Congress Catalogue, British Library Catalogue, and Worldcat. The data collection is much challenged task, especially the collection and authenticity about biographies and memoirs of Dr. Kalam. The Collected Data fed up into Ms Excel for analyzing the bibliographic details. All collected data tabulated and analyzed to meet the aim and objectives of the present study.

6. RESULTS AND ANALYSIS:

The analysis of data by the different form of works by Dr. Kalam, 2685 speeches and lectures are the highest contribution, 61 books were identified and which comes in second position 21 poem and 16 research articles were identified respectively. Songs are among the least of Dr. APJ Abdul Kalam's contributions in terms of his works. Google scholar is portraits the Citation details of the DR. APJ Kalam publication from 1999 to 2020 year. Total Citation score is 811 and the total H index value is 11. I10 index (the number of publications with at least 10 citations) is 14. In the year 2017 is highest citation are seen in with 71, in the year 20016 and 2015 the citation scores 57 and 54 respectively. The very lowest citation score in the year 1999 with 6. The book 'India 2020: A vision for the new millennium' has got

highest citation (171), Ignited Minds: Unleashing the Power within India has got 72 citation which is comes in the second position the third position is wings of fire has got 48 citation. The figure 1 illustrates the year wise distribution of the original works Total 60 books are published during the period of 1999-2018, 6 books are published in Hindi languages and 3 books were published in Tamil Languages. In the most productive year is 2018(8 books) and 2011 (8 books) are published in the year.

Table 1 depicts the Forms of Works.

Forms of Works					
Speeches and Lectures	Books	Poems	Research papers	Oaths	Songs
2686	61	21	17	14	4

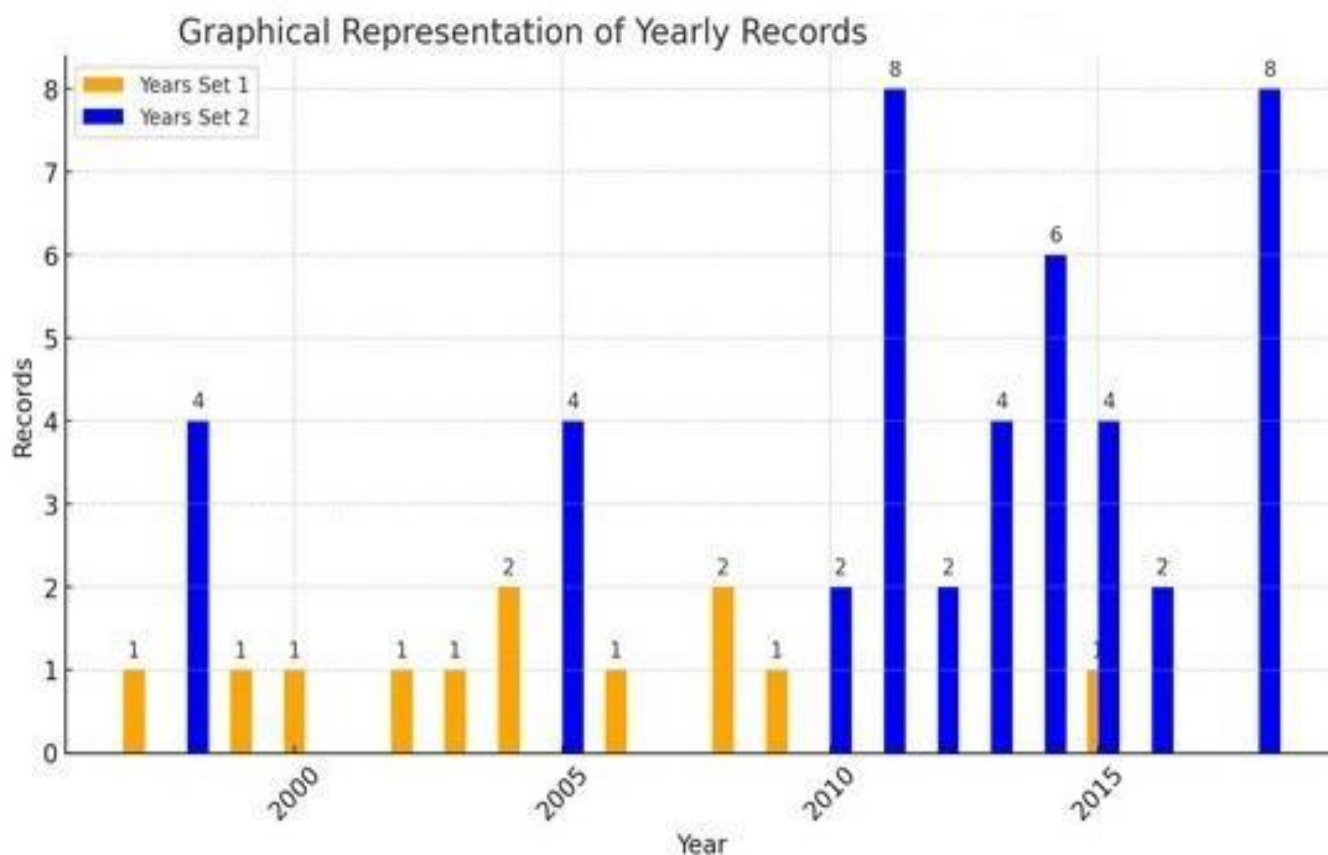


Fig 1 Year wise Distribution of Original works

Distribution of Original works and Translated works:

The below table 2 displays the original and translated works in various language. It found that 60 original works and 166 translations were identified. Most of the works was published in English Languages and only three works written in Tamil Language.

Table 2 Distribution of Original works

Sl No.	Nameof the Book	Year of	Language	Sl No.	Nameof the Book	Year of	Language
1	Combating technology control regime	1997	English	31	You are Unique	2012	English
2	India 2020- A Vision for the New Millennium	1998	"	32	Turning Points	2012	English
3	A Manifesto for Change: A Sequel to India 2019	1998	"	33	My Journey	2013	English
4	Beyond 2020: A Vision for Tomorrow's India	1998	"	34	Squaring the Circle	2013	English
5	Can technology lead to a prosperous society	1998	"	35	Jagrth bharth sedhta Bharat	2013	Hindi
6	Wings of fire: an auro biography	1999	"	36	Thoughts for Change	2013	English
7	Nuclearisation of Divided Nations	2000	"	37	Governance for Growth in India	2014	English
8	Ignated minds	2002	"	38	Forge Your Future	2014	English
9	President kalam's call to the nation Ignites young	2003	"	39	Missile Man	2014	English
10	The Luminous Sparks	2004	"	40	Bharat Bhagya Vidhata	2014	Hindi
11	Envisioning an Empowered Nation Technology	2004	"	41	The Righteous Life: The Very Best of	2014	English
12	The Life Tree:Poems	2005	"	42	Reignited: Scientific Pathways to a	2014	English
13	Mission India: A Vision of Indian Youth	2005	"	43	My india : ideas for the future	2015	English
14	Guiding souls : dialogues on the purpose of life	2005	"	44	Advantage India	2015	English
15	You are Born to Blossom	2005	"	45	My life an illustrated autobiography	2015	English
16	Children ask Kalam	2006	"	46	Aao Bachcho Avishkarak Banen	2015	Hindi
17	Evolution of enlightened societies	2006	"	47	Learnring how to fly	2016	English
18	The Family and the Nation	2008	"	48	The wonderful world of books	2016	English
19	Indomitable spirit	2008	"	49	Pathways of greatness	2018	English
20	Inspiring Thoughts	2009	"	50	Loving your country	2018	English
21	The Scientific Indian	2010	"	51	Can india become developed country	2018	English
22	Bharat Ki Awaz	2010	"	52	A beautiful life	2018	English
23	Spirit Of India	2011	"	53	Enlighted minds	2018	English
24	Target 3 Billion	2011	"	54	Dream your dreams	2018	English
25	Building a New India	2011	"	55	Failure is a teacher	2018	English
26	Mem kalam bol raha hum	2011	"	56	Mera desh badal rah hei	2018	Hindi
27	Failure to Success	2011	"	57	Transcendence My Spiritual Experienc	2015	English
28	A Lesson for My Teacher	2011	"	58	Unnai urangavidamal seyvathuthaan	2016	Tamil
29	School Topper	2011	"	59	Ilainagar Kalam	2016	Tamil
30	Designing a Fighter Jet	2011	"	60	Urakathille varauvathalla Kanavu	2015	Tamil

In Translated works analysis found that 149 books are many Indian languages and 17 books are translated into international languages. Wings of fire is the most translated books have 25 Languages where 18 in Indian languages and 7 international languages, Ignited mind is secured in second position which are translated into 14 languages 12 Indian languages and 2 international languages, and India 2020 - A Vision for the New Millennium came to the third position translated into 13 languages, 10 Indian languages and 3 foreign languages.

Table 3 Translated works

Name of the book	Regional Languages	Foreign Languages	Total
Wings of fire: an autobiography	18	7	25
Ignited minds: Unleashing The Power Within India	12	2	14
India 2020 - A Vision for the New Millennium	10	3	13
Envisioning an Empowered Nation Technology for Societal Transformation	9		9
Turning Points: A Journey Through Challenges	8		8
Forge Your Future	8		8
Children ask Kalam	7		7
My Journey: Transforming Dreams into Actions	7		7
Guiding souls: dialogues on the purpose of life	6	1	7
Indomitable spirit	6	1	7
You are Born to Blossom	5		5
The Family and the Nation	5		5
Inspiring Thoughts	5		5
The Scientific Indian: The Twenty-First Century Guide into the World Around Us	5		5
Squaring the Circle : Seven Steps to Indian Renaissance	5		5
Spirit off India	4		4
A Manifesto for Change: A Sequel to India 2019	3	1	4
Beyond 2020: A Vision for Tomorrow's India	3		3
Governance for Growth in India	3		3
My India: ideas for the future	3		3
Transcendence My Spiritual Experiences	3		3
Mission India: A Vision of Indian Youth	2		2
You are Unique	2		2
Reignited: Scientific Pathways to a Brighter Future	2		2
Pathways of greatness	2		2
The Luminous Sparks: A biography in verse and colours	1	1	2
The Life Tree: Poems	1	1	2
Target 3 Billion: Innovative Solutions Towards Sustainable Development	1		1
Thoughts for Change: We Can Do it	1		1
The Righteous Life: The Very Best of A.P.J. Abdul Kalam	1		1
Failure to Success	1		1
Total	149	17	166

Distribution of Translated languages of books:

Analysis of Translated language wise distribution of books, the most translated languages is Hindi total 28 number, Malayalam (19) translation, Marathi and Gujarati (16) each Tamil 14 number and Telugu 13 and Kananada is for 11. In the case foreign language Tai languages came in first position with 5 numbers, Chinese, Sinhala comes the respective positions.

Table 4 Distribution of Translated languages of books

SI No	Languages	Number of books
1	Hindi	28
2	Malayalam	19
3	Marathi	16
4	Tamil	14
5	Gujarati	16
6	Telungu	13
7	Kannada	11
8	Bengali	4
9	Benga(Bengladesh)	1
10	Assame	8
11	Panjabi	8
12	Urudu	3
13	Braille(english)	2
14	Braille(hindi)	1
15	Oriya	3
16	Bodo	1
17	Thai	5
18	Chinese	4
19	Sinangale	3
20	Spanish	1
21	French	1
22	Japanese	1
23	Korean	1
24	Romanian	1
25	Russsian	1
		166

Co Authorship Pattern

The co-authorship analysis shows that Arun Kumar Tiwari leads with 7 co-authored books but only 1 article. Yagnaswami Sundara Rajan and Srejan Pal Singh have balanced contributions, with Rajan having 5 books and 3 articles, and Singh 4 books and 2 articles. Apathukatha Sivathanu Pillai focuses more on articles, co-authoring 4, compared to 2 books. Authors like Acharya Mahapragya, Rohit Kathuria, and V. Ponraj co-authored 1 book each, with Mahapragya contributing 5 articles. Others have 1 Co-authorship in either books or articles, indicating lower collaboration.

Table 3 Co Authorship Pattern:

Co Authorship in books			Co Authorships in Articles		
1	Arun Kumar Tiwari	7	1	R. Chidambaram	1
2	Srejan Pal Singh	4	2	B. Medawar	1
3	Yagnaswami Sundara Rajan	5	3	A K George	1
4	Apathukatha Sivathanu Pillai	2	4	Prahlada	1
5	Acharya Mahapragya	1	5	Sarma, B. S	1
6	Rohit Kathuria	1	6	B Russel	1
7	V. Ponraj	1	7	U. R. Rao	1

Oaths, Poetry and Songs:

An oath is a solemn promise or regarding one's future action or behaviour Dr. Abdul Kalam delivered about 14 oaths for various kinds for social community/professionals. 21 Poem wrote by him, in those 2 poems in Tamil languages. National Prayer ,Song of Youth, My song(Mera Geeth version, and Glory to Chattisgarh (hindi version: Chathisgarh ke gourav ki jay) are the four all these literary contributions are inspired and accepted every common people and professionals to remember their promises, duties and responsibilities for the growth of the nation.

Table 4 Oaths, Poetry and Songs

Oaths		Sl No.	Poems
1	Oath for Students and Youth	1	Our Mission is Water
2	Oath for Teachers	2	Prayer for departed children of Kumbakonam
3	Oath for Jawans	3	My dear Soldiers
4	Oath for Doctors	4	Village Development is key to Nation Development
5	Oath for IIT Students	5	Rakhi Day is Righteous Day
6	Oath for Civil Service Officers Promoted in IAS	6	Guru Prakasham
7	Oath for Pharma Professional	7	Soaring Dream
8	Oath for Enlightened Citizens	8	Dream
9	Oath for Ambedkar Jayanti	9	The Vision
10	Oath for Village citizen	10	The Vision (Tamil)
11	Oath for Common People	11	I am the Indian Ocean
12	Oath for Nursing Community	12	Homage to Carnatic Music Doyen Late M S Subbulakshmi
13	Oath for Farmers	13	The Life Treez
14	Oath for Professional Leaders	14	Rock Walls
		15	Where are we?
		16	Where are we? (Tamil)
		17	Song of Youth
		18	Earth shining in Glory
		19	Phoenix of Life
		20	Neva Speaks
		21	My Garden Smiles

Table 5 Songs Lists

Sl. No.	Songs Lists	Language
1	My National Prayer	English
2	Songs of Youth	English
3	My songs	English & Hindi
4	Glory to Chhatisgarh	English & Hindi

Speeches and Lectures:

Dr. Abdul Kalam Delivered the around 2685 speeches and lectures in various national international, meetings, summits, award ceremonies, Inaugural Addresses, conference, seminars, functions, convocations etc during 1990 to 2007. His first address speech in January 1990 at AAPI inaugural Luncheons at New York, and his last speech on July 2015 at IIM Shillong .The year 2008 have highest number of speeches and lectures (292) and 2007 have the lower number (121) of speeches and lectures. At the same time 289 international speeches delivered by him. In the year 2009 he delivered by 87 speeches and 2003 only 7.USA secured in first position to get great opportunity have immense speeches and lectures with 94 times , Canada(44) England (25), Abudabhi (13).

Table 6 Speeches and Lectures																	
	1990	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	Total
Jan	1	48	14	27	11	21	18	31	13	35	17	26	16	8	17	2	305
Feb		0	13	32	16	15	30	27	27	20	22	25	12	9	24	2	274
Mar		0	20	1	6	8	19	34	26	15	20	21	21	16	18	0	225
Apr		0	6	8	8	11	9	20	29	31	18	13	7	20	14	0	194
May		0	21	7	10	8	23	24	14	14	8	16	16	15	11	0	187
Jun		0	18	12	12	14	20	21	13	14	16	12	21	11	10	0	194
Jul		1	7	17	30	14	10	18	18	14	24	10	16	14	24	2	219
Aug		1	6	22	22	12	20	28	28	15	16	9	17	18	4	0	218
Sep		3	23	12	18	30	20	20	15	22	19	27	19	14	6	0	248
Oct		8	16	23	30	22	24	24	22	13	13	23	16	11	4	0	249
Nov		19	16	27	32	30	22	31	17	14	7	22	8	13	6	0	264
Dec		16	27	22	41	38	25	14	20	13	17	31	13	11	1	0	289
	1	96	187	210	236	223	240	292	242	220	197	235	182	160	139	6	2866

The speeches and lectures given outside of India showcased a wide array of perspectives. As seen in table 7, the United States had ninety-four contributions, making it the global leader. Canada followed with forty-four while England contained twenty-five. Within the Middle East, Abu Dhabi shared thirteen contributions and Oman provided seven. Southeast Asia showed Malaysia's ten contributions and Singapore's insightful twelve. In total, the first set amounted to one hundred twenty-seven engagements. An additional one hundred sixty-two came from the second grouping. Together they culminated in two hundred eighty-nine total contributions. These numbers demonstrate the diverse regions actively taking part in scholarly discussions across the world.

Table 7 Speeches and Lectures in Foreign Countries

Abudhabi	13	Malaysia	10
Bahrain	7	Nepal	3
Bangladesh	6	Netherlands	6
Canada	44	Oman	7
China	11	Russia	4
Dubai	6	Saudi Arabia	9
England	25	Scotland	4
Finland	1	Sharja	6
Ireland	4	Singapore	12
Israel	4	Srilanka	7
Maldives	6	USA	94
Total	127		162
			289

Honours and Awards/Recognitions:

Dr. Kalam is one of the most eminent Indian Scientists who has ever received the concerned civilian awards Padma Bhushan(1981) and Padma Vibhushan (1990) and the highest civilian award BharatRatna (1997).He was

awarded the King Charles-II Medal for Science and Technology by The Royal Society, UK, in October 2007. In 2008, he was presented with the Woodrow Wilson Award. In June 2009, he was awarded the International Medal 2008 from The Royal Academy of Engineering, London (UK). In April 2009, the Hoover Board of Awards bestowed upon him the Hoover Medal 2008 at New York. In September 2009, he was awarded the 2009 International Von Karman Wings Award by the Aerospace Historical Society in Conjunction with the Graduate Aerospace Laboratories (GALCIT) at the California Institute of Technology. The government of Tamil Nadu announced his birthday on October, The Solibacillus kalamii is named in honour of the late former president Dr A.P.J. Abdul Kalam by researchers at the NASA Jet Propulsion Laboratory (JPL) On the establishment of Kerala Technological University and Uttar Pradesh Technical University, in 2014 and 2015 the university was renamed as APJ Abdul Kalam University. Moreover, in 2015 the UN announced Dr. Kalam birthday as 'World Students' Day'.

DR. Kalam a truly beloved personality was given unique distinction of receiving 48 Honorary doctorates from terminals and institutions in India and abroad. The award of the Honorary Doctorates from 12 foreign Universities are, Nyenrode Business University, Netherlands; Nanyang Technological University, Singapore; Carnegie Mellon University, Pittsburgh USA; University of Wolverhampton, UK; University of Kentucky, USA; Oakland University, Michigan USA; University of Waterloo, Canada; University Sans Malaysia, Malaysia University of Sydney, Australia and the Simon Fraser University, Vancouver.

Table 8 Distribution of Awards

Awards	Year
Padma Bhushan	1981
Padma Vibhushan	1990
Bharath Ratna	1997
Indira Gandhi Award for National Integration	1997
Veer Savarkar Award by Govt of India	1998
Ramanujan Award by Alwars Research Centre	2000
King Charles-II Medal for Science and Technology by The Royal Society, UK	2007
Woodrow Wilson Award	2008
London Royal Academy of Engineering International Medal Award	2008
International Von Karman Wings Award. The Aerospace Historical Society	2009
Karman Wings Award by California Institute of Technology, USA	2009
Hoover Medal from ASME Foundation, U.S.A	2009
Braun Award by National Space Society, Washington	2013

7. LIMITATION AND CONCLUSION:

The study data was collected over a timeline of September 2023 to January 2024. One clear limitation is that due to the translation of many books into numerous regional languages, this may not present the complete picture in the study presented. And the statistics around the same for books published in particular regional languages are not getting in web world. DR. Kalam is the only person in the world who got awards of honorary doctorates from 48 universities and institutions all over the India and foreign countries. Bharat Ratna Dr. APJ Abdul Kalam, a smart scientist who spent his whole life in India's civilian space programme and Indian Space Research Organisation (ISRO). An eminent scientist, Teacher, Great leader, speaker, a versatile genius, respect beyond the boundaries, He lead to give wings to dream of Indian peoples. His writings, speeches, services endowed with scientific, philosophical thoughts gained much popularity across the world. His first book is a Wings of Fire it is a consolidation of his life experiences that he scribbled together with his friend Arun Tiwari. In his book, he employed the term dream with some variations. His writing found a soul in youth and they took it to be the pump to escape from all pangs. Dr. Kalam will always be remembered as a simple, humble man with inspiring words. He has published 61 original literary works and identified the 166 translation of the same works in regional and international languages, and 21 poems and 14 oaths 4 songs and 2865 speeches and Lectures are identified without any bibliographic details, Apart from that 17 research articles are also identified, Wings of Fire, Ignited minds and India 2020 are the most translated books from his works, His loss makes an impact in this whole world with his endless visions and contributions. The author tries to explore the Bibliometric portrait of Dr. APJ Literary contributions to the world and also dedicate this paper as a tribute to a great person a missile man of India.

REFERENCES:

1. B. A. Kademani, V. L. Kalyane, M. R. Balakrishnan, Scientometric Portrait of P. K. Iyengar , Journal of Information and Knowledge: Volume 31, Issue 4, December 1994
2. Bhattacharyya, P. K., & Sahu, N. B. (2020). Informetric Portrait of Elinor Ostrom, the Nobel Laureate in the Field of Economic Sciences. *Journal of Scientometric Research*, 9(2), 204–213. <https://doi.org/10.5530/jscires.9.2.25>
3. B. S. Kademani, V. L. Kalyane, Vijai Kumar, Scientometric Portrait of Vikram Ambalal Sarabhai: A Citation Analysis , Journal of Information and Knowledge: Volume 37, Issue 2, June 2000
4. Bidyarthi Dutta(2019) Biobibliometric portrait of B.K Sen: A librarian, information scientist and scientometrician, Malaysian Journal of Library & Information Science, Vol. 24, no.1, April 2019: 1-21
5. K.R Mulla et.al (2010) Sixth International Conference on Webometrics, Informetrics and Scientometrics & Eleventh COLLNET Meeting, October 19 – 22, 2010, University of Mysore,
6. Kalam,APJ(1999) Wings of Fire, Universities Press: Hyderabad.
7. Kalyane, V. L., & Kalyane, S. V. (1995). Scientometric Portrait of M. S. Swaminathan. *Journal of Information and Knowledge*, 31(1), 31–46. <https://doi.org/10.17821/srels/1994/v31i1/48731>
8. Kaur, R. (2023). *A study of educational thoughts of Dr A P J Abdul Kalam* (Master's thesis, Tanta University). <http://hdl.handle.net/10603/447511>
9. Murthy Gopal Prasad Dixit and Suresh Jange(2017) Scientometric Portrait of Prof. S Sreenivasa International Journal of Research in Library Science Volume 3, Issue 1 (Jan-June) 2017, 24-35
10. Susanta Koleya and B. K. Sen(2006) A biobibliometric study on Prof. B. N. Koley, an eminent physiologist, Annals of Library and Information Studies Vol. 53, June 2006, pp. 74-82

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- <https://www.abdulkalam.com/>
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