

**Educational Policies in India (1947-1964): A Critical
Analysis of Nehruvian Administration**

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Akriti Kumar



Zakir Husain Centre For Educational Studies

School of Social Sciences

Jawaharlal Nehru University

New Delhi – 110067

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ZAKIR HUSAIN CENTRE FOR EDUCATIONAL STUDIES
UGC-CENTRE FOR ADVANCED STUDY (CAS)
SCHOOL OF SOCIAL SCIENCES
JAWAHARLAL NEHRU UNIVERSITY
NEW DELHI-110067

Date: 19/7/18

DECLARATION

I, Akriti Kumar, declare that the dissertation entitled 'Educational Policies in India (1947-1964): A Critical Analysis of Nehruvian Administration' in partial fulfilment of the requirement for the award of the degree of Master of Philosophy of Jawaharlal Nehru University, is my original work. No part of this work has been published or submitted to any other university.


Akriti Kumar

CERTIFICATE

We recommend that this dissertation be placed before the examiners for evaluation.


Prof. Saumen Chattopadhyay

(Chairperson)

CHAIRPERSON
Zakir Husain Centre for
Educational Studies
School of Social Sciences
Jawaharlal Nehru University
New Delhi - 110067


Dr. Parimala V. Rao

(Supervisor)

Assistant Professor
Zakir Husain Centre for
Educational Studies
School of Social Sciences
Jawaharlal Nehru University
New Delhi - 110067
Jawahar Lal Nehru University
New Delhi-110067

For my mummy and papa

For their abundant love!

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Introduction

Education has always held a significant position in Indian society. Leaders of the freedom movement like Mahadev Govind Ranade, Govind Krishna Gokhale, Subramanya Iyer, Lajpat Rai, Aurobindo Ghosh and others knew its importance and all through the fight for independence, emphasized its value for the progress of the nation. Post independence, leaders of the country utilized the opportunity to mold the educational policies according to the needs of the nation. But this prospect was not free from some liabilities. They had to reform the whole system of education, so that it could give birth to an accomplished future generation, and facilitate it to create a new, a modern nation. Furthermore, substantial changes in the political, societal and financial reformation of the country took place throwing greater responsibilities and challenges before the educational institutions to provide leadership, guidance and qualified personnel in various fields of national development. In this regard, it is necessary to analyse the educational guidelines under the colonial government to comprehend the current situation and envision the future.

To start with the British interest in the Oriental education, ‘it was the classical aspect of Indian education that first attracted the attention of a few high officials of the East India Company after the Company had stood forth as the *Dewan* in 1765 in the Bengal Presidency.’¹ Officials like Warren Hastings and William Jones were attracted towards higher education in India. In fact,

Jones had been elected a Fellow of the Royal Society in London in 1773 and had set out to create a similar learned society in Calcutta with the “inquiry into the history and antiquities, arts, sciences and literature of Asia” as its aim. The “*Asiatick Society*” of Bengal which was formed on 15 January 1784 to pursue this aim gave a great fillip to ancient learning in India by discovering, editing and publishing rare Sanskrit manuscripts, besides bringing out

¹ S.C Ghosh, *The History of Education in Modern India 1757-2012*, Orient Blackswan, Private Limited, New Delhi, 2016, p. 9.

the journal, *Asiatick Researches*, containing scholarly contributions in Oriental learning.²

In addition, The Charter Act of 1813 was passed to refurbish the privileges of the East India Company, under which, came the question of giving modern and western education to the Indian masses. A new clause was introduced and

“this Clause empowered the Governor- General to appropriate a sum of not less than one lac of rupees in each year out of the surplus territorial revenues” for the revival and improvement of literature and the encouragement of the learned natives of India, and for the introduction and promotion of a knowledge of the sciences among the inhabitants of the British territories in India.”³

Further, we see the execution of the recommendations of the Macaulay Minutes, named after Lord Macaulay, who was made the “President of the General Committee of Public Instruction’ by Bentinck. He referred to the alleged prejudices of the Indian people against English Education and argued that it was the duty of England to teach Indians what was good for their health, and not what was palatable to their taste.”⁴ Bentinck also helped in the establishment of the Calcutta Medical College and the Elphinstone College in Bombay. This was done to encourage the Indians to get English education and make them eligible for government jobs.

“The accession of Dalhousie started a new chapter in the history of education in India. Under his period in office, Charles Wood, President of the Board of Control, was requested to frame a General Scheme of Education for British India.”⁵ The Wood’s Despatch, as it was called,

“emphatically declared that the nature of education was to be the ‘improved arts, sciences, and literature of Europe’ and categorically stated that the eastern systems ‘abound with grievous errors’.” The medium of higher education was to be English, but it was not to be substituted for the

² Ibid, pp. 10-11.

³ Ibid, p. 18.

⁴ Ibid, p. 32.

⁵ Ibid, p. 74.

vernaculars. The Despatch replaces the provincial boards and councils of education by creating departments of public instruction in each of the five provinces into which the territory of the Company was divided at that time- Bengal, Madras, Bombay, the North-Western Provinces and the Punjab.”⁶

Also, ‘it was suggested that ‘universities should be established at Calcutta and Bombay and also at Madras and other places; these universities were to be modeled on the University of London as being best adapted to the wants of India.’⁷

In spite of the discharge of the proposals of the Despatch, the goal of mass education was not attained. In fact, the emphasis was only put on secondary and higher education and thus the primary education got neglected. To revise the principles of the Despatch,

In February 1882, Ripon appointed the first Indian Education Commission with William Hunter, a member of his Executive Council, as its Chairman. Among its 20 members, Indians were represented by Anand Mohan Bose, Bhudev Mukherjee, Syed Mahmud and K.T. Telung, and the missionaries by Rev. Dr. Miller of Madras.”⁸ The Hunter Commission was asked, to inquire particularly into the manner in which effect had been given to the principles of the Despatch of 1854 and to suggest such measures as it might think desirable with a view to the further carrying out of the policy therein laid down. The Commission was also asked to keep the inquiry into the primary education in the forefront, because of an agitation alleging its neglect in India.⁹

The commission supported the indigenous system of education which had been waning for want of patronage. According to its definition, indigenous education was one “established or conducted by natives of India on native methods.”

⁶ Ibid, p. 78.

⁷ Ibid, p. 79.

⁸ Ibid, p. 92.

⁹ Ibid, p. 93.

“The Commission also recommended that primary education should be closely related to the practical aspect of the masses and so while allowing considerable catholicity of views in allowing all the provinces to adopt a curriculum suited to their needs, they recommended that such curriculum should include certain subjects of practical utility, such as, bookkeeping, mensuration, arithmetic and natural and physical sciences with their application to agriculture, health and industrial arts. The Commission also made provisions for backward classes. The Commission recommended special educational facilities to the Muslims for the encouragement of indigenous Muslim schools like the establishment of Muslim High, Middle and Primary Schools and Normal Schools as well as institutions of scholarship and studentship from primary to college level. For Girls, it suggested liberal grants to girls’ schools, establishment of Normal Schools, institutions of a simple curriculum for the primary education of girls, award of grants to the *zenana* teachers, and a separate inspectorate for girls’ education.”¹⁰

Along with the growing number of graduates and postgraduates, there was growth in the numbers of unemployed educated people. The lack of job openings was resulting in discontentment among the youth. There was also a rise in militant nationalism and Curzon declared that this was the result of imparting English education and called it a failure. In fact, there was a check placed on the spread of higher education. Curzon's educational reforms started with the Shimla conference which was then followed by Indian Universities Commission in 1902 and taking its recommendations, Indian Universities Act was passed.

The act introduced radical changes into the five existing universities at Calcutta, Bombay, Madras, Lahore, and Allahabad. Among these were, an enlargement of the functions of the university; reduction in the size of the University Senates; introduction of the principles of election; statutory recognition of the Syndicates where university teachers were to be given an adequate

¹⁰ Ibid, pp. 95-98.

representation; stricter conditions for the affiliation of colleges to a university; definition of the territorial limits of the universities; provision for a grant of Rs. 5 lakh a year for five years for implementing these changes to the five Indian universities and finally powers to the government to make additions and alterations while approving of the regulations passed by the Senates.¹¹

The main changes brought against the system could be generally grouped under five heads: First, the higher education was pursued with too exclusive a view to entering government service, which unduly narrowed its scope; Secondly, excessive importance was given to examinations. Thirdly, the courses of study were too literary in character. Fourthly, the schools and colleges exercised the intelligence of the students too little and taxed their memory too much. And finally, in the pursuit of English education, the vernaculars were neglected, with the result that the hope expressed in the Despatch of 1854 that they would become the vehicle for diffusing Western knowledge among the masses was far from realization.¹²

Renowned Indian educationists like Gopal Krishna Gokhale, Srinivasa Sastri, also worked to improve the existing condition of the elementary and primary education in the country. Gokhale worked for the enhancement of primary education, and his efforts led to the passing of the Government's Resolution of Educational Policy of 1913 and led to the Government's efforts to pay more attention to primary education. To quote the recommendations of the Resolutions,

“Echoing the development in the organization of British universities which were fast becoming unitary, teaching and residential institutions, the Resolution declared that there would be a university for each province of British India, that teaching activities would be encouraged, and

¹¹ Ibid, p. 121.

¹² Ibid, p. 123.

that mofussil colleges would be developed into teaching universities with provision for research in due course.”¹³

“The resolution criticized the complete withdrawal of government from the field of secondary education and suggested that state schools should be retained as model institutions.”¹⁴

“The Resolution stressed the need for expanding primary education- starting lower primary education- it was only by expanding primary education ‘that illiteracy must be broken’ and though the Government of India was unable to recognize ‘the principle of compulsory education’, it desired the widest possible extension of primary education on a voluntary basis and hoped to see in near future some 91,000 primary public schools added to the existing 100,000 and the doubling of 4¼ millions of pupils who now received instructions in them.”¹⁵

The resolution was immediately implemented. After the conclusion of the World War in 1917, the Government of India appointed the Calcutta University Commission, “under the Chairmanship of Michael Sadler, the Vice Chancellor of Leeds University. The Commission was asked, ‘to inquire into the condition and prospects of the University of Calcutta and to consider the question of a constructive policy in relation to the question it presents’.”¹⁶ “Among other members of the Commission were Dr. Gregory, Professor Ramsay Muir, Philip Hartog, the Director of Public Instruction in Bengal, Asutosh Mukhopadhyaya and Zia-Uddin Ahmad.”¹⁷

The Commission also wanted to free the university from the rigid governmental control imposed on it by Curzon’s Indian Universities Act of 1904-05. The Commission found the courses of instruction “too predominantly literary in character and too little varied to suit various needs” and commented on the inadequate provision for “training in

¹³ Ibid, p. 142.

¹⁴ Ibid, p. 142.

¹⁵ Ibid, p. 142.

¹⁶ Ibid, p. 144.

¹⁷ Ibid, p. 144.

technical subjects.” The Commission also recommended the organization of *purdah* schools for Hindu and Muslim girls whose parents were willing to extend their education up to 15, 16.¹⁸

With the introduction of Government of India Act of 1919,

“institutions of higher learning including universities with all-India character, secondly, colleges for Indian princes and similar institutions for members of His Majesty’s armed forces and public services, their children, and finally, the education of the Anglo-Indians and the resident Europeans were to be looked after by the Government of India.”¹⁹

The passing of this act was followed by the Jallianwala Bagh massacre in Amritsar, and thus, to protest, the Congress decided to boycott the government and its policies. When the Non-Cooperation movement started, students were asked to boycott schools and colleges run by the government, and there were national schools and colleges established.

The courses offered by these schools and colleges did not differ much from those offered by government controlled institutions, though the medium of instruction was invariably the mother tongue and the object was to breed a race of Indians to provide leadership to the national movement with a national outlook. Among the national universities thrown by the national education movement during this period were the Jamia Millia Islamia, the Viswa Bharati and the Gurukul which now adorn the scene of our higher education in the country.²⁰

“On 8 November 1927, the British Government announced the appointment of a Commission to enquire into and report on the working of the Montague-Chelmsford

¹⁸ Ibid, p. 146.

¹⁹ Ibid, p. 150.

²⁰ Ibid, p. 152.

reforms as a basis for further action.”²¹ This was the Hartog Committee, headed by Philip Hartog. Its report was submitted in September 1929. As the report observed:

“Education has come to be regarded generally, as a matter of primary national importance, an indispensable agency in the difficult task of ‘nation building.’ The transfer of Department of Education to popular control, as represented by a Minister, has both increased the public interest in it and made it more sensitive to the currents of the well-to-do classes that have welcomed and encouraged the spread of education.”²²

The report divided students by two concepts, wastage and stagnation. Wastage was supposed to be the gradual decline in the figure of students in schools. And stagnation was the rise in the cases of withdrawals of students from the schools. The report suggested the consolidation of the primary education. Further, with the implementation of the Government of India Act of 1935, which,

“divided the educational administration into two categories- Federal or Central and State or Provincial and included under the first head the following subjects: Imperial Library, Indian Museums, Imperial War Museum and Victoria Memorial Hall- all in Calcutta and any similar institution controlled or financed by the Federal Government; Benares Hindu University and Aligarh Muslim University; Archaeology; Education in Centrally Administered Areas and finally Education for the Defence Forces. In the State or Provincial subjects, the Act included all matters regarding education other than those included in the Federal or Central list.”²³

²¹ Ibid, p. 153.

²² Ibid, p. 154.

²³ Ibid, p. 162.

Formation of Government Headed by Nehru

As we move towards the *scope of education in India after independence*, the need to have a national system of education emerged after the country attained independence. In this regard, “Nehru’s observation was quite in keeping with the forces of the time which saw emergent nations in Asia, Africa and Latin America preoccupied with the task of renovating their educational structures to suit national needs and inspirations.”²⁴ There were a lot of challenges faced by the newly freed country and in the middle of everything, the University Education Commission was set up for rebuilding the educational reforms at a higher level. The report highlighted the responsibilities and the role of a University in the making of a nation. To quote from the report,

“It is the primary duty of a university to maintain the highest standards of its teaching and examinations. A university is a place of higher education where the personality and capacities of the students are developed to the utmost by teachers who should themselves be at work at the frontiers of knowledge in their respective fields. The success of a university is to be judged as much by the type of graduate it turns out as by the amount and quality of research contributed by its teachers and research students. A degree must always be what a university makes it by the kind of teaching it imparts and the type of intellectual and social life it provides for its members. If our universities are to be the makers of future leaders of thought and action in the country, as they should be, our degrees must connote a high standard of scholarly achievement in our graduates.”²⁵

The Government of India took keen interest in the proposals of the Commission seriously and central financial assistance to Universities was revived. The University Grants Commission was thus set up.

“The University Grants Commission Act, as finally passed gave the UGC the responsibility for allocation of funds

²⁴ Ibid, p. 178.

²⁵ *Radhakrishnan Committee Report*, Ministry of Education, Manager Government of India Press, Delhi, 1948, pp. 74-7.

placed at its disposal to universities--for maintenance and development to central universities, and for development to state universities, -as a means to achieve the objectives of “promotion and coordination of university education and for determination and maintenance of standards of teaching, examination and research.”²⁶

Additionally, another committee, The Mudaliyar Committee, was established to look into the growth of secondary education in the country. This committee scrutinized the advancement of the school education at the primary and secondary levels and gave proposals for improving the stagnant condition of the school curriculum, teacher training and the financial aids given to the schools.

The Mudaliyar Committee Report of 1952-1953 focused on the change in the basic education system. The report suggested ways to inquire into the problems of secondary education in the country. There were recommendations made for re-organizing and improving with a special suggestion for the aims & substance of secondary-level education and its connection to primary & college-level Education. The Mudaliyar Committee recommended that

“it must be clearly understood that, in the planning of the curricula at these three successive stages (including the Primary) there must be an organic continuity so that each stage will lead on to the next and there will be no abrupt break. Particular care will have to be taken to ensure that the education imparted during the first 8 years in the Primary (or Junior Basic) and the Middle (or Senior Basic) stage forms an integrated and complete whole, so that when free and compulsory education is extended up to the age of 14, as envisaged in the Constitution, it will constitute a uniform pattern of education.”²⁷

²⁶ Kavita A Sharma, *Sixty Years of University Grants Commission*, UGC, New Delhi, 2013, p. 40.

²⁷ *Report of the Secondary Education Commission*, Ministry of Education, Government of India, October 1952 to June 1953, p. 22.

Thus, the recommendations of the Mudaliyar committee report were exercised and many of them were later used in the formulation of the National Policies on Education, which were implemented under different governments.

Coming to the institutions of higher education, it was because of Nehru's dream for the country's youth that important institutions of higher education such as the Indian Institutes of Technology (IITs), Indian Institutes of Management (IIMs), All India Institutes of Medical Sciences (AIIMS) were set up. Institutions like Lalit Kala Academy and the Sahitya Akademi were also set up which promoted creative and visual arts.

In the policies formulated regarding the facet of education, two objectives were common,

1. important suggestions for improving the standard of education in the country
2. train the youth for leadership and for democratic citizenship

Thus, one of the major aspects of the current research will focus on critical analysis of the development of these two purposes for the period of seventeen years, i.e. 1947-1964.

Historiography

“The past becomes something that leads up to the present, the moment of action, the future something that flows from it; and all three are inextricably intertwined and interrelated.”²⁸

The literature review here is divided into two different but related categories. These two categories are (a) Nehru's idea of education and his contribution to the field and (b) Government's policies on education (primary, secondary, higher).

In the first category, we find the exemplary book, *The Discovery of India*, by Jawaharlal Nehru, we find glimpses into the manifold aspects of Jawaharlal Nehru, an insight into his personal and public life, his idea of the nation, his idea of nationalism, his idea of growth and development of the country and his idea of making the newly freed country a great nation. The book tells us about the essential self of Nehru. It is this

²⁸ Jawaharlal Nehru, *Discovery of India*, Penguin India, New Delhi, 2008, p. 7.

multifaceted and rich personality of Nehru, one of India's greatest men that we learn about in *The Discovery of India*.

The Discovery of India is essentially a book containing historical facts, philosophical theories and plethora of essays on different themes. The book is a proposal on Indian culture and history by the cosmopolitan mind of Nehru. He critiques the idea of the country. But it will be wrong to call it entirely as a book of history. It is basically the expression of the ideas and opinions, tastes and temperament, refined sentiments and noble passions of Nehru.

Considered as a book of history, it can be termed as an introduction to the cultural history of India. It is also his study of the various phases in the steady development of the rational mind from the early period of civilization to the twentieth century when colonial India stood at the doorstep of freedom. Since Nehru is not an academic historian, his aim is not to narrate the facts of history. In this book, he comes across basically as a philosopher of history, and he makes productive suggestions in the book, on the basis of historical knowledge. The book is a work of the narration and interpretation of history. It is in a way an addition and prolongation of his autobiography.

Moving over to the primary source, *Selected Works of Jawaharlal Nehru*, it is a collection of Nehru's speeches and letters. There are 70 volumes which use data from the Jawaharlal Nehru papers and the A.I.C.C. records which are in the Nehru Memorial Museum and Library. They also consist of data from sources like the contemporary newspaper clippings. Most of the documents are letters written by Nehru, documentation of court cases, his speeches, and excerpts from his diaries from his time in the prison. A lot of this data is accessible in print form, but in the ratio to the by and large work, the overlap is nominal.

Nehru had understood that India's enormous unemployment crisis could be resolved with primary education. But when we go through the entire set of 70 volumes of his selected works, we find the contradictions between these thought processes. The major focus was always on the higher education, and thus the primary education was ignored, and it had its repercussions. These volumes also tell that Nehru was a staunch

advocate of state support for quality education. There were still a plethora of institutions without any training or education which bothered him. In his letters to Chief Ministers, he is seen writing about academic freedom, and he supported international academic collaboration. Growing number of unskilled as well as the unemployed youth was another issue which the newly freed country had to face. This was another primary reason to focus on the development of institutes of higher education than on the primary education. The 70 volumes concentrate on his personal writings, speeches at the inaugurations of institutions and schools, his personal correspondences and his views on government policies, social transformations, science, and technology.

Another essential primary source for the study is *The Letters to Chief Ministers*, written by Jawaharlal Nehru and edited by B.R Nanda. Nehru started a ritual of writing fortnightly letters to the Chief Ministers of all the states. These letters convey Nehru's views and opinions about the troubles the country was facing at the time just after independence. These letters are a component of the Nehru's Collected Works and Selected Works, published by Nehru Memorial Museum and Library Trust. These letters, written over a period of 16 years, are the source of a remarkable foretaste into the first prime-minister's views and opinion, through which he has dealt with a plethora of questions, from nation-building, democracy, communalism, country's economy, rights of minorities, social justice, science and technology, foreign policy, gender, and education.

Scholars have also criticized Nehru for the quintessential work he did in the social aspects of the nation. Going by the views of Percival Spear, in his article *Nehru*, he says that "it seemed that there was nothing that he had done which was right. Population?-he should have taken steps to control it. Language?-he had failed to control the Hindi faction and had weakly compromised. Corruption?-he had denounced but failed to act, had even shielded guilty parties. Non-involvement?-it had led India into isolation, and as for China, the less said about that painful subject, the better. If Mahatma Gandhi was the forgotten man of early 1965, Nehru was the rejected man."²⁹

²⁹ Percival Sear, *Nehru*, Modern Asian Studies, Vol. 1, No. 1, 1967, p. 15.

At one point in time, the author adores the way he approaches the then problems. But at the other end, he critiques the results of these issues. He comments on Nehru's personality and to quote him, "For in all directions where strong forces of public opinion were not already committed he had virtually a free hand, and where currents of opinion conflicted with his ideas much depended on his ability to handle them. All the world became familiar with the slight alert figure in the buttoned-up tunic adorned with a single rose, with Gandhi cap cocked at an angle and silver-capped cane in hand. The soft voice, precise yet imperious, the hesitations of speech as if each word required a separate thought, the nervous highly-strung manner, the sudden gusts of temper, combined in a magnetic personality which could draw the multitudes who understood little of what he said. For all his intellectualism he became a popular idol, apostrophized as *chacha* (uncle) by the immense crowd which saw him borne to his burning. The people felt that he cared for them even if their lot changed little; unlike other leaders, they said, 'he listened'."³⁰

The author also critiques Nehru for being influenced by western education. "Apparently, people were apprehensive of the fact that a foreign educated person could not perceive the grass root reality of a nation which was just freed and needed some strong foundation. Finally, since the Indian masses were desperately poor and their plight must be relieved, recourse must be had to the one part of the world where it seemed that the problem would have been solved, the West, and to the techniques practiced there. Industrial development and technological advances were the secrets of this progress. So industrial development it must be for India. The plants would create jobs to absorb the unemployed and produce the goods which would create more jobs. This then was Nehru's beatific vision. The new Indian society was to rise from poverty with the help of industrial techniques, and to shake off the shackles of traditional society to enter the free

³⁰ Ibid, p. 17.

secular world of individualism and personal rights.”³¹ “Nehru was, in fact, a convinced westernizer.”³²

The author also comments on the condition of primary education. “The expansion of university and technical education was set about with a will. India has now an impressive array of over 60 seats of higher education and institutes of research. *But elementary education has lagged.*”³³

There are other evidences which confirm the degraded status of primary education in the country. To quote from the correspondence of The Telegraph, ‘Primary education remained ignored ever since Independence. Nehru’s attitude towards primary education was profoundly deplorable. In spite of Nehru’s devotion towards developing it, when it came to conducting the resources, priorities or planning, there was a big malfunction. According to the first five-year plan (1951-56) document, the central government had envisaged an investment of Rs 35.02 crore for the entire education ministry for five years. Of this amount, the allocation for primary education was Rs 12.5 crore while that for technical education was Rs 11.55 crore’.³⁴

Coming to the idea of education for all, author Nirmala Banerjee, in her article, ‘*Whatever Happened to the Dreams of Modernity? The Nehruvian Era and Woman's Position*’, argues that “there have been the limitations of the women's achievements in the Nehruvian period, which in its limited reliance on the state, neglected mass mobilization and remained aloof from the understated class and patriarchal barriers.”

“The Nehruvian era, which has set the prototype of economic development for the next 40 years to go after, provides significant traces for accepting the failure of modernization project in getting liberated from gender

³¹ Ibid, p. 20.

³² “Nehru went to Harrow School in 1905. He took his degree from Trinity College, Cambridge, in 1910. His democracy, his socialism, his ideas of social equality, were all in essence western”, in Percival Sear, *Nehru*, Modern Asian Studies, Vol. 1, No. 1, 1967, p. 20.

³³ Ibid, p. 26.

³⁴ Special Correspondent, *Primary School Blot on Nehru*, The Telegraph, July 4, New Delhi https://www.telegraphindia.com/1110705/jsp/frontpage/story_14198389.jsp

discrimination inside the household and at the workplace. Regardless of presiding over a committee in the 1930s, on women's status, Nehru and the Planning Commission under his headship, in the post-independent India, went on to thrust aside the fundamental fiscal dealings the committee had suggested to set up equivalence between men and women. Instead, the trouble-free tradition of regarding women as targets for the domestic circle and motherhood-oriented wellbeing duties was given acknowledgment in certified policy papers. Thus, now, challenging the patriarchal ethos of our society had never been on the agenda of the Indian state. In such matters, there has always been a wide divergence between the professions and the practices of Indian politicians in power. The analysis further suggests to the Indian feminists that demands and appeals to the state for removing gender-based discrimination can be effective only when backed by a strong movement against patriarchal authorities whether in public or in the private sphere.”³⁵

Moreover, Benjamin Zachariah, in his article, ‘*The Indian State, Nehruvian (Anti) Nationalism, and the Question of Belonging*’, criticizes the nationalistic policy of Nehru and says that it was very much communal in nature and there was no place for the minorities. He appreciates his policies concerning higher education but criticizes him for his secularism. To quote him,

Nehru himself made several statements on the need for collective national action, and of deferring conflict between classes for that greater cause. The rhetoric of the period after 1947 strongly stressed the need for collective and disciplined national progress, for production before distribution could be achieved, and consequently for harmonious industrial relations. With the emphasis placed on ‘nation-building’, industrialists and workers were asked to work together for the collective good. Change would come, but it would be relatively gradual, consensual, and

³⁵ Nirmala Bannerjee, *Whatever Happened to the Dreams of Modernity? The Nehruvian Era and Woman's Position*, Economic and Political Weekly, Vol. 33, 1998, p. 2.

rely on the education of the masses and the initiatives of the state. Vested interests would be chipped away by the authority of the state, represented by the national government, which in effect was the Congress.³⁶

Coming back to the aspect of education, SP Aggarwal and JC Aggarwal, in their book *Nehru on Social Issues*, have worked on Nehru's idea of education. According to the authors, "he was the architect of modern India, a man of dynamic vision, intellectual integrity and profound qualities of leadership. His adoption of the socialist pattern of society for India has resulted in the country's taking massive strides into modernization and all that the concept has stood for through the centuries."³⁷

The book has attempted to draw conclusions about Nehru's thought on social issues at one place. A lot of different aspects are discussed by the authors and are brought together. The different aspects covered are social philosophy of life; historiography, political and economic system of state and government; democratic ideals; national reconstruction; national integration; education; women, youth; children; social problems; communication; etc. commenting on the social relevance of education, the authors say that the real foundation of society, according to Nehru, are laid in teaching at our schools and colleges.³⁸

The author also says that "a properly trained student, according to Nehru, is one who can face life and its problem; Nehru wanted thinking individuals, especially senior students, to grapple with problems facing mankind intelligently and constructively."³⁹ Thus, the book helps in drawing conclusions about the government's policies regarding the higher education. The different issues talked about in the book are co-related on some level or the other. The authors have commended Nehru's role in the expansion of higher education.

³⁶ Benjamin Zachariah, *The Indian State, Nehruvian (Anti) Nationalism, and the Question of Belonging*, History and Sociology of South Asia, Sage Publications, 2009, p. 198.

³⁷ SP Aggarwal, JC Aggarwal, 'Foreword', *Nehru on Social Issues*, Concept Publishing Company, New Delhi, 1989

³⁸ Ibid.

³⁹ Ibid

On a similar tone is B R Nanda's book, '*Jawaharlal Nehru: Rebel and Statesman*', which has a plethora of essays dealing with Nehru's personal as well as political life. Excluding the essays which have a restricted comprehension, such as 'The Young Nationalist', and 'Jawaharlal Nehru and the Partition of India', there are another set of essays such as 'Nehru and Religion' and 'Nehru and the British' which allow the reader to discover, the, issues of permanence and alterations in Nehru's life. There are instances in the book where he criticizes him as well. For example, he criticizes Nehru's documentation as prime minister. He questions,

Why was he not more successful? If life expectancy rose from 40 to 50 between 1951 and 1966, 40% of the population remained below the poverty line. Nehru always asked of his policies, do they enhance the quality of life of the people at large? No, Nehru did not underestimate the importance of agriculture, but yes, the land reforms were "botched" and community and panchayat projects "sustained more in hope than in achievement."⁴⁰ "Nehru was 'an outstanding parliamentarian' and, no, he did not attempt to found a political dynasty. But he was let down by lack of commitment in his civil service and the Congress party. He failed to attract a younger generation and 'to build a second line of leadership'."⁴¹

Apparently, the author's wants to provide a well-formed picture of Nehru as the statesman. The book helps us identify with what made him so vital in his time and also tells how much India had progressed since freedom in 1947 as well as since 1964 when he passed away.

Focusing on Nehru's advocacy for science in modern India, David Arnold's article '*Nehruvian Science and Postcolonial India*' tells us about "his inclination towards development through Nehru's own speeches and writings, through the wider project of science with which he identified— critiquing colonialism, forging India's place in the

⁴⁰ B R Nanda, *Jawaharlal Nehru: Rebel and Statesman*, Oxford University Press, USA, 1998, p. 215.

⁴¹ Ibid, p. 204.

modern world, marrying intellectual endeavor with practical nation building”⁴². The article helps in understanding that how “Nehru was not a practicing scientist, nor (despite his undergraduate education at Cambridge) did he possess scientific training. And yet he was one of the principal architects of modern India and, through his enduring commitment to science, a leading figure in the formation of India’s science policy and practice. His personal engagement with science helps explain how, within the time frame of the late colonial and early postcolonial periods, science received such public validation.”⁴³

There are four broad arguments in the article. First, since for Nehru science was also a philosophical and literary pursuit, Nehruvian Science created a space for postcolonial ownership and subjectivity, establishing the centrality of science in the autobiography of the Indian nation. Second, since science stood for authority and a higher form of knowledge, Nehruvian Science sought to contest Western presumptions of a monopoly over science and to ground modern science in India’s cultural traditions and contribution to world civilization. Third, while extolling the transnational foundations of modern science, Nehru understood science, intellectually and functionally, primarily in relation to India’s national needs and Cold War ambitions. Fourth, Nehruvian Science presented science as a program of delivery, committed to redressing such basic social problems as ill health and poverty, an endeavor answerable to the state and the public it aspired to represent.⁴⁴

Another study by V.V Krishna endeavors to study Nehru’s ideas about science and technology. Since the very beginning Nehru was an ardent supporter of the world-wide progress made by science and technology. Here, the author says that Nehru’s pro-science views were in contrast to the views held by Gandhi. He says that,

⁴² David Arnold, *Nehruvian Science and Postcolonial India*, The History of Science Society, United Kingdom, 2013, p. 360.

⁴³ *Ibid*, p. 361.

⁴⁴ *Ibid*, p. 361.

as early as 1947, when addressing the 34th Session of the Indian Science Congress, Nehru initiated the alliance with scientists by observing ‘that in India there is a growing realization of this fact that the politician and scientist should work in close cooperation.’ In contrast to Gandhi’s critical stance towards modern science and technology, Nehru’s modern, secular image and—most of all—his unquestioned support for science made him a “messiah” for the development of science in India. The scientific community in general, and its élite in particular, could immediately identify with his vision of science and development as they also found him a great promoter of their interests. Nehru once declared that:

It is science alone that can solve the problem of hunger and poverty, of insanitation and illiteracy, of superstition and deadening custom and tradition, of vast resources running over waste, of a rich country inhabited by starving people. I do not see any way out of our vicious circle of poverty except by utilizing the new sources of power which science has placed at our disposal.⁴⁵

The article also talks about India’s journey from independence to becoming a self-sufficient country in the area of technology. The author admires Nehru for his role in developing the research and technological institutes of higher education. It traces the foundation of organizations like The Council of Scientific and Industrial Research (CSIR), DAE, Atomic Energy Commission, and growth of the Research and Development Sector and how,

Pandit Nehru, India’s first prime minister, played an important part and is credited with having forged an important alliance with the scientific élite. From the beginning, élite scientists who were heads of large science agencies like the Atomic Energy Commission and the Council of Scientific and Industrial Research were made part of the bureaucracy, as they were given positions

⁴⁵ Krishna V.V, ‘Changing policy in Science and Technology in India,’ *Science and Technology Policy*, Vol II, p. 5.

equivalent to those of civil servants and thus came under the Public Service rules of the government.⁴⁶

Objectives of the Study

The study will focus on the development of educational policies beginning with the appointment of Radhakrishnan Commission to the appointment of Kothari Commission. It will also focus on how the postcolonial Indian government focused on modernizing higher education.

Secondly, it will focus on the government's policies and programs on school (primary and secondary level) education as well as the repercussions of these policies. Another aspect of my research will also include Nehru's policies towards the minorities and their rights; and how the policies of the newly freed country were formulated keeping in mind every aspect of the nation like education, gender as well as marginalized sections of the country.

Thirdly, it will focus on Nehru's views and efforts on the advancement and progress of technological as well as scientific education and its development throughout his reign.

Research Questions

Thus, based on the above discussion, the questions I propose to address are

1. What were Nehru's views on education? What measures were taken to implement them?
2. What were the ramifications of the policies and programmes introduced for primary, secondary and higher education?
3. Were the minorities taken into consideration while formulating educational policies? How were they affected?

⁴⁶ Ibid, p. 3.

4. How did the advancements made in the arena of scientific and technological education and developments in the country reflect Nehru's ideas of modernity?

Rationale of the Study

One of the primary and pertinent reasons why a study on Nehruvian era policies is taken up is because there are no such studies done. This study focuses mainly and majorly on Nehru's speeches, his letters to chief ministers, education ministers, his personal correspondences and will try to analyze his views and opinions through his own writings.

The rationale behind taking up this period 1947-1964 as the period of this proposed study is because this period is considered as the watershed period in the history of higher education in the country. After the independence, a plethora of prominent institutes of higher education were built by the efforts of Nehru, which was the result of his faith in the power of the expansion of science and technology and his constant attempts to empower the country by introducing technological education. Also, the study majorly uses primary sources like Nehru's letters and speeches which have allowed a much more comprehensive analysis of the subject.

Historical Method

The study follows the historical method of analyzing the historical documents. It is based on primary and secondary sources. Nehru's Official Correspondences and speeches and writings of Nehru will be forming a large part of my dissertation, located at the National Archives, Indian Council of Historical Research and Nehru Memorial Museum and Library. It will be historical research on the educational policies in modern India. Also, like any other studies, the study also incorporates secondary sources like published books and articles.

Framework of the Study

This study has been divided into five chapters. The first chapter is an introductory chapter which primarily deals with the objectives of the study, the research questions raised in the study, the rationale behind undertaking the study and is followed by the methodology. The advancement of education during the colonial period to the independence and from the independence till the death of Nehru has been traced in the chapter as a background to the establishment of policies and commissions, Review of the Literature and the Research Objectives and Rationale.

The second chapter primarily deals with origin and development of the government's policies of Higher Education as a whole for a background to the establishment of University Education Commission, Secondary Education Commission, UGC, etc. an attempt is made to analyze the roles of these policies in the making of the higher education in India. Each of them is dealt with separately to give a clear picture. The chapter deals with the challenges addressed by the commissions, their recommendations and the problems with the reports. It looks at the transition of the education system went through, from the period right after the independence till 1964. The chapter deals with the reports of these above-mentioned policies.

The third chapter deals with the issue of education for social transformation through the Nehruvian vision. Nehru wanted an all-inclusive approach for education and wanted to make sure that it is available to everyone, be it women, scheduled castes, and religious minorities. Giving the opportunity to study for everyone was the next step after independence. The chapter deals with Nehru's efforts to attain this, through his speeches.

The fourth chapter systematically explains the progression of scientific and technological educational expansion in the country through Nehru's writings. He very well knew that no nation could advance without being aided by western knowledge of science and technology. And as the other countries were developing on these lines, he did not want India to lag behind. For this chapter, his speeches have been used extensively where he very often remarks the significance of introducing scientific education which will lead to vocations and thus a technologically trained youth will run the country.

The fifth and the concluding chapter summarizes the other sections and brings out the main argument analytically.

I

Government's Policies on Higher Education

The policy debates on higher education highlight some of the underlying issues affecting its progress since its development in the country. The Constitution, which was introduced in 1950, included many provisions which had their direct and indirect effects on education. For instance, it guaranteed free and compulsory education for all children, which was to be attained within ten years of the introduction of the constitution. To understand the problems affecting the higher education and to promote the goals set in the constitution, many committees were set up by the government. This chapter discusses the progress of the higher education after the independence. It will deal with the various commissions and committee reports, the formation of UGC, and their analyses over the Nehruvian period. This section also deals with the challenges addressed by the commissions, their recommendations and the problems with the reports.

The University Education Commission

The Central Advisory Board of Education, the Inter-University Board and the Government of India signed up a University Education Commission in 1948 with Dr. S. Radhakrishnan as its chairman. After independence, the most noteworthy achievement of the Government in the field of education was the setting up of this Commission (UEC). The Commission was appointed, to analyse the university education and propose additions that may be advantageous for the present and future requisite of the country. The UEC submitted its report in 1949. The report said,

“In distribution of educational opportunity there should be no caprice, prejudice, favouritism, special privilege, or other arbitrary action. In general each person should, have educational opportunity of the kind and to the extent that is suited to his capacity and interest and which represents his fair share of the total educational resources. Application of this principle may be adjusted to the needs of society and to humane considerations. Should society need more technicians and fewer clerical

workers, educational opportunity may be shifted accordingly. Exceptional ability is socially so valuable that it may be given exceptional opportunity. Special training for retarded persons may be justified by the need to make them self-sustaining and not a burden to society. Humane considerations may lead to special educational provisions for the blind and other handicapped persons. Wise administration of educational resources must rest on the integrity and judgment of the State.”⁴⁷

Further, the report also mentions the primary duties of a university in the making of a student, where the university, the teachers as well as the environment helps in the making of a student. The report states that,

“It is the primary duty of a university to maintain the highest standards of its teaching and examinations. A university is a place of higher education where the personality and capacities of the students are developed to the utmost by teachers who should themselves be at work at the frontiers of knowledge in their respective fields. The success of a university is to be judged as much by the type of graduate it turns out as by the amount and quality of research contributed by its teachers and research students. It must be clearly recognized that there is no conflict involved between the twofold function of a university to educate its members and to advance the frontiers of knowledge-the two functions are, in fact, complementary. Unless high standards of teaching and examinations are maintained, research will suffer, since research can continue uninterruptedly only if there is a regular supply of graduates well prepared by general education for specialized research work. On the other hand, if research is neglected by teachers, their teaching will lack vitality and will rapidly become stale. A degree must always be what a university makes it by the kind of teaching it imparts and the type of intellectual and social life it provides for its members. If our universities are to be the makers of future leaders of thought and action in the country, as they should be, our degrees must connote a high standard of scholarly achievement in our graduates.”⁴⁸

⁴⁷ *The Report of the University Education Commission*, (December 1948- August 1949), Vol 1, Ministry of Education, Government of India, 1962, p. 44.

⁴⁸ *Ibid*, pp. 74-75.

This Commission which had to report first and foremost on University Education in India, also had to evaluate the position of Secondary Education as well, and it made important proposals. It recommended that

“The standard of admission to University courses should correspond to that of the present Intermediate examination, i.e., after 12 years of the study at School and Intermediate College. The Commission thought it unfortunate that neither the public nor the Government had realized the importance of Intermediate colleges in the Indian educational system, and remarked that our Secondary Education remains the weakest link in our educational machinery and needs urgent reforms. The aim of these colleges would be to meet a variety of needs of our young men by giving a vocational bias to their courses while retaining at the same time their value in a system of sound general education as a preparation for university courses.”⁴⁹ It cites examples like, “In many cases, intermediate classes were simply tacked onto the existing high schools, and school teachers without proper qualifications were asked to teach the intermediate classes as well. No consistent attempt was made to recruit highly trained, efficient and well-paid staff for the intermediate classes. Accommodation and equipment were generally inadequate. Some degree colleges were asked to drop their degree classes and actually functioned as intermediate colleges for some years, but many of them again took up degree classes without recruiting a different staff. In most cases, the intermediate classes still remain attached to first degree and post-graduate classes in the same institution. These institutions should serve as important a function as the universities; they should have sound well-established traditions of good all-round general education; teachers should feel that service in their institutions is as honorable and dignified as in a university; principals and teachers of intermediate colleges should be well paid.”⁵⁰

The report further emphasizes the significance of secondary education in the country,

“While we are definitely of opinion that no student should be admitted to a university until he has passed the intermediate examination, we are equally convinced that the mere raising of the standard of admission to the, level of the present intermediate examination would not by itself improve the work of the universities. We must at the same time make

⁴⁹ Ibid, p. 81.

⁵⁰ Ibid, p. 82.

better provision for the training of students at the high school and intermediate college level. In fact, our secondary education needs radical reform.”⁵¹

The report also talks about the substandard of the quality of historical education which is imparted at the university level.

“Our methods of teaching and examining do not stimulate the historical imagination or develop a true sense of the past. We must train our young men and women to understand the historical causes of our world politics, to assess the value of historical evidence. A detailed study of the History of India is essential, but we require also a knowledge of the history of other countries. One of our witnesses said: "A good School of History is of great importance in the intellectual life of a people not only because it alone can give the accurate knowledge necessary for a right understanding of modern problems both in one's own country and outside it, but also because history offers, to a greater degree than any other subject, an opportunity for the study of human personality in relation to circumstance, and fosters a sense of human responsibility; it helps to develop the moral judgment and to train the mind in the perception of values; whilst at the same time it develops powers of accuracy and the proper weighing of evidence." In the study of Indian History, more attention should be paid to Archaeology because it is not only intrinsically interesting but provides an opportunity for visual education and practical work which would to some extent relieve the dependence on text books and lecture notes. For the Honours students, at any rate, knowledge of historical world-geography as well as of philosophy of history may be required.”⁵²

The committee knew that conducting research is an important component for the development of scientific thinking and the research conducted, thus, adds to the body of knowledge. Thus the committee report also emphasizes the importance of introducing the value of scientific research. It says that,

“The interest of Government in scientific research is naturally utilitarian, and as the organization of science to aid agriculture, engineering, industry,

⁵¹ Ibid, p. 80.

⁵² Ibid, p. 116.

medicine, etc. requires large laboratories and organized teamwork, the Government has plans, partly or largely implemented, for the establishment of several new Scientific Laboratories and Institutes. Besides these, there are already well- established institutes like the Indian Agricultural Research Institute, Indian Veterinary Research Institute, the Indian Forest Research Institute, and the Geological, Zoological and Anthropological Surveys. Scientific research at these numerous Government Laboratories, Institutes and Surveys will always be partly fundamental, although it will be largely applied, and they must constantly look to the universities for a continuous supply of scientific personnel highly trained in fundamental research for recruitment of their staff.”⁵³

Coming to the issue of professional education, the committee wanted to include programs that improved the knowledge, skills, and attitudes of the students. Thus, the introduction of the subjects Agriculture, Commerce, Engineering and Technology, Law and Medicine were encouraged.

“The study of agriculture at the primary secondary and higher education was to be given high priority in national economic planning. So far as is feasible, agricultural education was to be given a rural setting. Commerce students were to be given internships for practical work or apprenticeship in three or four different kinds of firms. The numbers of engineering schools of different ranks were to be increased. In establishing new engineering colleges or institutes there was supposed to be fresh critical inquiry as to the types of engineering services needed in the country. Uncritical repetition and imitation of existing institutions here and abroad should be avoided. Especially consideration should be given to training which will prepare students to become competent and self-reliant, who will have the initiative and courage to start new industries, even if on a very small scale, to the end that there shall be many sources of initiative and responsibility in India, and that a top-heavy economic bureaucracy may not be necessary.” A three year degree course was to be offered in the field of Law in pre-legal and general studies were required for admission to law courses; a three-year degree course be offered in special legal subjects, the last year to be given over largely to practical work, such as apprenticeship in advocates’ chambers.”⁵⁴ “Students pursuing degree courses in law were

⁵³ Ibid, p. 142.

⁵⁴ Ibid, p. 228.

not permitted to carry other degree courses simultaneously except in a few cases where advanced students had proved their interest and were studying law-related subjects in some other fields.”⁵⁵

In the sphere of Medicine, “the maximum number of admissions to a medical college was to be 100, and it was to be made sure that the staff and equipment for that number are enough and available. Here, two fundamental points were desired.

1. To provide for the continuance of indigenous schools, so that any contributions they may make to modern medicine may not be lost, and so that inexpensive medical care may not be taken away from the mass of the people when no other is available to them.

2. To develop one or more research centers for the study both of indigenous remedies and of indigenous methods.”⁵⁶ “Noteworthy recommendations were that post-graduate training be offered in certain colleges taking into account the personnel and the equipment essential for the purpose; Public Health Engineering and Nursing be given greater importance; facilities for research in indigenous systems be provided.”⁵⁷

Religious education was also taken into consideration. The report says, “Though we have no State religion, we cannot forget that a deeply religious strain has run throughout our history like a golden thread. If we bear in mind that the whole future of our democracy depends on freedom of conscience, freedom of inquiry, moral solidarity, our secularism is an act of supreme courage and sublime loyalty to our national faith.”⁵⁸

Thus, the report recommended that, “that in the first year of the Degree course lives of the great religious leaders like Gautama the Buddha, Confucius, Zoroaster, Socrates, Jesus, Somkara, Ramanuja, Madhava, Mohammad, Kabir, Nanak, Gandhi, be taught; in the second year some selections of a universalist, character from the Scriptures

⁵⁵ Ibid, pp. 223- 229.

⁵⁶ Ibid, p. 238.

⁵⁷ Ibid, p. 239.

⁵⁸ Ibid, p. 257.

of the world be studied; in the third year, the central problems of the philosophy of religion be considered.”⁵⁹

Coming to the aspect of students’ welfare, “the commission made sure that students should undergo a thorough physical examination at the time of admission and at least once a year thereafter; all universities must have hospital and health service; competent staff should be provided for compulsory physical training and a regular time should be assigned for the purpose, and social service should be encouraged, and it should remain on a completely voluntary basis”. The commission also looked into the aspect of Women’s education. Keeping them on equal grounds, the report says that,

“Women should share with men the life and thought and interests of the times. They are fitted to carry the same academic work as men, with no less thoroughness and quality. The distribution of general ability among women is approximately the same as among men.”⁶⁰ “It also talks about the inadequacy of the current situation of women’s education. There are few truly co-educational colleges in our country. Rather, there are men’s colleges to which women have been admitted as students, which is a very different matter. Quite frequently in ‘Coeducational’ colleges nearly all the amenities are for men, and women are little more than tolerated. Often sanitary facilities for women are totally inadequate, and sometimes wholly lacking. Recreation space and facilities for women similarly are inadequate or lacking.”⁶¹

The commission finally recommended that,

1. “the ordinary amenities and decencies of life should be provided for women in colleges originally planned for men, but to which women are being admitted in increasing numbers;
2. there should be no curtailment in educational opportunities for women, but rather a great increase;
3. where new colleges are established to serve both men and women students, they should be truly co-educational institutions, with as much thought and consideration given to the life needs of women as to those of

⁵⁹ Ibid, p. 265.

⁶⁰ Ibid, p. 344.

⁶¹ Ibid, p. 349.

men. Except as such colleges come into existence there are no valid criteria for comparing segregated education with coeducation;
4. women teachers should be paid the same salaries as men teachers for equal work.”⁶²

In addition, according to the suggestions of the University Education Commission, the subjects of higher education were to be taught in the local language with the choice to use the national language. All provincial governments were to bring in the teaching of the national language in the schools, colleges and the universities. English was to be studied in the high schools and the Universities for acquainting the students with the modern know-how. It also disapproved of the then system of examination and introduction of the objective type questions in the examination was emphasized on.

On a different note, the concept of rural universities was also promoted. It was recommended that “a rural university should include a ring of small, resident undergraduate colleges with specialized and university facilities in the center. Regarding the syllabus of the rural university, the Commission said: a common core of liberal education may be assumed for the rural university as for any other, though the methods used in teaching and learning may be different.”⁶³

Further, “University education was placed on the concurrent list. The concern of the central government with the universities was to be with regard to finance coordination of facilities in special subjects’ adoption of national policies, ensuring minimum standards of efficient administration and liaison between universities and nation research laboratories and scientific survey,”⁶⁴ etc. The commission observed that because of the resource crisis, the universities are not able to put appropriate reforms into operation. To quote from the report,

As we have repeatedly shown in earlier chapters our universities are grossly under-financed for the tasks they are attempting. More buildings,

⁶² Ibid, pp. 351-352.

⁶³ Ibid, p. 498.

⁶⁴ Ibid, p. 380.

more staff, better-paid staff, more scholarships, more facilities for research, more books, more equipment- all these are clamant needs. We see no possibility of the Provinces providing the whole of the necessary expenditure, burdened as they will be with the no less acute needs of extending basic, secondary and technical schools. Generous grants from the Centre must be forthcoming; and these grants the Centre will not and should not allocate blindly or mechanically. A Central University Grants Commission working through the Ministry of Education must allocate the sums made available by the Central Government in accordance with the special needs and merits of each university.⁶⁵

It further emphasized on the importance of University Grants Commission by recommending that "for allocating grants to universities a Central Grants Commission be established its composition and functions to be is indicated, and The Grants Commission be helped by panels of experts in different branches."⁶⁶

The University Education Commission report was drafted and published before the establishment of the constitution of India and its investiture on 26th of January 1950. Therefore, some of the crucial terms like socialism, secularism, national and regional integration, and fundamental rights, etc. do not find mention in the report and thus, we cannot find their implication in the final statement. The report of the university education commission is an article of significance as it has directed the development of universities and university education in Indian since freedom. It was the first report to take up the philosophical and sociological aspects of the higher education at university level. It granted the due consideration to create the knowledge in its recommendations. The commission report has laid down some specific aims of higher education keeping in mind the significance of the traditions and regulations, the then current conditions and future prospects for the country. In this perspective, the commission looked into the manifestations of the interests of students and also of the country.

⁶⁵ Ibid, pp. 354-355.

⁶⁶ Ibid, p. 381.

The Secondary Education Commission

Secondary education is the foundation of higher education. An ineffective coordination of secondary education affects the worth of education adversely, at all the later stages of higher education. The Indian Government began to take interest in the development of secondary education after independence. Although there were steps taken to increase the number of secondary schools and the admissions in them, the quality of education which was imparted was not capable to cater to the shifting socio-economic needs of the country. There was no qualitative development happening in the facet of school education. The curriculum was one-sided & there was no diversity in it. Also, there was no scope of development of rapport between the teacher and student. There was no provision for teacher training, and the schools lacked proper facilities for play & recreation.

As such, the need for reform in the aspect of maintaining the standard of school education was strongly believed in. Furthermore, the University Education Commission had also remarked that our secondary education was in need of urgent reforms as it remained the weakest link in the educational machinery. Higher education could not be achieved until the level of efficiency attained at the secondary stage is polished.

To tackle this problem, The Secondary Education Commission was appointed under the Chairmanship of Dr. A.L. Swami Mudaliar on September 23, 1952 to examine the issues in school education in the country and recommend actions for the reforms of its various aspects, such as aim, curricular, examination system, teaching method, teachers' training, building, administration, and control. The Commission emphasized the necessity of restructuring the Secondary School Curriculum so that the aims of education may be realized. In this relation, the commission wanted the curriculum to be reorganized according to the needs of the students, keeping in view the demands of the time and those of the nation. To quote from the report of the Secondary Education Commission,

“We feel that in the entire planning of education and to some extent, in the matter of its financial responsibility, there should be the closest co-

operation and co-operation between the Centre and the States. In some fields of secondary education, the Central Government should assume greater responsibility, e.g., in the training of teachers, the formulation of educational and vocational tests, the production and selection of better textbooks, and the training of technicians.”⁶⁷

Talking about the importance of secondary education, the report says that,

“Another main function of Secondary education is to release the sources of creative energy in the students so that they may be able to appreciate their cultural heritage to cultivate rich interests which they can pursue in their leisure and so contribute, in later life, to the development of this heritage. The Secondary school must make itself responsible for equipping its students adequately with civic as well as vocational efficiency-and the qualities of character that go with it-so that they may be able to play their part worthily and competently in the improvement of national life.”⁶⁸

On the question of improving the eminence of high schools, the report says that,

“Considerable improvements will be needed to make them more efficient and to enable them to be converted ultimately into Higher Secondary schools. These improvements should include the provisions of better qualified and more carefully selected personnel, better equipment, better laboratory and library facilities and better organization of co-curricular activities. In addition, the scheme of diversified courses of study, recommended by us elsewhere, should also be introduced as far as possible.”⁶⁹

“If these schools are to develop into efficient institutions capable of achieving the objectives in view, it is necessary that their recognition should be governed by carefully defined and strict conditions, which must be fulfilled scrupulously before such recognition is given. These conditions should prescribe special criteria for-

- (1) Accommodation,
- (2) Equipment,

⁶⁷ *Report of the Secondary Education Commission* (October 1952 to June 1953), Ministry of Education, Government of India, p. 5.

⁶⁸ *Ibid*, pp. 19-20.

⁶⁹ *Ibid*, pp. 24-25.

- (3) Qualifications of the staff,
- (4) Salaries, grades, and
- (5) Adequate finances to ensure that the institution will continue to function efficiently. Such assurance must be offered either by the management itself or be provided on the basis of help guaranteed by the State and Central Governments.’⁷⁰

Further, the commission wanted to bring in some novel reforms in secondary education by improving the eminence of the curriculum by introducing a variety of educational plans. To quote the report,

In view of the fact that education up to the age of 14 has been made free and compulsory under the Constitution, students with a very wide variety of talents will be seeking education in the future. This postulates that our Secondary schools should no longer be "single-track" institutions but should offer a diversity of educational programmes calculated to meet varying aptitudes, interests, and talents which come into prominence towards the end of the period of compulsory education. They should provide more comprehensive courses which will include both general and vocational subjects and pupils should have an opportunity to choose from them according to their needs.’⁷¹

“If a Multipurpose curriculum was introduced in schools, it could provide a wide variety of courses to students with different aims, interests, and abilities. It could also provide each student, appropriate prospects to use and develop his caliber and potential. The committee also proposed for the introduction of agricultural education in secondary schools as back then a major proportion of the country’s population was formed the part of agricultural industry. The need, therefore, to educate the youth of the country to a proper appreciation of the role that agriculture plays in the national economy must be stressed in all schools. In view of its basic importance, we recommend that all States should provide much greater opportunities for Agricultural education in rural schools, so that more students may take to it and adopt it as a vocation.’⁷²

“If the study of agriculture is to lead to any positive results, the student must be trained not merely in the mechanics of agricultural operations but

⁷⁰ Ibid, p. 25.

⁷¹ Ibid, p. 26.

⁷² Ibid, p. 28.

also in those subsidiary occupations that a farmer should know in order to utilize his leisure profitably in the off-season.”⁷³ Equal weight was put on courses like animal husbandry, sheep farming, poultry farming, dairying, etc. as well as training in these courses.

Coming to the aspect of Technical education, the report emphasizes its importance and suggested introduction of technical education in schools as an essential structure of vocational and occupational training. According to the report, “Technical education has to cater for four distinct types of students:

- (1) The students of Higher Secondary schools in the four upper classes.
- (2) Students who are unfit to pursue the full course of Secondary education or who leave school for economic reasons and find it necessary to earn a living as early as possible.
- (3) Those who pass the Secondary schools course and who desire to pursue Technical education in polytechnics or occupational institutes without going to a University.
- (4) Those belonging to any of the above categories who after completion of their course are gainfully employed and who wish to improve their prospects by part-time evening classes in subjects of their choice.”⁷⁴

“The objective of the school is to give an all-round training in the use of tools, materials, and processes which are mainly responsible for turning the wheels of civilization. The school is not intended to produce artisans. In order to attract the right type of student’s selection is to be made on the same basis as for the Secondary school and the examinations are to be held at the end of the school course on the same lines on which Secondary School-Leaving-Certificate Examinations are held.”⁷⁵ Further, “with the introduction of diversified courses at the Secondary stage and a larger provision of Junior Technical institutions, the latter working in collaboration with the industry, it will be increasingly necessary to secure from the industry facilities for practical training at all

⁷³ Ibid, p. 28.

⁷⁴ Ibid, p. 32.

⁷⁵ Ibid, pp. 32-33.

levels. Apprenticeship schemes would require to be worked out for students leaving the High schools as also for students completing the Senior Basic stage.”⁷⁶

Moreover, there were provisions made for differently abled students as well.

“The need for special types of schools for pupils who are handicapped in various ways has been recognized in all countries. In some of the advanced countries a regular system of special schools has been established for mentally and physically handicapped children. In all communities, there are unfortunately many children who definitely suffer from serious mental deficiency, which in some cases develops into abnormal propensities. There should be a few schools in each State for such children where methods specially suited to their need may be adopted. This is also necessary in the interest of the smooth progress of normal children.”⁷⁷

The commission report also dealt with social issues like the education of women and girl children. Coming to the aspect of women education, the report says that,

“Education should seriously concern itself with the place that women occupy in public life. They point out that India greatly needs the services of women outside the four walls of their homes and that its backwardness in the last century was due in no small degree to the low place in society accorded to women. They insist that women must be given exactly the same education as men, so that they may compete with them on equal terms, at school and college as well as in the various professions and services.”⁷⁸

The report not only promoted girls’ education but also advocated the idea of co-education in mixed schools i.e. gaining of knowledge of both boys and girls in same school under the same roof. It meant imparting the same education to both the boys as well as girls without any distinction. To quote,

⁷⁶ Ibid, p. 37.

⁷⁷ Ibid, p. 40.

⁷⁸ Ibid, p. 42.

“This brings us to a consideration of the special facilities that should be provided for girls in mixed schools. We feel that in all such institutions definite rules should be laid down in order to provide for the special needs of girls. In the first place, the staff must be composed of both men and women. Necessary amenities should be provided for girls by way of separate sanitary conveniences, retiring rooms, playing fields, etc. Even in those institutions where a comparatively small number of girls is admitted- and this will particularly be the case in rural areas for a long time- there should be at least one woman teacher on the staff to attend to their needs and to advise them on all social and personal matters. We need hardly stress the fact that women teachers themselves should have necessary special facilities in the way of retiring room and sanitary conveniences.”⁷⁹

For the study of languages and the medium of instruction, “Hindi was taken as the national language. For government services, Hindi was made compulsory. Similarly, English was made compulsory for secondary level. Sanskrit was also included as a third language which was optional. During the Middle school stage, every child should be taught at least two Languages. English and Hindi should be introduced at the end of the Junior Basic stage, subject to the principle that no two languages should be introduced in the same year.”⁸⁰ The medium of instruction was supposed to be the mother tongue or regional language. Also, the national language and a foreign language were also supposed to be taught in schools. Further, special attention was given to the structure of the curriculum for the students. It was supposed to be broad-based. It was made sure that the students were not merely confined to bookish knowledge but also made aware of the practical life for development in all respects. To quote from the report,

“For his (student’s) all-round development, we must provide a wide and varied range of occupations, activities and experiences. We must give him practical training in the art of living and show him through actual experience how community life is organized and sustained. We have to do all this, not because we necessarily want our pupils to start earning their living immediately, but because such knowledge and experience contribute to the all-round growth of their personality.

⁷⁹ Ibid, pp. 43-44.

⁸⁰ Ibid, p. 59.

If Secondary education remains exclusively academic and does not develop practical skills and aptitudes, suitable candidates will not be forthcoming for admission to technical institutions which will not, therefore, be able to pull their full weight in our national life. On the other hand, a suitable reorientation of Secondary education will help to produce skilled workers and technicians who will provide efficient personnel for industry and make our various national projects successful. In fact, it is the special function of Secondary education to provide the country with the second line of its leaders in all walks of national life-art, science, industry, and commerce.”⁸¹

Moreover, textbooks and the way they were made into use, was taken into consideration particularly. For the students, the textbook is one of the most important sources of contact they have with the language. It is a framework or guide that helps them to organize their learning. Thus, it was recommended that

“Textbooks should be selected very carefully. There was supposed to be a committee for selection and reforms of the textbooks. There was to be a definite standard for printing, cover and front page of the textbook. The books were to be scrutinized and everything which was supposed to spread hatred, enmity against any community, religion or social customs, were to be banned. It was also recommended that there should be more than one textbook for a subject. Curriculum in this context does not mean only the academic subjects traditionally taught in the school but, it includes the totality of experiences that pupil receives through the manifold activities that go on in the school, in the classroom, library, laboratory, workshop, playgrounds and in the numerous informal contacts between teachers and pupils. Secondly, “there should be enough variety and elasticity in the curriculum to allow for individual differences and adaptation to individual needs and interests. Thirdly, the curriculum must be vitally and organically related to community life, interpreting for the child its salient and significant features and allowing him to come into contact with some of its important activities.”⁸²

Moving over to the methods of teaching, the report recommended that the teaching methods used by teachers in schools should be taken up according to the

⁸¹ Ibid, pp. 61- 64.

⁸² Ibid, p. 65.

requirement of moral, societal and intellectual growth of students. The method should be founded on “activity methods” or “project methods.” The way a teacher teaches should not disturb the learning. Teaching methods were to be adopted in a way that it pays heed to the verity that every student has individual distinctions. More stress was to be laid on the experimental and demonstration methods for teaching.

There was also emphasis placed on the importance of libraries in schools. “Libraries were to be given a form of an intellectual laboratory. As its role was to help in completing personal and group works, literary interests and co-curricular activities, Libraries were to be made the most attractive place for students. The books and magazines were to be according to need and interest of the teachers and students.” The committee stated that,

We would like to make certain general suggestions in order to strengthen library facilities and to secure the maximum use of those that exist. In all public libraries there should be a section specially meant for children and adolescents which may supplement the resources of the local school libraries. Secondly, steps should be taken to keep the school library open during the vacation and long holidays for the benefit of the students as well as the local community, if possible.⁸³ ‘As the proper use of a well-equipped school library is absolutely essential for the efficient working of every educational institution and for encouraging literary and cultural interests in students, every Secondary school should have such a library; class libraries and subject libraries should also be utilized for this purpose.’⁸⁴ “Trained librarians, who have a love for books and an understanding of students' interests, should be provided in all Secondary schools and all teachers should be given some training in the basic principles of library work, in the Training colleges as well as through refresher courses.”⁸⁵

The report was of one of its kind to emphasize on the importance of teacher training and improving teachers’ status. Training program for teachers was supposed to help them to keep themselves up to date with the latest methods and classroom processes

⁸³ Ibid, p. 92.

⁸⁴ Ibid, p. 96.

⁸⁵ Ibid, p. 96.

to be followed. The traditional ways of teaching like memorizing were to be replaced by more practical oriented. To quote,

“Having considered the general question relating to the improvement of the teachers' status it is necessary to devote special attention to the problems of their training. It has been noted that there are considerable variations in regard to the teacher-training programme in different States and also that the number of institutions for teacher-training is very inadequate compared even to the present needs. Moreover, the prospects of teaching profession are not satisfactory enough to attract sufficient number of candidates to join the teacher-training institutions.”⁸⁶

“Teachers working in High Schools should be graduates with a degree in education; those who teach technical subjects should be graduates in the subject concerned with the necessary training for teaching it; teachers in Higher Secondary schools should possess higher qualifications, somewhat similar to those prescribed in some Universities for teacher of the, Intermediate College.”⁸⁷

Further, the procedure of selection and appointment of teachers was also taken into consideration. It was made to be uniform throughout the country.

“The probation period of trained teachers was to be of one year. Secondary school teachers were to be trained graduate and higher secondary school teachers were to be trained post-graduate. Teachers who were equally qualified were to be paid equally throughout the country. A Triple Benefit Scheme was also planned for teachers which included pension, provident fund and life insurance. An arbitration board was also formed to solve the grievances of teachers. The retirement age of teachers was made 60 years; at present, the age of retirement is 55, but in private institutions, it can be extended up to 60 with the approval of the Department of Education. We feel that in view of the expanding need for qualified teachers and in view also of the improvement in the general expectation of life within recent years, the age of retirement may be extended to 60 with the approval of the Director of Education provided the teacher is physically and otherwise fit.”⁸⁸

⁸⁶ Ibid, p. 135.

⁸⁷ Ibid, p. 144.

⁸⁸ Ibid, p. 132.

The teacher's children got free education in the school. Teachers were also provided residential and medical facilities, study leave, traveling allowances, etc. Private tuition was supposed to be banned entirely. To improve their social status, teachers were to be honored time to time.

In the aspect of teacher training, "Higher Secondary teachers were to be given two-year training and graduates, one-year training. The report recommended that teachers should be trained in one or more extra-curricular activities. There should be provision for Refresher Course and Practical Training and Workshops in Training colleges. Training Colleges should charge any fee from pupil teachers. State should provide stipends. There should be hostels in training colleges. The teachers who have three-year teaching experience only year teaching experience only should be eligible for M.Ed. Also, Graduate teacher-training institutions should be recognized by and affiliated to the universities which should grant the degrees, while the secondary grade training institutions should be under the control of a separate Board appointed for the purpose."⁸⁹ The report also suggested the formation of a committee of ministers for secondary education. To quote from the report,

"In view of all these considerations, we recommend that there should be a committee constituted at the Centre as well as in the States consisting of the different Ministers concerned with the various types of education as well as the Minister for Finance. They must meet and discuss how best the resources of the departments could be pooled for the furtherance of the educational programme."⁹⁰

Overall, the report reiterated that secondary education was to be taken as a complete stage in itself. And at the end of this stage, the students should be able to get vocations and take up responsibilities. This is one of the reasons why the report emphasized the diversification of curriculum in secondary education.

⁸⁹ Ibid, p. 145.

⁹⁰ Ibid, p. 148.

The University Grants Commission

Going back to the University Education Commission, it analysed the limitations, obscurities, and challenges encountered by the universities and recommended the formation of a governing body. It recommended “University Grants Committee be reconstituted on the general model of the University Grants Commission of the United Kingdom with a full-time Chairman and other members to be appointed from amongst educationists of repute.”⁹¹ Going by the history of creating a common funding ground for the countrywide universities, the report suggested that “the universities needed autonomy not only to grow but also to develop and improve their mutual relationships. This needed greater funds than were available to them from the fee of various kinds paid by students. Hence, it was felt that a grant-giving body along the lines of the UGC of Britain should be established.”⁹² The government wanted that education must be given the utmost significance right from the school level to the university level like the Ph.D. degree. This is why they built up with a body that will ensure that the education in India meets a certain standard.

Earlier, “the first effort to establish an All-India university organization was made in 1924 when the Government of India called a conference in Shimla of the representatives of the fourteen universities in India. Inaugurating the conference, the Viceroy, Lord Reading referred to the “financial stringency affecting the complete execution of projects,” the need “for mutual help and for cooperation between universities,” for “a united front” and “a joint effort to develop higher education in India to the highest standards”. He also said, “there is not the slightest disposition in any quarter to interfere with or detract or subtract in any manner whatsoever from the autonomous or self-governing powers possessed by the various universities.” “From this conference developed the Inter-University Board of India, which today is known as the present Association of Indian Universities (AIU). Its main concerns were the coordination of standards, mutual recognition of degrees, and safeguarding the autonomy

⁹¹ Genesis, University Grants Commission, <https://www.ugc.ac.in/page/genesis.aspx>

⁹² Kavita A. Sharma, *60 Years of UGC: Establishment, Growth and Evolution*, University Grants Commission, New Delhi, 2013, p. 13.

of universities.”⁹³ “The main function of the proposed Indian University Grants Committee was supervision over the allocation of grants to universities from public funds and to ensure that they had enough resources to meet the demands that might be made on them. It was envisaged that such financial assistance would be given as block grants for a certain number of years, to enable the universities to plan ahead. Also, all grants to universities for new developments would be made by the central government through the Grants Committee.”⁹⁴

Thus, “The Government of India appointed a University Grants Committee in 1945; vide the late Department of Education, Health and Lands Resolution dated June 4, 1945, consisting of four part-time members to advise the government on the grants to be given to the Central Universities. The constitution of the Committee was amended and its scope enlarged by the Department of Education Resolution dated July 27, 1946, and the Ministry of Education Resolution dated December 16, 1947. It was also empowered to deal with the other universities. Neither the Committee’s chairman nor its members were full-time, and its functions were restricted to being basically advisory. It functioned as an intermediary body between the government and the universities. Its job was to advise the government on the allocation of grants from public funds to the central universities and to any other universities whose case for such grants the government might refer to it. It was also supposed to advise universities with respect to any question or matter that might be referred to them by the government.”⁹⁵

In the words of Jawaharlal Nehru,

We are proceeding on the basis of the University Grants Commission being given large powers and a high status. The only point of appointing such a commission is for it to have these powers and status. Otherwise, it will not function effectively at all and will not be respected by the universities. The members of the commission are three vice chancellors apart from the chairman and representatives of education and finance. It is

⁹³ Ibid, p. 13.

⁹⁴ Ibid, p. 14.

⁹⁵ Ibid, p. 15.

right that this commission should have the highest position in regard to educational matters, more particularly in regard to grants being to universities. I take it that they will deal with all universities including the central universities. Their decisions about grants should be expected as a matter of course. Whether the commission is called an advisory body or not, its decision about the allocation of grants within the sum provided should be final unless some grave impropriety occurs...

... I would, therefore, suggest that:

- (i) The status and powers of the commission should be as high and wide as possible. It should be considered an autonomous body, subject to general policy control of the government.
- (ii) In the matter of grants, its decision should be considered more or less final.
- (iii) The finance representative on the commission should only refer any matter which he considers as involving financial impropriety. This reference might be made to the cabinet committee, suggested above.
- (iv) The commission should deal directly with the minister that is the Minister of Education, and not through the apparatus of the ministry.⁹⁶

To quote Jawaharlal Nehru, on UGC, from one of his other notes, he says that,

“The purpose of having a high-powered University Grants Commission is to make them responsible for the division of money available for the purpose among the universities concerned, which means all universities in India, including the Central Universities. For this purpose, the Commission should be practically autonomous. They should follow the English parallel. The legislation may well say that they recommend, but, in practice, their recommendation should be accepted as is done in England. So far, as this division of grants to universities is concerned, this is the special work of the Commission and they are the best qualified to judge. Even the cabinet is not in a better position to judge this because they cannot keep in intimate touch with the universities and their work.”⁹⁷

Further, in his speech at the inauguration of the first meeting of the University Grants Commission, New Delhi, 28 December 1953, he said that “Education in the present day India must take note of vast changes sweeping across the country especially

⁹⁶ Ravinder Kumar and H.Y Sharda Prasad, *Selected Works of Jawaharlal Nehru*, Vol 24, Teen Murti House, New Delhi, 1999, pp. 173-174.

⁹⁷ *Ibid*, p. 180.

after independence. I hope that the University Grants Commission will evolve policy which will bring about a complete reorientation of university education.”⁹⁸

Thus, “the University Grants Commission Act, as finally passed gave the UGC the responsibility for allocation of funds placed at its disposal to universities--for maintenance and development to central universities, and for development to state universities, -as a means to achieve the objectives of promotion and coordination of university education and for determination and maintenance of standards of teaching, examination and research.”⁹⁹

In the present context, “as it functions today, the principal concerns of the UGC are the coordination and maintenance of standards; allocation and disbursement of grants; and its interface with institutions that receive advice and grants from it. Much of the UGC’s infrastructure is deployed in these three areas.”¹⁰⁰ It still works on its opening lines that was, to take action for requirements of the growing number of colleges throughout the country. It finances the monetary grants for government-acknowledged universities and colleges. It gives recognition to the universities. Its head office is in New Delhi, and the southern regional office is in Hyderabad.

Thus, UGC plays a very important responsibility in the education sector of the country. It has guaranteed a scheme which is pursued in the higher education. It also makes sure that the education imparted in all the universities is of the equal level so that the students passing out of these institutes would be considered equal. Many colleges offer diverse courses. It is impossible to make sure that a universal standard is sustained. However, UGC has made this impossible job feasible. It has been successfully carrying out its role for more than fifty years and will continue to do so in the future.

In conclusion, it can be said that “over the past seventy years after independence, the higher education system was made more effective and responsive to societal needs and was managed on the principles of modern scientific management. Various

⁹⁸ Ibid, p. 182.

⁹⁹ Kavita A Sharma, *60 Years of UGC*, p. 40.

¹⁰⁰ Ibid, p. 42.

Commissions and Committees were appointed for improving our educational system, and all of them have stressed the need for the evolvement of organizational system and management practices based on contemporary societal environment and requirements.”¹⁰¹ Right from the choice of subjects, courses, syllabus, teaching practices, these educational policies have set up a framework under which the Indian education system has been build. Although there are loopholes between the suggestions and the implementations of these policies, the growth in the public sector of education has been tremendous in these seventy years. The social and economic inequalities are not properly handled by these committees, and many state policies have been introduced to tackle these problems. These are the challenges to be faced by the future educational policies.

¹⁰¹ Suma Chitnis, Philip G Altbach (Eds), *Higher Education Reform in India-Experience and Perspectives*, Sage Publications, New Delhi, 1993, p. 15.

II

Education for Social Transformation

“In his letters and speeches, Jawaharlal Nehru rightly argues that there should not be any break with the past but past should also not be allowed to dominate the present. One can find through his letters and speeches that he was an ardent advocate of education for Indian youth believing it essential for future progress.”¹⁰² Women make up half the youth population and he believed that to have a self-sufficient stable India after Independence it was essential to ensure women’s rights and to promote their education. In his address at the Prayag Mahila Vidyapitha in 1934, he stated: “How can our children grow up into self-reliant and efficient citizens of India if their mothers are not themselves self-reliant and efficient?” He tried to ensure that Indian women had the legal backing they needed to step out on their own and break the mold Indian social customs had shaped. Not only this, the constitution of India contains Nehru’s philosophy which has some important facets, like guaranteeing religious equality and freedom to all minorities in India, which was one of Nehru’s most significant attributes.

In this chapter I have discussed Nehru’s views on women’s education, his vision about the social changes brought about by education, his views and suggestions for the upliftment of the backward classes through education, by throwing light on his letters and speeches.

Women’s Education

Being a fervent proponent of women’s education and knowing the backwardness of Indian women, he understood that women should be given best schooling in every facet and should be educated to participate in all the fields of society. In his speech at the

¹⁰² S P Aggarwal, J C Aggarwal (ed), ‘Foreword’, *Nehru on Social Issues*,

foundation laying ceremony of a women's college at Teynampet, Madras, 22 January 1955, he was quoted as saying that,

“For my part, I have always been strongly of the opinion that it may be possible to neglect men's but it is not possible or desirable to neglect women's education. The reasons are obvious. If you educate women, probably men also will be affected thereby. And in any event children will be affected. For the certainly affects the children and every educationist knows that the formative years of a person's life are the first seven or eight years. We talk about schools, colleges and the rest which are important but a person is more or less made in the first ten years of his or her life. Obviously, in that period, it is the mother who has been well trained in various ways becomes essential to education. Therefore, it is necessary for women to be educated, if not for themselves at any rate for their children...”

“...A great French writer once remarked, “if you want me to tell you what a nation is like, or what a social organization is like, tell me the position of women in that nation.” From the social status and the position of education of the women in a country, one could draw sure deductions about the rest of that country...”

“...The idea that women should be kept away from most occupations and the like do not find favor now. It might be that certain occupations are not suited for women. But that is a different matter. There are plenty of occupations which they could engage in and which they do engage in. If we look around us, we would find that the average women in India work in the field. Man and woman both work in the field. It is only when one gets to the middle class a distinction arises. The great majority of our women have to work because economic circumstances compel them to work. Unfortunately, the idea has been prevailing- I am glad to see that this is rapidly fading- that the less work one did, the higher is the status one occupied in the society, and the higher status is of the person who never works at all. Similarly, in regard to women. In my own part of the country, you can see a woman working hard in the field or elsewhere with her men folk, but when the family or the man begins to earn a little more, people think she should retire into purdah. Doing no work is considered a sign of status. Of course, it is wrong. The whole concept behind this business is totally unsuited to the present. The business of not doing anything is not a sign of superiority in any way. There are strange stories in my part of the world, which some of you may have heard. The Begums

of Oudh were so delicately nurtured and were so delicate that they could not peel an orange. It is said that whenever they saw an orange at a distance, they caught a cold. Also when a doctor and Hakim was called in, it was not only improper, but it was thought it might hurt the ladies' gentle wrists if the doctor touched them for feeling their pulse. So it was arranged that a slender thread should run from the wrist to the doctor who should feel the thread and read the pulse. That might have been a good way of proceeding in the matter because most of these women were neurotics and required treatment; as such it did not matter what their pulse said..."

"...We have passed that age and everybody, woman and man, has got to be physically strong and mentally alert, and do creative, productive work. And a time is going to come when people would not tolerate the person who does no work. Therefore, apart from the desirability of education, in sheer self defense people should have education. By self-defense I mean people defending ourselves against other nations of the world or defending our interests within the nation itself. I admit as a Prime Minister, and I am sure, my colleague Maulana Azad, will also admit as Minister of Education, that it should be the duty of the state to provide education, education at all levels to everyone. I hope the time will come when that will be done. But now, obviously, we are struggling against difficulties of finance. Education is of basic importance. At the same time, our ability to ensure it proceeds from the productive capacity of the nation, there are still many things of basic importance to do. So you have to face the problem and have to decide which is to be given priority of treatment so that we could have a balanced system of priorities."¹⁰³

Not only this, he used to take out experiences from his own personal life and use them as examples to support his views on the issue of educational backwardness of women in the country. And this was not limited to just one stratum of the society; be it Muslim women, or Dalit women, or Tribal women, he ardently supported the cause of giving everyone equal access to quality education. To quote further from the speech,

Only yesterday Mr. Basheer Ahmad wrote to me a "Private and Confidential" letter. Let me whisper it to you: he said in his letter that education among Muslim women was very backward here and that I

¹⁰³ Ravindar Kumar and H.Y Sharda Prasad, *Selected works of Jawaharlal Nehru*, Vol 27, Teen Murti House, New Delhi, 2000, pp. 435-438.

should say something to put it forward. Certainly, I am prepared to say a great deal. In fact, whatever I have been saying is meant to stress that aspect. Whatever group or religion one might belong to, education is essential- by education I mean education and not learning to be lady-like. Learning to be lady-like may be good in itself but it is not education as such. I shall be perfectly candid. Education has mainly two aspects- one is cultural aspect, which makes a person grow and the productive aspect, which makes a person do things. Both are essential. Everybody should be a producer as well as a good citizen and not sponge on others, if I may use the expression, even if, the other may be the husband or the wife. So that is the way we are developing and persons who do not wake up to this fact and prepare themselves for it will just be left behind. So it is highly necessary that we should develop education among girls more specially, because men are provided for to some extent, there are still inhibitions in the case of Muslim girls' education and these should be removed, because apart from any other big reason, common sense tells us so.¹⁰⁴

Education for a Better Character and a Good Citizenship

Being an advocate for the modern education, Nehru believed that it is only proper education which can help in strengthening the newly freed country from the shackles of backwardness. He believed that quality education was every child's right and was the need of the hour so that the forthcoming generation would not only be educationally aware but also could serve the country by being a responsible citizen. To elaborate, in his speech on the occasion of laying the foundation stone of Bhogilal College, Bhavnagar, Saurashtra State, 1 November 1955, he was quoted as saying that,

There is no doubt about it that we desperately need educational institutes. But the question is what they should be like and the kind of education that ought to be imparted because in most places the old systems still prevail. As you know, it is not very satisfactory and the changes that ought to be brought about in the system to make it more relevant to the modern world are being talked about everywhere. There is a greater emphasis on technical subjects, on science and technology. It is obvious that those subjects ought to be taught, but at the same time, it is necessary to teach

¹⁰⁴ Ravindar Kumar and H.Y Sharda Prasad, Selected works of Jawaharlal Nehru, Vol 27, Teen Murti House, New Delhi, 2000, p. 438.

certain other subjects as well. That is, attention will have to be paid to arts subjects too. It is not good enough or proper for a person merely to become a good carpenter or a doctor or an engineer, without being aware of what is going on in the rest of the world. We must broaden both our minds and hearts.¹⁰⁵

.... I do not know what they teach in colleges these days. My own college days were over a long time ago. There have undoubtedly been great changes since then but I often have a suspicion that the education that is being imparted today is not of a very high standard. The products I see are not very well educated. Now I do not know whether it is not proper because ultimately our aim is to make good human beings. That is biggest task because the success of all our plans and projects depend on them. If they are not up to the mark, nothing can work, no matter what we do. This is true especially now when we are building a new India which is gradually taking shape. The most important aspect of that is the making of our young girls and boys, that is, providing opportunities for them to train themselves, molding their character etc. Character cannot be molded by scolding or by punishing children. Those days are gone when such methods were approved. You must understand that giving long lectures or too much advice is not good, for that only serves to put up the backs of the listener. So advice should be made palatable and children allowed to think for themselves and learn. The old method of maulvis and pundits sitting and lecturing to the pupils is no longer relevant.¹⁰⁶

...Therefore it is extremely important to provide suitable opportunities to the children to learn to read and write. As important as book knowledge are physical fitness, training in some practical skill, etc. I would like to draw the attention of boys and girls especially to the importance of athletics and games, for we have to compete in every field in the world. We must learn to respect manual labour because it that is fundamental to our progress. We have got into the strange habit of thinking that people who sit in the offices are superior to those who do manual work. It is absolutely wrong. The man who does not know how to use his hands and feet is only half a man. Therefore we must teach children right from the beginning to respect manual labour and train them in some skills. I want to tell you that the most important part of the five year plan is education of the young because not enough attention has been paid to it. Some of you at least

¹⁰⁵ H.Y Sharda Prasad and A.K Damodaran, Selected works of Jawaharlal Nehru, Vol 30, Teen Murti House, New Delhi, 2002, p. 206.

¹⁰⁶ Ibid, pp. 206-207.

must be aware that the most critical time in a child's life is the few initial years. In the first seven or eight years are the formative years and after that it is too late to remould their character. I think it is at this time that the least attention is paid because it is mistakenly felt that they will learn later in schools and colleges.¹⁰⁷

On a similar note, in another letter, a message to the Vice Chancellor of Visva Bharati, on occasion of the annual convocation, 20 December 1955, he was quoted as saying that,

Our schools and Universities have the primary function for training the younger generations for this purpose. It is not by the number of degrees that are given that this training can be judged, but by the development of character, culture and specialized ability. There is a general feeling in the country that there is something wrong with our education system and all kinds of suggestions are made to improve it. It was perhaps inevitable that during this phase of rapid transition, that old methods of training should prove inadequate. They are inadequate also in the content of the training because the type of man or woman required in future for the service of the country and our people is different from the old type. I have no doubt that we shall overcome these difficulties of the transitional phase. Meanwhile, we have to face them and do our utmost to solve the new problems that have arisen. In this task, every university has a special function, and every teacher and student has to realize his own place in this larger scheme of things. The present is difficult, but the future is bright with hope and achievement. Even the present has demonstrated that we can achieve great tasks if we set about them in the right way and do not ignore the basic principles that should guide us.¹⁰⁸

¹⁰⁷ Ibid, p. 207.

¹⁰⁸ H.Y Sharda Prasad and A.K Damodaran, *Selected works of Jawaharlal Nehru*, Vol 31, Teen Murti House, New Delhi, 2002, pp. 107-108.

The Social Relevance of Education

Nehru believed that social development is one of the important dimensions of an individual's life. The fundamental idea of this belief was to support the role of education in the social aspect of human development. In his address at the All India Educational conference, Baradari, Dec 27, 1939, he spoke about the functions of education.

The ideal of education has long been the improvement of the individual. The ideal must inevitably hold, for without individual advancement there can be no social progress. But even that care of the individual must today be considered in terms of the mass of the people or else the enlightened individual will be submerged in the unenlightened mass. And, in any event, is it right or just that a group of individuals should have opportunities of advancement and growth which are denied to the many?

...

...But, even from the standpoint of the individual, a vital question has to be faced. Can an individual truly advance, except in the rarest cases, if the environment that surrounds him is pulling him back all the time? If this environment is evil or injurious to him, the individual battles in vain against it and must inevitably be crushed by it. What is this environment? It consists of inherited ideas, prejudices and superstitions which restrict the mind and prevent growth and change in a changing world. It is the pressure of political circumstances that keeps the individual and the group in enforced subjection and thus starves his soul and crushes his spirit. It is, above all, the stranglehold of economic conditions which denies opportunity to vast masses of people. It is this complex of prejudice and superstition, political and economic conditions that form our environment which holds us in its grip. Through your educational system you may teach all the well known virtues, but life today teaches something else, and the voice of life is louder and more effective. You may teach the advantages of co-operative effort, but our social structure is based on cut-throat competition, and each one tries to rise on the dead selves of others. The glittering prizes go to him who is most successful in knocking down and crushing his rivals. It is any wonder that our youth should be attracted by these glittering prizes, and should hold acquisitiveness as the most desirable quality in an acquisitive society?

Our educational system, in spite of the ideal which it may profess, is itself an outcome of and a part of this environment. It seeks sustenance from it

and, consciously or unconsciously, supports it. Yet if there is anything clear in the world today, it is this: that this environment is the cause of most of our troubles, and to leave it as it is, is to head straight for disaster.¹⁰⁹

...All education must have a definite social outlook and must train our youth for the kind of society we wish to have. Politicians may strive for political and economic changes in order to bring that society into existence, but the real basis of that society must be laid in the teaching of our schools and colleges. The real change will have to come in the minds of men, though that change can and will be helped greatly by external changes in the environment. The two processes go together and should help each other.¹¹⁰

“...Our present day social fabric is a decadent and dying thing, full of its own contradictions, and leading continually to war and conflict. This acquisitive and competitive society must be ended and must give place to a co-operative order, where we think in terms not of individual profit but of the common good; where individuals co-operation for human advancement; where human values count for more and there is no exploitation of a class or group or nation by another.”¹¹¹

...If this is the accepted ideal of our future society then all our education must be fashioned to that end and must not pay homage to anything that is against this conception of the social order. That education will always have to think in terms of the hundreds of millions of our people, and not sacrifice their interests for any group or class. The teacher will then be not just a follower of a profession which gives him a livelihood, but one who has chosen his vocation in the ardent spirit of a missionary in a sacred cause which fills his being.¹¹²

According to Nehru, the purpose of education was to make the citizens educated enough to prepare them to enter the workforce for rebuilding the nation, as well as to promote the social, academic, cultural and intellectual advancement so that the students

¹⁰⁹ SP Aggarwal, JC Aggarwal (ed), *Nehru on Social Issues*, pp. 110-112.

¹¹⁰ *Ibid*, pp. 112- 113.

¹¹¹ *Ibid*, p. 113.

¹¹² *Ibid*, p. 113.

can become better citizens. In another message to the Hindustani Talim Sangh, November 8, 1957, he spoke about the process of education.

“In the final analysis, no subject is of greater importance than that of education. It is the men and women in a country that make and build a nation and it is education that is supposed to build those men and women...”

“...The process of education, therefore, must help to build men and women suited to the age and the tasks they have to perform. It should presumably deal with certain basic factors in the development of boys and girls to give them strength of character and the right outlook on life. I do not mean by this that they should be conditioned only in one particular way, but rather that they should develop, apart from the essentials of character, a trained receptive and tolerant mind which is capable of considering problems in their entirety and trying to arrive at solutions. They should in effect develop into integrated human beings. Integration means not only a process within themselves, which of course is highly important, but also a measure of integration with the environment.”¹¹³

The part of training that deals with the environment will necessarily vary with the age and the kind of work that these people may be called upon to do. We live, as is well known, in an intensely transitional age. We cannot go back upon it and we can only try to understand it and look forward to the changes that are likely to come.¹¹⁴

Education – Real and Superficial

In one of his speeches, he differentiates between the kinds of education which should be imparted. To quote from his inaugural address to W.C.O.T.P Conference, New Delhi,

“I suppose everyone is concerned in every country because more and more it is realized that it is through education that you can ultimately influence people’s minds and thereby events. I think in the Preamble of the Constitution of UNESCO it is stated that wars begin in the minds of men. Well if wars begin in the minds of men as they surely do, then one has to influence the minds of men and women. That seems obvious enough and

¹¹³ Ibid, pp. 113-114.

¹¹⁴ Ibid, p. 114.

therefore, whether we look at it from the narrower point of view of imparting education, say, in the scientific or technological fields which is so essential or other fields, the basic thing that should be necessary is to direct people towards thinking in terms of let us say, peace and co-operation and understanding and not in terms of the type of international life that we lead today...”

“...But we find that the most highly educated nations and peoples in the world, who have all the advantages of technical education, advantages of education in humanities and who have succeeded in a large measure in getting rid of some of the ancient evils from which humanity has suffered like poverty, etc. in another context not only do not get on with each other but are full of violent hostility towards each other...”

“...Now, is that the result of different types of education or lack of education? Does education lead to greater hostility in spite of greater understanding? It is a problem which, I will submit to you, deserves consideration. I am quite sure that education is essential and I am not decrying education but the fact is education or, if I may say so, that the type of education that we have had has not led to that peaceful and co-operative international approach which has become so essential to the world’s survival. That troubles me...”

“...And in thinking about our own educational problems in this country—as we do very often, even a layman like me— we may argue as to greater stress sometimes on scientific training, technological training or may stress about humanities, the importance of the humanities...”

“...How far does education help in creating that atmosphere, I venture to submit, that is worthy of your consideration. You are going to discuss training for responsibility which is a very good and desirable subject, an important subject that we, each individual have a measure of responsibility in discharging his obligations and duties. We claim rights but no right is ever divorced from a duty or an obligation and it is right that we should be trained in that...”

“...It does surprise me that while education is obviously desirable, inevitable and essential, I do not find the educated person always so desirable. He is often, in spite of his education, rather narrow minded and throws his weight about on others whom he considers inferior to him, whether he does it as an individual, as a group or as a nation, but he does it. And in some ways he has got, in spite of his education, rather a closed

mind. He does not look into other people's minds, peeps into it and understand it because he starts with the presumption that he has got all that he wants to have in his mind and does not open it to others' impressions. That surely cannot be understood by them..."

"...Big revolutionary changes are taking place in the minds of the people. Education, I think, is the most revolutionary factor in India and is changing the face of India. It is not so suddenly obvious but any person who goes and sees the changes taking place is tremendously impressed by it."¹¹⁵

A Place of Culture

For Nehru, education was the only tool for cultural change in the society. He believed in education as the course, through which society (through educational institutions) passes on its cultural heritage, its valuable information, ethics and expertise from one generation to another. He gave equal importance to cultural education as he considered it as an essential feature in the development of human personality. To quote from the convocation address at the University of Ceylon, Colombo, January 12, 1950, he said,

I take it that a university is essentially a place of culture, whatever 'culture' might mean... There is a great deal of culture all over the place and I, normally, find that those people who talk most loudly of culture, according to my judgment, possess no culture at all. Culture, first of all, is not loud; it is quiet, it is restrained, it is tolerant. You may judge the culture of a person by his silence, by a gesture, by a phrase or, more especially, by his life generally. The peculiar, narrow idea of culture that is spreading is that culture depends on the kind of headgear you wear or the kind of food you eat or on similar superficial things which, I do not deny, have a certain importance but which are very secondary in the larger context of life...

...Each country has certain special cultural characteristics which have been developed through the ages. Similarly, each age has a culture and a certain way of its own. The cultural characteristics of a country are important and are certainly retained, unless, of course, they do not fit in

¹¹⁵ SP Aggarwal, JC Aggarwal (ed), *Nehru on Social Issues*, Concept Publishing Company, New Delhi, 1989, pp. 114-116.

with the spirit of age. So, by all means, adhere to the special culture of your nation. But there is something that is deeper than national culture and that is human culture. If you do not have that human culture, that basic culture, then even that national culture, of which you may be so proud, has no real roots and will not do you much good. Today more especially, it has become essential for us to develop, in addition to such national culture as we may have, something that can only be called a world culture. There is much talk of One World and I believe that, at some time or other, that talk must bear fruit or else this world will go to pieces. It may be that we will not see that One World in our generation but if you want to prepare for that One World you must at least think about it. You have at least a culture to sustain you; and there is no reason why you should live your lives in narrow grooves, trying to think yourselves superior to the rest of the world.¹¹⁶

Role of Universities

Nehru was of the opinion that universities transform student's lives through the imparting of higher education as well as by giving them a more comprehensive impression of their study. He believed in the power of the universities to help students in developing their skills and knowledge on the global level. In another address at Allahabad University, December 13, 1947, he said that,

The universities have much to teach in the modern world and their scope of activity ever enlarges. I am myself a devotee of science and believe that the world will ultimately be saved, if it is to be saved, by the method and approach of science. But whatever path of learning we may pursue, and however profitable it might seem to us, there is a certain basis and foundation without which the house of learning is built on shifting sands. It is for a university to realize and to lay stress on this essential basis and foundation, those standards of thought and action which make an individual and a nation. Above all, this is necessary today, during this phase of extremely rapid transition, when old values have almost left us and we have adopted no new ones...

...A university stands for humanism, for tolerance, for reason, for progress, for the adventure of ideas and for the search for truth. It stands

¹¹⁶ Ibid, p. 121.

for the onward march of the human race towards even higher objectives. If the universities discharge their duties adequately, then it is well with the nation and the people. But if the temple of learning itself becomes a home of narrow bigotry and petty objectives, how then will the nation prosper or people grow in stature?

“...A vast responsibility, therefore, rests on our universities and educational institutions and those who guide their destinies. They have to keep their lights burning and must not stray from the right path even when passion convulses the multitude and blinds many amongst those whose duty it is to set an example to others.”¹¹⁷

Girls’ Education

Nehru is also considered as one of the greatest advocates of women in India. He not only played an essential role for the betterment of their socio-economic condition but also made efforts to elevate their position socially, economically, politically and educationally, and also put great efforts in making the women at par with men. To quote from another of his speeches at a Seminar on Gaps between Boys’ and Girls’ Education, at New Delhi, January 4, 1964, he said that,

...I believe education is spreading fast, though the gap between boys’ and girls’ education is still marked. But it is spreading undoubtedly. Possibly, in a few years time, perhaps four or five years, it may well include every boy and girl in the country...

...Now, the reasons why girls’ education has lagged behind, somewhat are fairly obvious- social customs, and other factors too. I do not think those reasons apply with the same force today as they used to, and I have no doubt that this trend will go up. Now it is really for expert educationists and others to suggest what should be done in this matter, and not for an amateur like me who with all his goodwill for what you are aiming at, cannot speak with any authority on the subject. I do not have the figures before me regarding girls’ education, but I should think that on the whole they are encouraging, although not so much in comparison with boys’ education. Intrinsically, they are satisfactory...

¹¹⁷ Ibid, pp. 121-122.

...There is one thing that struck me as illustrating the great need for girls' education. You will find that in the past, wherever girls' education was encouraged in India, there was progress. I suppose Punjab is one of the places where girls' education had an earlier beginning than elsewhere. In many respects, Punjab is one of our progressive States. I suppose that might be true of some other places, too. So girls' education is not an end in itself but is intimately connected with the social fabric and with advance along other lines, too.

...Therefore, girls' education is very important. Now, of course, conditions are such that they are compelling the advancement of girls' education, irrespective of my desire or your desire to do that. Therefore, whatever you may do or not do, girls' education is bound to advance. I suppose the only difficulty arises in certain rural areas. In towns, the need for girls' education is accepted. In rural areas, too, difficulties largely arise from the location of the school. It is difficult for them to walk long distances to go to school. These are the difficulties which have to be got over by the education authorities there. They are not difficulties which cannot be overcome. There is very little opposition to their education, though there may be a lack of enthusiasm for it here and there. That too will disappear.

... You are, I suppose, thinking of girls' education in the primary and secondary stages. In the later stages, in the university stage, girls are fairly successful not only in terms of numbers who pass, but otherwise too. They are doing fairly well. Ultimately, the future of girls' education depends on the openings available for them in professions and other jobs. Those openings are now increasing daily.

Of course, looking at the mass of womenfolk, there is no doubt they have been working. They work in the field, they work in the factory. The problem is really of the middle class. Others too have their problems, but different reasons apply to them. But nobody is against education for girls. It is only a question of providing facilities. If facilities are there, they will join schools and colleges in greater numbers.¹¹⁸

¹¹⁸ Ibid, pp. 139-140.

Eliminating Social Shackles

According to Nehru, education was the sole instrument which could be used for removing the ignorance of common masses. Superstition and other false notions and beliefs of people could be removed with the help of quality education. To quote him from his speech at Mahila Vidyapeeth, in Allahabad, on March 31, 1928,

“A great French idealist, Charles Fourier once said: “One could judge the degree of civilization of a country by the social and political position of its women.” And if we are to judge India today, we shall have to judge her by her women. The future that we build up will also be judged by the position of Indian women. I must confess to you that I am intensely dissatisfied with the lot of the Indian women today. We hear a good deal about Sita and Savitri. They are revered names in India and rightly so. But I have a feeling that these echoes from the past are raised chiefly to hide our present deficiencies and to prevent us from attacking the root cause of women’s degradation in India today.

...I find from a reference to the report of this institution that it was started to give special instruction to women. It was laid down that since man as the bread-winner, women’s place was in the home and her ideal should be that of a devoted wife and nothing more. Her chief delight should be in skillfully rearing her children and serving here revered elders. May I say that I do not agree with this ideal of women’s life or education? What does it signify? It means that woman has one profession and one only, that is the profession of marriage and it is our chief business to train her for this profession. Even in this profession her lot is to be one of secondary importance. She is always to be the devoted help-mate, the follower and the obedient slave of her husband and others. I wonder if any of you here has read Ibsen’s *Doll House*, if so, you will perhaps appreciate the word “Doll” when I use it in this connection.”

“...The future of India cannot consist of dolls and playthings and if you made half the population of a country a mere plaything of the other half, an encumbrance on others, how will you ever make progress? Therefore I say that you must face the problem boldly and attack the roots of the evil. We have *Purdah* and child marriage and denial of rights to women in so many fields. Go to any country and you will see bright faced boys and girls playing and growing strong in mind and body. Here children of the same age are kept in *Purdah*, locked up in cages almost, and denied in a

large measure all freedom. They are married just when they should be growing physically and intellectually and are thus stunted and made miserable for life.”

“...If this *Vidyapitha* really stands for the progress of our women, it must attack these evil customs. But I should like to remind the women present here that no people, no group, no community, no country, has ever got rid of its disabilities by the generosity of the oppressor. India will not be free until we are strong enough to force our will on England and the women of India will not attain their full rights by the mere generosity of the men of India. They will have to fight for them and force their will on the men folk before they can succeed.

...I hope, therefore, that this *Vidyapitha* will be instrumental in sending out, into the province and the country, women who are rebels against the unjust and tyrannical social customs of the day and who will fight al; who oppose this progress; women who are as much soldiers of the country as the best men.”¹¹⁹

In another message to the *Vidyapith*, he said that,

Many of them girls and young women present at the convocation will have finished their courses, taken their degrees, and prepared themselves for activities in a larger sphere. What ideals will they carry with them to this wider world, what inner urge will fashion them and govern their actions? Many of them, I am afraid, will relapse into the humdrum day to day activities of the household and seldom think of ideals or other obligations; many will think only of earning a livelihood. Both these are no doubt necessary, but if this is all that the Mahila Vidyapitha has taught its students, it has failed of its purpose. For a university that wishes to justify itself, must train and send out into the world knight-errant's in the cause of truth and freedom and justice, who will battle fearlessly against oppression and evil. I hope there are some such amongst you, some who prefer to climb the mountains, facing risk and danger, to remaining in the misty and unhealthy valleys below.

“...It is sometimes, said, and I believe the *Vidyapitha* itself lays stress on this, that women's education should be something apart from that of man's. it should train her for household duties and for the widely practiced profession of marriage. I am afraid I am unable to agree to this limited and

¹¹⁹ Ibid, pp. 143- 144.

one-sided view of woman's education. I am convinced that women should be given the best of education in every department of human activity and be trained to play an effective part in all professions and spheres. In particular, the habit of looking upon marriage as a profession almost and as the sole economic refuge for woman will have to go before woman can have any freedom. Freedom depends on economic conditions even more than political and if woman is not economically free and self-earning, she will have to depend on her husband or someone else, dependent are never free. The association of man and woman should be of perfect freedom and perfect comradeship with no dependence of one on the other..."

...What will you do, graduates and others of the *Vidyapitha*, when you go out? Will you just drift and accept things as they are, however bad they may be? Will you be content with pious and ineffective expressions of sympathy for what is good and desirable and do nothing more? Or, will you not justify your education and prove your mettle by hurling defiance at the evils that encompass you? The *purdah*, that evil relic of a barbarous age, which imprisons the body and mind, so many of our sisters- will you not tear it to bits and burn the fragments? Untouchability and caste, which degrade humanity and help in the exploitation of one class by another – will you not fight them and end them and thus help in bringing a measure of equality in this country? Our marriage laws and many of our out-to-date customs which hold us back and especially crush our women folk- will you not combat them and bring them in line with modern conditions? Will you not also fight with energy and determination for the physical improvement of our women by games in the open air and athletics and sane living so that India may be full of strong and healthy and beautiful women and happy children? And, above all, will you not play a gallant part in the struggle for national and social freedom that is convulsing our country today?"¹²⁰

"...I have put these many questions to you, but the answers to them have already come from thousands of brave girls and woman who have played a leading part in our freedom struggle during the last four years. Who has not been thrilled at the sight of our sisters, unused as they were to public activity, leaving the shelter of their homes and standing shoulder to shoulder with their brothers in the fight for India's freedom? They shamed many a person who called himself a man, and they proclaimed to the

¹²⁰ Ibid, pp. 146-147.

world that the women of India has risen from their long slumber and cannot be denied their rights.”¹²¹

“...The women of India have answered, and so I greet you, girls and young women of the Mahila Vidyapitha, and I charge you to keep that torch of freedom burning brightly till it spreads its luster all over this ancient and dearly- loved land ours...”

“...There was no seclusion of women in ancient India except to some extent among royalty and the nobility. Probably there was more segregation of the sexes in Greece than in Indi then. Women of note and learning are frequently mentioned in the old Indian books, and often they took part in public debates.”¹²²

In his speech, while inaugurating the Lucknow University Students’ Union, Lucknow, 28 October 1957, he talked about how students should keep their minds open. According to him, open-mindedness helps one to learn and grow, strengthening his or her belief in oneself. And this could be achieved by right education. To quote him,

You should shun fanaticism, narrow-mindedness and rigidity of thought and keep your minds open and free to receive fresh ideas. The shackles of caste, community or region that fetter the minds are great impediments to progress of the country. Do not hold rigid opinions and keep an open mind. Time will come for you to hold opinions, or to change them, but even then you should avoid becoming fanatics...

...You should keep your minds open to receive and assimilate new thoughts and ideas. Their influx brings about freshness in brain and helps it grow. Exactly the same principle works in developing the fertility of the brain as in the development of physique. It is dangerous to shut the doors of the brain feeling that whatever one has learnt is the final goal of the achievement. You should equip yourself to share the burden of responsibilities to run the future administration of India. Nothing could be achieved through rowdyism and indiscipline. The days of slogan

¹²¹ Ibid, p. 147.

¹²² Ibid, p. 147

mongering are over. You should work hard keeping before your high ideals.”¹²³

In his speech on the occasion of silver jubilee celebrations of Banasthali Vidyapith, Banasthali, Rajasthan, 2 February 1958, he spoke about women’s education and how important the primary education is. To quote him,

Banasthali is a girls’ school and when I had come here earlier, I was surprised to find an institution like this in Rajasthan where the girls are taught riding, swimming, sports and what not, because, if you will forgive me, the status of women in Rajasthan has been very low. Even now the old and useless customs of purdah and so on are prevalent here. I used to think that they had become part of history. But I hear that they continue even now in Rajasthan. This is absurd. A country cannot grow if its women are kept in cages and behind purdah. The nation and the men who perpetrate these things are useless and so are the women who bow down to them. Let me tell you that there is no pity in my heart for anyone, big or small, in this matter; there should be no sympathy for them...

...Today I got a letter from a gentleman in Alwar, a Rajput. He writes that he had felt for a long time that his wife should give up the purdah and ultimately she did. When she came out, the *panchs* of the village got extremely angry and condemned the whole thing in stringent terms. This is the situation. It is my opinion that the *panchs* of that village should be placed in the purdah and asked to do the work of women.¹²⁴

...We must strive to understand the modern times. The world is a revolutionary place today and is changing very fast. You may have heard about the satellite launched by the Soviet Union two or three months ago which is still in orbit. Today’s newspapers carry the news that the United States has launched a similar satellite. These are the products of modern science. All kinds of new discoveries are taking place and if we do not keep our eyes and ears open, and are not alert mentally and physically, we will become backward and will keep repeating the old lessons learnt by rote while the world marches on. We will continue to remain poor and backward. Therefore, it is very essential that we should understand the times we are living in. so, education is very important to prepare the minds

¹²³ S. Gopal (ed), *Selected works of Jawaharlal Nehru*, Vol 39, Teen Murti House, New Delhi, 1984, pp. 199-200.

¹²⁴ Aditya Mukherjee and Mridula Mukherjee (ed), *Selected works of Jawaharlal Nehru*, Vol 41, Teen Murti House, New Delhi, 2010, pp. 242-243.

and bodies of children. It is especially important that the girls and women of the country must be educated. I can tell you categorically that a nation cannot progress if its women do not.¹²⁵

...So, Banasthali has a special role to play. But I do not think of one or two places but of many places in the country. It is impossible to make separate arrangements for educating boys and girls when we are not able to do so for them together. It is impossible. It is merely a question of money though that is also there. It is a question of teaching also. Wherever there are separate colleges for women, I have seen that generally the quality of teachers is second rate or even third- rate and consequently their education suffers. We do not have sufficient number of first rate teachers. We need more of them. Moreover, the demands of the modern times are such that every man and woman, boy and girl, must be prepared to take up challenges and become strong and capable. The old days are gone when women suffered from the cold feet and nervousness and retired behind purdah in the presence of a stranger. It is absurd. I do not know who coined the word *abala* for women. He must have been a very foolish man and no woman must accept it. Everyone, man, woman or child, must be strong. We are unnecessarily maligning our women by calling them weak. There have been brave women here in Rajasthan itself. We must change our thinking in these matters if we wish to progress.¹²⁶

The Opening of Women's College

In his speech while inaugurating the Janki Devi Mahavidhyalaya, 30th March 1960, Nehru said that,

No matter which path we choose, education is very essential for India. Mass education is the most revolutionary thing in our country. That is slowly spreading all over India, particularly, education for women. Our society has not behaved well towards our women. In speeches, lectures and articles, Sita, Savitri and Damayanti may be praised. But all our social traditions, laws and attitudes have been opposed to women. In the last few years, as you know new laws have been passed which have chalked out a new a new path and lightened the burden on the women. The most important thing is that they are now getting an opportunity to grow...

¹²⁵ Ibid, pp. 242- 243.

¹²⁶ Ibid, p. 243.

...We must certainly hold on to our fundamental principles. For all this, education is extremely essential important. Therefore the establishment of this college, it is to be welcomed particularly because of the goals it has set for itself.¹²⁷

In another speech at inaugurating the Kamla Nehru Hostel of Shree Tikaram Kanya Mahavidhyalaya, Aligarh Uttar Pradesh, 6th December 1960, he was quoted as saying,

A country's growth depends upon the amount of work its people are prepared to do. There is a great deal to be done and that requires preparation and training. That applies especially to young girls, because in the past there education is neglected, and in my opinion girls exert a greater influence on society, than boys do. So our society can grow in the right direction only when our girls are fully prepared to participate in the national tasks. I have come to this college after 25 years and, it has grown a lot in this period. The number of girls reading here is growing, similarly, the number of girls and boys' going to school and colleges is increasing all over the country. So you are getting an opportunity to study. You must remember that it is a very special opportunity which is not available to all the children in the country. You must take full advantage of this opportunity and repay your debt by serving the country and society when you grow up.¹²⁸

Education for the Minorities

Caste system has been coterminous with the social organization and culture of India. It had been the basic organizing principle of Indian Society. Nehru believed that caste system was a product of an agrarian civilization. The rise of a market economy and an industrial society, social and physical mobility and other changes however created conditions that were antithetical to the continuation of the caste system. The caste of untouchables had been a major splinter group of Indian society. Since 1932 when a separate electorate was awarded to the untouchables and Gandhi had undertaken an epic

¹²⁷ Madhavan K. Palat (ed), *Selected works of Jawaharlal Nehru*, Vol 59, Teen Murti House, New Delhi, 2010, pp. 302-304.

¹²⁸ Madhavan K. Palat (ed), *Selected works of Jawaharlal Nehru*, Vol 65, Teen Murti House, New Delhi, 2010, pp. 345-346.

fast, Congress had committed itself to looking after the welfare of the depressed castes. The 1935 Government of India Act had made a schedule of these castes in order to provide them the necessary facilities for their uplift from which derives their names the scheduled castes.¹²⁹

“Nehru was a major champion of the cause of depressed classes. After the country became free, the commitment to the depressed classes and specially the untouchables was not forgotten. In 1955, an Untouchability Offences Act was passed which made the practice of untouchability in any form a punishable offence. In order to secure adequate representation of the scheduled castes and tribes, special constitutional provisions were made for reservation of seats in the parliament and in the state assemblies.”¹³⁰

In one of his letters to P N Rajabhoj¹³¹, Nehru speaks about the upliftment of the backward classes through providing education and equal opportunities. He believed in secularism and wanted it to combat not just communalism (while maintaining religious neutrality) but also wanted it to ensure religious parity and freedom for the all minorities in India. To quote him,

Anyhow, I do not like the idea of anyone calling himself downtrodden because it stands in the way of his progress. At the same time, we must not shut our eyes to reality either. We must comprehend the problem. Moreover, no race or people can go very far, except by their own effort. It is all very well to provide opportunities or help but that alone will not do unless an individual and community has inner strength. India became free by her own strength and not by the help of others, and India will grow when there is an economic revolution in the country and our big economic problems are solved. We are a poor country and yet we must advance by our own strength. We will certainly accept any help from outside gratefully but that would be only a drop in the ocean. In what does our strength lie? It does not lie in gold or silver but in hard work. We must work hard if we want to increase production from lands, industries and

¹²⁹ R P Dubey, *Jawaharlal Nehru: A study in Ideology and social change*, Mittal Publications, New Delhi, 1988, pp. 207-208.

¹³⁰ Ibid, p. 208.

¹³¹ P N Rajabhoj (1905-1984); journalist and agriculturist; left government service in Revenue Department, Bombay in 1925 and worked for the upliftment of Backward classes', in Aditya Mukherjee and Mridula Mukherjee (ed), *Selected works of Jawaharlal Nehru*, Vol 42, Teen Murti House, New Delhi, 2010, p. 271.

cottage industries, etc. which can be converted into gold and silver later on.¹³²

...You have said that untouchability must be removed. It is obvious that it must be removed and it is gradually going. I have no doubt about that and we must make an effort to get rid of it completely. But the most important thing is to uplift the people because other things will follow automatically. What does that mean? It means making the people educated and secondly, improving their economic condition. These are the two things which are especially important. Thirdly, everyone should get employment. But that does not mean making reservations and keeping 50 posts here and there for them. Whether posts are reserved or not is a different matter. The essential thing for you is to make yourselves better off by your own effort. Nobody can then stop you...

...So, first of all, I would say that proper arrangements for your education must be made and along with it practical training in some field or the other should also be provided because book-learning alone, though essential, is not enough. Our educational system must be improved by including some practical training in some craft. As you know, now a day, education involves some practical work too. It is not purely mental work. India is advancing industrially and small, cottage and heavy industries are coming up very fast. We must train people to work in them. You must remember that the days, government jobs were considered superior are gone. There will have to be government servants, clerks and what not, but now new avenues of employment are opening up, which involve manual work, and our education must lean in that direction. If everyone wants safe government clerical jobs, one cannot go very far. It will be far better for people to train themselves for some useful occupation instead of pushing files the whole day.¹³³

Taking another instance, in another letter to Dhannalal Loudwal (President, All India Scheduled Castes League), dated 25 January 1958 Delhi, he advocated for the cause of the Harijans. To quote the letter,

I received your letter (referring to the caste riots in Ramnathapuram district, Madras State, in September 1957) of the 5th January some time ago. I was much surprised to read it because it is apparently based on

¹³² Aditya Mukherjee and Mridula Mukherjee (ed), *Selected works of Jawaharlal Nehru*, Vol 42, Teen Murti House, New Delhi, 2010, p. 271.

¹³³ *Ibid*, p. 271.

ignorance of facts. All of us know that *harijans* have been badly treated in the past in India. All of us know, also or should know that both legally and otherwise the progress made in helping the harijans to advance educationally, economically and socially has been very considerable. I agreed that a great deal remains to be done, that especially social customs and practices are not easy to root out and we must try our utmost to put an end to these prejudices.¹³⁴

On Minorities and ‘Loyalty’

In one of his letters to the Chief Ministers, he talks about how education can be used to teach people about the growing communalism in their minds and how it could be used as a tool for curbing it. To quote him,

The education Ministry have suggested that the Inspectorates of Education in the states should be utilized to promote communal understanding in educational institutions. I think this is an excellent suggestion. I think also that our senior students, during their holidays, might well devote themselves to this highly important task. Whatever our views may be about political or economic problems, any man or woman with any sense will realize that no progress can be made unless we have this communal understanding. This is a challenge to us, and if we fail in this challenge we dub ourselves as backward and little-minded people lacking the culture that makes a nation grow and prosper.¹³⁵

In one of his letters to the Chief Ministers, dated March 1, 1950, he addressed the problems of minorities the state of Bengal. He says that,

If India is to progress, we must absorb, and make our own the various minorities in India, and notably the Muslims. The view of the *Hindu Mahasabha* and other communal organizations is opposed to this. I am certain that the *Hindu Mahasabha* policy is fatal for India. Their talk of putting an end to Partition is foolish in the extreme. We cannot do so, and we should not try to do so. If by any chance Partition was ended, while present passions last on either side, it would mean tremendous new

¹³⁴ Aditya Mukherjee, Mridula Mukherjee (ed), *Selected Works of Jawaharlal Nehru*, Vol 41, Teen Murti House, New Delhi, 2010, pp. 331-332.

¹³⁵ Jawaharlal Nehru, *Letters to Chief Ministers*, Vol 2 (1950-1952), (ed by G. Parthasarathi), Jawaharlal Nehru Memorial Fund, Teen Murti, New Delhi, 1952, p. 83.

problems for us to face. We would be worse off than ever. Therefore, there must be no thought of putting an end to Partition and having what is called *Akhand Bharat*...

...There is a tendency among some of us to demand loyalty from the Muslims in India and to condemn tendencies amongst them which may be pro-Pakistani. Such tendencies, of course, are wrong and have to be condemned. But I think it is wrong to lay stress always on the loyalty on behalf of the Muslims of India. Loyalty is not produced to order or by fear. It comes as a natural growth from circumstances which make loyalty not only a sentiment which appeals to one but also profitable in the long run. We have to produce conditions which lead to this sentiment being produced. In an event, criticism and cavilling at minorities does not help...

...Some people talk vaguely but none the less rather aggressively of war. I think it would be a disaster of the first magnitude for us to have war on something that necessarily takes the shape of a communal issue. War is disastrous in any event, but much more so when it is communal or racial or something like that. It is true that there are some things worse than war and there are occasions when there is no alternative left except war. It is also true that whether we want it or not, war may be thrust upon us. And so every prudent statesman will keep in readiness, and in full preparation, for every eventuality. But that does not mean talking and encouraging war sentiment...

...It is difficult to think of long-term policies when the situation is an ever-changing one. The only real long-term policy we can have is to consolidate India by making all the minorities in the country feel completely at home in the State, and indeed by removing all sense of difference from the political point of view between the so-called majorities and minorities. That will, no doubt, take some time. But that is the only goal to aim at and every step taken must keep that in view.¹³⁶

In conclusion, it can be said that Nehru was the builder of modern education values. He knew that a liberal society can only survive by bringing together the cultural diversity in the country. For him, the cultural objectives of education were important because it was aimed at man's aesthetic improvement. In addition, Nehru made efforts to

¹³⁶ Jawaharlal Nehru, *Letters to Chief Ministers*, Vol 2 (1950-1952), (ed by G. Parthasarthi), Jawaharlal Nehru Memorial Fund, Teen Murti, New Delhi, 1952, pp. 40-42.

make sure that education for art and culture could develop in the country. He recommended that special institutes (catering to cultural education) should be set up. He was also the head of the Sahitya Academy, and he considered that the government should promote the artistic and literary education. Through his letters, correspondences and speeches, one could easily infer that he worked hard for the socio-cultural renovation of the country, for elevating the living standards of the people and making the status of women in the society, better- all these point towards his approach for building a strong country.

III

The Nehruvian Idea of Science and Technology

A noteworthy concomitant of the independence was the systematic creation and expansion of scientific work across the nation. Starting in 1950, more than 300 specialized research laboratories were built across the country, whose equipment and results are generally on a world level. Tens of thousands of scholars engaged in basic research and technical engineers have been solving, in these “temples of science¹³⁷” as Jawaharlal Nehru once called them, the most demanding tasks from the genetics of agricultural crops and utilization of solar energy to electronics and nuclear and space research.¹³⁸ Like the Indian government’s postulate of economic planning, for instance, or its basic foreign political orientation, this concept too, was formed still during the course of the national liberation movement and its main protagonist, both at the time of freedom struggle and later in his post as Prime Minister of independent India, was Jawaharlal Nehru. Even Ajit Prasad Jain, one of Nehru’s biographers, who certainly was not an uncritical admirer of his, states that “Nehru’s highest contributions to India’s development were science and technology.”¹³⁹ In the words of Homi Bhabha, “So great was his zeal for science and for the scientific approach to life that he missed no opportunity of imparting his views to others. To quote him: ‘You know that whenever the chance offers itself, I say something about the importance of science and its off-shoot, technology. I think, we should realize how modern life is an offspring of science and technology’.”¹⁴⁰

In this regard, this chapter attempts to show the impact of science and technology on Nehru, and his efforts to express the same to the domains of industrial growth, new

¹³⁷ S Gopal, *Selected Works of Jawaharlal Nehru*, Vol 19, Teen Murti House, New Delhi, 1996, p. 129.

¹³⁸ Miloskar Krasa (ed), *Nehru: His work and relevance*, Contributions presented to the Third International Symposium on Jawaharlal Nehru organized to commemorate the 17th-anniversary of his death, Czechoslovak Society for International Relations, REPRO Publications, Prague, 1981, p. 24.

¹³⁹ *Ibid*, pp. 25-26.

¹⁴⁰ Homi J Bhabha, *Jawaharlal Nehru and Science*, in B. K Ahluwalia (ed) *Jawaharlal Nehru: India’s Man of Destiny*, Newman Group of Publishers, New Delhi, 1978, p. 48.

scientific advancements, making of science policies and atomic energy. This chapter discusses Nehru's efforts in the spread of Science and Technology, and how his encouragement for it led to the establishment of institutions of higher education which imparted top-notch scientific and technological as well as management education.

The Laudable Attempt of Setting-Up of National Laboratories

“Nehru is, of course, identified in the public mind with the tireless advocacy of the intrinsic link between science and development. In the early years after independence this association was perceived in a positive spirit, as was the notion of India's transition to modernity, with which this linkage was connected.”¹⁴¹ This was manifested in his speech at the inauguration of the thirty-ninth session of the All-India Science Congress at Calcutta, 2 January 1952, where Prime Minister Nehru was quoted as saying that,

A proud achievement of the Government of India during the past four or five years has been the setting up of a large number of very fine national laboratories all over India. We can take legitimate pride in this achievement. We have thought it essential for future progress in the country to lay these foundations. They are not very spectacular and many people in India do not perhaps realize their importance. They want something more obvious. But these laboratories should produce important results- results which help to bring about a certain mental outlook in men, a particular mental climate beneficial to our general progress. Science has attained great heights but it has also failed to produce the environment so necessary for the successful implementation of development plans. Science can do a great deal towards creating this mental climate and I feel that we have done a great thing in India by setting up these laboratories and thus encouraging and developing the growth of science. I hope the central and State governments will be able to continue this great work to the best of their ability.

Scientists too will have to be not merely scientists but human beings as well. This applies to all of us and especially to those who work in the Secretariat. As a person intimately connected with the administration of

¹⁴¹ Nasir Tyabji, *Jawaharlal Nehru and Science and Technology*, History and Sociology of South Asia, 1. 130-36, Contemporary Perspective Studies, Vol 1, January-June 2007

the country and concerned with the welfare of the people of India, I want scientists to help me to rid the country of its poverty and ignorance and give the people the good things of life.¹⁴²

In the evolution of science policy in the immediate post-independence era, the roles of S.S Bhatnagar and H.J. Bhabha were crucial. Nehru and his principal advisers, including Bhatnagar and Bhabha, were keen to promote expansion in two directions. The first was to create facilities in the form of well-equipped laboratories, a well paid cadre of scientific civil service and so on, and it was expected that these steps would stimulate research activity in science and technology at a level commensurate with the development needs of the country.¹⁴³ As an ardent supporter of the scientific discoveries and technological advances for the country, in another speech at the opening ceremony of the auditorium of the National Physical Laboratory, New Delhi, 14 January 1952, he was quoted as saying,

We all nowadays, talk of science in terms of praise. In a sense, we all worship at the altar of science and yet I often wonder if science is not going to meet the same fate as religion did in older times... Science is not a matter of merely looking at test tubes and mixing this and that and producing things big and small; science ultimately is a way of training the minds and of the whole life functioning according to the ways and methods of science, that is, the whole structure, social or otherwise, function in the spirit of science. Science indeed has built up structure of modern life and you cannot exist without it.¹⁴⁴

Science and Technology for the Remotest Part of the Nation

In his speech at the inaugural function of Central Road Research Institute, New Delhi, July 1952, he said that forming of this institute will help the people living in the remotest

¹⁴² S Gopal, *Selected works of Jawaharlal Nehru*, Vol 17, Teen Murti House, New Delhi, 1995, pp. 293-94.

¹⁴³ J. Mahanty, Science in the Universities Since 1947 in B.R Nanda (ed) *Science and Technology in India*, Vikas Publishing House, New Delhi, 1977, p. 118.

¹⁴⁴ *Ibid*, pp. 297-298.

areas of the country to get connected with the rest of the country. This was also to be counted as a technological development for the country. To quote him,

You have come to this new laboratory. There is this research institute and also the National Physical Laboratory. I am filled with fresh hope and strength when I see these institutions. They are symbols of new India. Visitors from other countries, some of them great experts, are profoundly are impressed by our science laboratories. They have seen that we have ultimately found the key to the country's progress instead of merely copying others. It is the new inventions of science and technology which has brought about this tremendous change¹⁴⁵.

There is no want of ability and courage among our people. It is our failure to make progress in the field of science which was responsible for our backwardness. Therefore, it became one of our most urgent priorities to lay the foundations of scientific advance in the country. We want to learn new methods of productions in order to increase our national wealth. But it is more important to develop a scientific temper in the country. We lack that at the moment¹⁴⁶.

The road research institute must pay attention to various aspects of road construction. There should be good roads which would be able to withstand the pressure of vehicles carrying heavy loads. At the same time, the Institute must do special research for laying roads at a low cost in order to open up the rural areas. The people in rural areas must be provided with various civic amenities and everyone must get an opportunity for making progress.¹⁴⁷

Improvement from Within

In his speech at the foundation stone laying ceremony of the Central Electronics Engineering Research Institute, Pilani, Rajasthan, 21 September 1953, he spoke about how scientific education was not just about learning science from the textbooks. Practical knowledge and experiences were also necessary for building a firm foundation for scientific learning. To quote him,

¹⁴⁵ S Gopal, *Selected works of Jawaharlal Nehru*, Vol 19, Teen Murti House, New Delhi, 1996, p. 128.

¹⁴⁶ *Ibid*, p. 128.

¹⁴⁷ *Ibid*, p. 129.

You are studying science in the colleges here and will probably get degrees thereafter. But we cannot hope to learn science by reading about it from textbooks as to what is happening in the United States and Germany and Japan and England. If we do that, we shall only be copying others or buying goods and machinery produced in other countries. The real power will continue to be in the hands of others and we shall merely follow them. No nation can progress like that. We have to take full advantage of scientific learning in the world for science, it is obvious, does not belong to any country. But as long as we do not develop the spirit of scientific inquiry and research in our country, there can be no scientific awakening. That is why we have opened large science laboratories and research institutes in order to develop the spirit. Otherwise so long as we look to other countries to provide technical knowledge or scientific goods, we shall continue to lag behind¹⁴⁸.

The new electronic centre that we are building seems like a piece of India's future to me because if there is to be progress in the country, we have to advance in these new fields. We may not be able to see the benefits immediately but we shall be laying the foundations of the basic skills which will be of great benefit in the future. The question that we are constantly facing is whether we should work for the well being of the people now and strive for their future prosperity. We are building a nation and the life of a nation is undying, though individuals may come and go. So we have to lay the foundations firmly. The task of nation-building is never ending but unless the foundations are laid properly, the edifice cannot be a stable one.¹⁴⁹

The Epoch of Science

On the occasion of the inauguration of new buildings of Central Laboratories for Scientific and Industrial Research, Hyderabad, 2 January 1954, he explained why he supported the cause of enhancing science and technological institutions and how it is for the overall empowerment of the nation and not just wastage of money.

¹⁴⁸ Ravinder Kumar and H.Y Sharda Prasad (ed), *Selected Works of Jawaharlal Nehru*, Vol 23, Teen Murti House, New Delhi, 1998, p. 110.

¹⁴⁹ *Ibid*, pp. 115-116.

One subject which has come up again is the great significance scientific progress has for India. Dr. Hussain Zaheer¹⁵⁰ that some people in India feel, even now, that it (building of scientific institutions) is a waste of money. But I feel that on the other hand, there is a large number of people in India who understand that progress in science is of fundamental importance. Whatever progress we may have made in the field of science in the last six to seven years, one thing that we have succeeded in doing is to instill into the minds of people the importance of science to India.¹⁵¹

The age of science dawned a couple of hundred years ago and has transformed the world completely. However, people often fail to understand its significance though they benefit from it. Anyhow, we must understand the true spirit of scientific energy. It is not confined to the laboratories or something which is useful for industrial development. Science is the search for truth, for facts, and we have to accept the results of our experiments, whether we like it or not. The real scientific spirit is one of pure inquiry. We must keep the doors and the windows of our minds open. We must make scientific progress, of course, but it is even more important to inculcate the spirit of scientific inquiry and a scientific temper in the people. Only then will our narrow-mindedness will disappear and the country can make progress.¹⁵²

“Jawaharlal Nehru’s interest lay as much in the customs of science as in its material achievements. He frequently cited what he termed the “**scientific temper**” and the “**spirit of science.**”¹⁵³ On the topic of spreading this “**scientific temper**” all over the country and its genuine importance, he also said that,

We established 13-14 national science laboratories all over the country and I feel that good work is being done in all of them. You may not look for anything spectacular for that is not the nature of scientific work, except very occasionally. Anyhow, we have set up specialized science laboratories in Delhi, Poona, Madras, Calcutta, Lucknow, Jamshedpur and other places. It was proper that they should be spread all over the country

¹⁵⁰ ‘Dr. Hussain Zaheer was the Director of the Central Laboratories, Hyderabad’, in Ravinder Kumar and H.Y. Sharda Prasad (ed), *Selected Works of Jawaharlal Nehru*, Vol 24, Teen Murti House, New Delhi, 1999, p. 201.

¹⁵¹ Ravinder Kumar and H.Y Sharda Prasad (ed), *Selected Works of Jawaharlal Nehru*, Vol 24, Teen Murti House, New Delhi, 1999, pp. 201-202.

¹⁵² Ibid, p. 203.

¹⁵³ Jawaharlal Nehru, *The Discovery of India*, Oxford University Press, Delhi, 1989, pp. 409, 512.

for it is not right to confine them to any one place. We want to inculcate a spirit of inquiry and scientific temper in India and give people the opportunity to undertake original research.¹⁵⁴

Creating a Technologically Trained Youth

Not only this, in his note to Y. N Sukthankar, the then Cabinet Secretary, dated 22 September 1956, he suggested that since the country was advancing on a great pace, it was essential that more people should be trained in technical institutions in order to cater to the growing needs of the developing country. To quote him,

It has always seemed to me rather a waste of money and resources for big institutions like Engineering courses, medical courses and the like to produce a relatively small number of trained persons. Very large sums are absorbed by buildings and equipments, and only a small number of students study in engineering colleges. In one engineering college in China, they used to have two thousand students. This number grew rapidly and became nearly twelve thousand. I have little doubt that this number is far too big for any adequate training, however good the college. But, still, the difference between the thousands in China and hundreds that we train in India in a college is very marked. Can we not devise means to train more people in our existing institutes and colleges?

It must be remembered that there are some essential features of a technical college, which can easily be used for larger number of students. Thus it is not necessary to duplicate big libraries and some big equipment. Some types of equipments will necessarily have to be duplicated, if there are more students. But, some efforts could be made to utilize our existing technical colleges for a much larger number of students with only some additional equipment.

There is another point to be borne in mind. While we should not bring down our standards and should produce fully trained engineers, technicians, etc. we can well have a separate course of about a year or,

¹⁵⁴ Ravinder Kumar and H.Y Sharda Prasad (ed), *Selected Works of Jawaharlal Nehru*, Vol 24, Teen Murti House, New Delhi, 1999, p. 204.

perhaps, two years for persons specializing in some particular type of work, which are needed by us¹⁵⁵.

On the similar note, in his speech, while inaugurating the Assam Engineering College, Gauhati, 16 January 1958, he spoke about how the young students, with their technical and scientific knowledge, will help in building the new, modern, and technically advanced India. To quote him,

Well, you know that how important engineering in its various forms is today. This is more and more the world of the scientist and the engineer I am glad that you have started this college. We are trying to produce and train engineers in even large numbers but we are always short of the mark.

We talk about putting up big and small plants. There are big projects, tremendous ones- steel plants, oil plants and river valley schemes- requiring not only a large number of engineers but highly trained engineers and engineers of experience. Because in a matter of this kind all the training that you get in college is not enough, experience also is necessary. In fact, the training itself should be such as to give you some experience, but when you come to deal with really big tasks, then experience is essential. We will get our difficulties about money, we cannot get over difficulties about trained manpower. We have to train them, there is no way except to train them, and therefore, the question of training people for the various important types of work in India is of higher importance and in a sense engineering in its many aspects is the one that requires most people today¹⁵⁶.

The Age of Industrialization

Nehru led the country through a scientific and technological transformation and that was because it was witnessing the age of modern industrialization. In another excerpt from Nehru's speech, while laying the foundation stone of the Hyderabad Polytechnic, Hyderabad, 25 October 1958, he was quoted as saying,

¹⁵⁵ H.Y Sharda Prasad, A.K Damodaran, Mushirul Hasan (ed), *Selected Works of Jawaharlal Nehru*, Vol 35, Teen Murti House, New Delhi, 2005, pp. 116-117.

¹⁵⁶ Aditya Mukherjee, Mridula Mukherjee (ed), *Selected Works of Jawaharlal Nehru*, Vol 41, Teen Murti House, New Delhi, 2010, pp. 228-229.

This is indeed a power age. I think it is someone, probably Mr. Henry Ford, who said that our modern material civilization is entirely dependent and has grown with the growth of power resources. Power is one thing of which you can never have enough in this country no matter what you do. If power is going to grow in India as it must, then the people who organize that power must necessarily grow, it is inevitable. The engineers and the like are necessary.¹⁵⁷

We talk about industrialization. We are in for inevitably and I think rightly. Industrialization means above all engineers, not so much as even the administrators, though administrators are required. Really speaking, even the administrator will have to be normally the engineer. So, the ultimate need for engineers in India is insatiable. We cannot fulfill it. It does not matter how many polytechnics and institutions you start in India; but still you are likely to fall short.¹⁵⁸

We are entering pretty fast the industrial age. It is really a new age in this country. But it is taking place at a fair speed in this country. It involves various things- growth of industry and the teaching apparatus, schools, colleges and universities, fitting in with the industrial age- not giving up other essentials of education, like cultural, literary values, character building and the like. The fact remains that we are entering a new age which in India is a scientific, technological and industrial age¹⁵⁹.

The Need to Keep Pace with the World

Nehru was very much impressed by the other third world countries which were developing technologically, at a global level. He also admired the scientific discoveries made by the USSR and China and believed in keeping pace with the world as science was an ever evolving subject matter.

We are standing at a revolutionary moment in the history of the world. First of all, we gained independence, but that paved the way for releasing the great energies of the nation for the advancement, social, industrial, economic. We are advancing, stumbling sometimes, falling down and

¹⁵⁷ Madhavan K. Palat (ed) *Selected Works of Jawaharlal Nehru*, Vol 44, Teen Murti House, New Delhi, 2012, pp. 537-538.

¹⁵⁸ *Ibid*, p. 538.

¹⁵⁹ *Ibid*, pp. 538-539.

getting up and going further again. We are in midst of revolutionary surges in the world- I use the word not in the narrow sense of a revolution in which heads are broken but in the new sense of atomic energy or industrial revolution, a bigger revolution. In order to keep pace with it, we require many qualities. Only a first-rate national with a first-rate mind, discipline and capacity to work can keep pace with it. It is quite essential in this age to have scientists and technicians in vast numbers to change the temper of the country. All institutions that help in this are not only to be welcomed but they also fulfill the vital needs of the country.¹⁶⁰

The Quest for Truth through Science

“Although not a practicing scientist, Jawaharlal Nehru’s personality revealed, throughout, the essential attributes of the real man of science- ‘his unquenched thirst for truth, his questing mind that admitted no man-made barriers, his essential humility, his constant willingness to learn and to teach,’ to quote the condolence resolution of the Scientific Advisory Committee of the Cabinet.” He saw science a great intellectual discipline which broadened a man’s personality and made him look at things objectively and dispassionately. “What is science?” he asked, and replied, “It is the search for truth, truth of the physical world, ... truth arrived at by a process of trial and error, by experiment, not taking something for granted until it is proved, and rejecting everything that is disproved or does not fit in with the facts before us.”¹⁶¹ In his speech at the inauguration of the birth centenary celebrations of Jagadish Chandra Bose at the Bose Institute, Calcutta, 30 November 1958, Nehru said that,

Science, which developed in the western world, got the capacity for search for truth in a somewhat different way. Just as philosophy and metaphysics was a search for truth, science searched for truth in a somewhat different way and brought heavy rewards in its train. It had not only to search for truth there, but [also] life and, energy not mere mumbling or something that has been done before, but experiment, experimentation and progress by succession of failures and succession. So science was a good thing and

¹⁶⁰ Madhavan K. Palat (ed) *Selected Works of Jawaharlal Nehru*, Vol 44, Teen Murti House, New Delhi, 2012, p. 540.

¹⁶¹ Homi J Bhabha, Jawaharlal Nehru and Science, in B. K Ahluwalia (ed) *Jawaharlal Nehru: India’s Man of Destiny*, Newman Group of Publishers, New Delhi, 1978, p. 52.

it showed tremendous results and, as everybody knows. It changed the whole concept and manner of living of the world. After all, much that we are and everything, all improvements, if I may say so, in Europe and America, are due to science and application of science.¹⁶²

Now, therefore, that is the essential quality of modern science – experiment, search for truth by experiment, by trial and error, without taking anything for granted, however big the man who said it. So, if that is so, there is a common bridge between the two. At least a bridge can be constructed between the two. Now, as I just said, Acharya Jagadish Chandra Bose was in his life and works, a bridge between the two. That is the thing which strikes me the most, apart from his high attainments in science and his experiments in various forms, first of all in electrical radiation and then in the responses of the living and the non-living substances and trying to break down the barrier between the living and the non-living.

But I do believe that the world has, mentally speaking, arrived at a turning point [...] and it has to add something to its thinking in its approach to problems in order to get out of this big tangle or else to perish. It may be that the scientific, spiritual approach- again using the words in the broadest term and not in any narrow term and laying stress on the scientific part of that approach- this approach, scientific, yet spiritual, which has been the characteristic of the highest Indian thought in past ages- might help. And it is that I see [in] Acharya Jagadish Chandra Bose.¹⁶³

Importance of New Discoveries

From a report of a speech at the 24th-anniversary general meeting of the National Institute of Sciences of India, New Delhi, 20 January 1959, he was quoted as noting the achievements of the country, so far and he also suggested measures to tackle the shortcomings. To quote the report,

¹⁶² Madhavan K. Palat (ed) *Selected Works of Jawaharlal Nehru*, Vol 45, Teen Murti House, New Delhi, 2012, p. 642.

¹⁶³ Madhavan K. Palat (ed) *Selected Works of Jawaharlal Nehru*, Vol 45, Teen Murti House, New Delhi, 2012, p. 645.

He demanded a radical reform in the educational system and said that educational system and said that education should be geared to the economic development of the country. Even now education continued to be the “monopolistic privilege” of a few. All barriers towards educational opportunities should be removed, he said. The problems were not easy to solve. The question was whether, in spite of all the scientific advance, humanity had succeeded in grasping the significance and importance of the new discoveries.¹⁶⁴

At Bombay IIT- Science and its Progress in India

In his speech at the foundation laying ceremony of the Indian Institute of Technology, Powai, Bombay, 10 March 1959, he emphasized on the significance of technical education for the youth and how these institutes (as IIT Kharagpur was established in 1951) were taking India on the roads of technical and scientific development. To quote him,

I am happy indeed to be present here on this occasion when this very important step is being formally taken by us. I suppose that among the many things that are being done in India today, the establishment of these great institutes of technical training and knowledge, is perhaps the most important, not only for the present, but even more so for the future. I have no doubt that India will advance on the industrial field, she is well set on that and she is bound to go ahead and go ahead pretty fast, I think, in spite of such difficulties as may come in our way.¹⁶⁵

But what I am particularly glad to notice now, the greater stress being led on good technical education, because it's easy enough; relatively easy to put up a factory or a plant. In fact, even in this age of tremendous machines it is ultimately the human being of training that counts. And it is the degree that we advance in that knowledge and training that we shall make progress.

We are sometimes, perhaps a little forgetful of all the basic work that is being done in India by our own young countrymen and country women,

¹⁶⁴ Madhavan K. Palat (ed) *Selected Works of Jawaharlal Nehru*, Vol 46, Teen Murti House, New Delhi, 2012, p. 528.

¹⁶⁵ Madhavan K. Palat (ed) *Selected Works of Jawaharlal Nehru*, Vol 47, Teen Murti House, New Delhi, 2013, p. 410.

wrapped up as we are, with problems of the day, political problems, especially, and the dust and fray of public life. And yet it is there, the basis is being laid for the future of India. And surely the most important foundation of all is, in the education that we are giving to our people. Whether it is general education or specialized education and both are obviously highly important¹⁶⁶.

There is far too much, sometimes, lack of ambition and lack of that vigorous thought which leads to vigorous deeds and vigorous achievement. So here we have; here we participate on this important occasion, which becomes another symbol of this- our attempt to grasp at the future and prepare for that future. And in this way in a hundred places or a thousand places in India, some small step or big step is being taken. This is a big step. But it is perhaps the tens of thousands of the small steps also which count. And so the people of India labor and weave the wharf and woof of the tapestry of the India of the future. It is, I imagine going to be a rich tapestry, a rich and varied one, as India even in her state of development is a rich and varied country. We want that richness and that variety tied up; allied to modern science and technology. We want to lose neither aspect. We can't do without modern science and technology and we would not lose the richness and variety and depths of India which we have had¹⁶⁷.

Development in Science Should Reach the Masses

In his speech at the inauguration of the Bombay University Institute of Technology, he urged the students to take forward their research in a way that every country man should benefit from it; it should reach the remotest of places and every person of the country. To quote from the report,

Prime Minister Nehru said here tonight that efforts must be made to see that the latest developments in the field of science and technology reach the masses. Pandit Nehru was inaugurating the Bombay University's Institute of Technology.

¹⁶⁶ Ibid, p. 411.

¹⁶⁷ Ibid, p. 413.

“I am looking at this matter always from the point of view of these seeping down to the masses of our people. The question before us is now the common people can benefit from these technical advances,” he said.

Pandit Nehru said that cities comprised only about 20 percent of India and only when modern techniques reached the villages, one could say that India had entered the technological era.

The Prime Minister said now-a-days people talked about the atomic age and the jet age. Although India had not yet reached this stage of development, he would confidently say that India would soon manufacture jet planes. For after all in the modern age the tempo of development had to be rapid. In fact, he added some little progress had been made in this direction.

But the main question before the country today, he said, was how to encourage and bring into being simple techniques which could benefit the villagers. Of course, these techniques must be cheap and yet they must help the people to raise their standard of living.¹⁶⁸

Emphasis on the Role of Scientific Research in the Process of Development

At the conference of Directors of National Laboratories, New Delhi, 16 November, 1967, Jawaharlal Nehru was quoted as praising the work of the national laboratories across the country and appreciating their efforts in improving and producing great results. To quote him,

I agree that scientific work should not be starved because of financial difficulties or foreign exchange difficulties. I should like you to look at even this financial picture of India in proper perspective. We are at present facing a number of difficulties and we have to try our utmost to overcome them. The difficulties are due to many causes which we cannot control. There has been considerable bad luck- the monsoons, drought and all that. The real problem for India is internal resources. We should get over the foreign exchange problem from year to year but we do not get over internal resources which are always with us, because we always have to

¹⁶⁸ Madhavan K. Palat (ed) *Selected Works of Jawaharlal Nehru*, Vol 56, Teen Murti House, New Delhi, 2014, p. 347.

expand these. That is the basic problem and that is the problem in which scientists should help us.

The increase in agricultural production is of vital importance in order to help our industry to advance. Here, scientific advance can help us greatly. Then there is this development regarding atomic energy and space travel. It gives a mental shock to know that this has been done and some day, many people, who did not conceive this kind of thing happening, people walking on the moon. This is such a revolutionary age, a changing age.

The moment we settle down, our mind settles down to a routine. We will lose the capacity for creative work. There can be no settling down to a routine in scientific research or in any creative ability.¹⁶⁹

The Positive Reception of Scientific Research

Nehru was a visionary. He was already impressed by the growth of Russia and China under their five-year plans. He wanted the same development to happen in India and wanted the country to be self-sufficient in its scientific and technological advances. To quote him from his note about the (above mentioned) meeting of Directors of National Laboratories and Institutes, he writes that,

On the whole, the impression gathered by me is that we are making good progress in our scientific work in these laboratories, but that sufficient advantage is not taken care by agencies of the Government. The rest of the world is rapidly and painfully coming to realize that scientists count and count more than others. Recently, and more especially after the Russian adventure in space, even the United States of America have felt that they have not adequately encouraged their scientists and are now prepared to pour money in particular types of scientific research. Evidently, we have not quite developed that appreciation of the importance of science, and further we do not appreciate the good work that is being done in India itself. We consult foreign experts and foreign firms but ignore our own people. I do think all this requires careful consideration.¹⁷⁰

¹⁶⁹ Mridula Mukherjee (ed), *Selected Works of Jawaharlal Nehru*, Vol 40, Teen Murti House, New Delhi, 2009, pp. 186-187.

¹⁷⁰ Mridula Mukherjee (ed), *Selected Works of Jawaharlal Nehru*, Vol 40, Teen Murti House, New Delhi, 2009, pp. 189-190.

Importance of Fundamental Research and the Practical Applications of Scientific Research

“A belief in the authority of science as the highest form of secular knowledge was invoked in order to instill legitimate pride in indigenous achievement and to laud the contribution ancient and medieval India made to the wider world of science, but Nehru qualified this with recognition that India could not make progress, in the present still more than in the past, from a position of epistemic isolation.”¹⁷¹ At the silver jubilee celebrations of the National Institute of Sciences, New Delhi, 29 December 1960, he was quoted as saying that,

Indeed, it is surprising that in spite of these limited opportunities, what good work was done by Indian Scientists. Well, today and during the last few years after independence that is, the opportunities, have been increasing, and the number of scientists coming out of various Universities and special institutes is considerable, and in fact, for more than ever before. This will go on increasing. But the major change, I believe is recognition in India of the extreme importance of science plus technology so that on the whole, there has been a progressive change, well, in the atmosphere in regard to these matters in India. The Government, the state is much more concerned with the advancement of science and technology and the public generally takes more interest.

So, we are possibly at the threshold or beyond the threshold in India of a growth, of trained scientific personnel, of scientific work and the results that flow from that work. It has crossed the threshold of quiet research in Universities or other laboratories. It remains there of course, and come out, coming to touch with the problems of life, the problems of a growing nation, and so many other things¹⁷².

Now the basic thing is this widespread recognition in India of the value of science. That in itself, I think, is almost more important than anything else that has happened and that is reflected, or may be independently of that, the recognition of the Government in India, of this importance. You have referred in your address to some fascinating aspects of modern problems-

¹⁷¹ David Arnold, *Nehruvian Science and the Post-Colonial India*, The History of Science Society, The University of Chicago Press, 2013, p. 362.

¹⁷² Madhavan K. Palat (ed), *Selected Works of Jawaharlal Nehru*, Vol 65, Teen Murti House, New Delhi, 2016, p. 370.

man in nature, the relation of man with nature, and the ultimate limits of the normal ways of scientific research, which are fascinating subjects for the scientists and perhaps to some extent even of the layman. And yet the problems that immediately confront a country like India at the present day are more limited obviously. Though, I should not like to suggest that fundamental research should be ever given a second seat in scientific work. I think it is of the utmost importance, this basic research. Nevertheless, inevitably, the problems that face us have to be solved and in the solution of those problems scientists can, do, have to play a very important part¹⁷³.

Now, if with this rapid pace in technological and scientific development and with new problems ever coming up before us, it becomes essential that any country that wants, well, to keep pace with events and not to be left behind, has to give the greatest thought and the greatest opportunities for scientific works of both kinds- fundamental research and the practical applications of scientific research.

Anyhow, the scientist and the technologist have to play a tremendously important role and I hope I am sure that more and more facilities and opportunities will be coming. There is one aspect, however, there can be no doubt that science and the scientist will grow in India, grow in numbers, I hope, grow in quality, because real quality comes from the type of educational institutions, your research institutions, your laboratories. But to some extent, in a matter of this kind it comes from the quality of the leadership that science itself provides to the scientists, or scientists provide to science, call it what you like. It is very important, and that should be done, and that, the very growth of science, or growth in the number of scientists should not water down the leadership which should be given to science¹⁷⁴.

Moreover, if we go back to *Discovery of India*, which was written in 1946, we find glimpses of Nehru's inclination towards the advancements made by science and the degree to which he was influenced by it. He very well knew that the country needed independence and science and technology were needed to re-establish it. He knew that he would have to work to build up the new India. Nehru believed that it was science that could end the problems of the newly freed, developing country, like food shortage and

¹⁷³ Ibid, p. 371

¹⁷⁴ Ibid, p. 375

poverty, illiteracy, fallacy this is why he felt the need to advance and promote science and also realized the prominence of science in the modern world.

“The applications of science are inevitable and unavoidable for all countries and peoples today. But something more than its application is necessary. It is the scientific approach, the adventurous and yet critical temper of science, the search for truth and new knowledge, the refusal to accept anything without testing and trial, the capacity to change previous conclusions in the face of new evidence, the reliance on observed fact and not on pre-conceived theory, the hard discipline of the mind – all this is necessary, not merely for the applications of science but for life itself and the solution of its many problems. Too many scientists today, who swear by science, forget all about it outside their particular spheres. The scientific approach and temper are, or should be, a way of life, a process of thinking, a method of acting and associating with our fellow men.”¹⁷⁵

Indeed, he enhanced the aspect of science and technology. The progress achieved in conducting the scientific researches, atomic energy, space research, has escorted the nation towards development. To him, “Science even gave meaning and context to the colonial experience. Thus he remarked in 1936 in his autobiography: ‘To the British, we must be grateful for one splendid gift of which they were the bearers, the gift of science and its rich offspring.’” “The manner of India’s encounter with the West, via colonial rule, was ‘unfortunate, and yet, perhaps, only a succession of violent shocks could shake us out of our torpor.’ Without this ‘great gift,’ India was ‘doomed to decay’.”¹⁷⁶

“Nehruvian science encompassed many different things, but some of its most salient characteristics deserve to be highlighted here. First, it was a program for socio-cultural change, intended to transform society and the prevalent mind-set. Science was crucial to Nehru because he wanted to oversee radical change in India without having recourse to revolutionary violence or state authoritarianism.” As he remarked in 1952: “We live in an age of science. We hear and read of revolutions but the greatest revolutionary force in the past 150 years has been science, which has transformed human life and has changed political, social and economic organizations. Although Nehru

¹⁷⁵ Jawaharlal Nehru, *Discovery of India*, Asia Publishing House, Bombay, 1960, p. 525.

¹⁷⁶ David Arnold, *Nehruvian Science and the Post-Colonial India*, The History of Science Society, The University of Chicago Press, 2013, p. 362.

prioritized ‘science’ in his earlier utterances, as he grew more aware of the complex needs of state planning and rapid industrialization his references to technology became more prominent. Thus in 1956 he spoke of ‘the stupendous growth of technology’ and the need to think ‘in technological terms’ of the requirements of the planning process.”¹⁷⁷

He kept to his words and built scientific institutions and establishments and personally looked after their development. “In August 1947 he created a central government portfolio for scientific research under his own direction. Expanded into a Department of Scientific Research, in 1951 this became the Ministry of Natural Resources and Scientific Research. Nehru continued to lead debates in parliament on scientific matters, address annual meetings of the Indian Science Congress, and preside over the governing body of the Council of Scientific and Industrial Research. Patron and mentor of India’s postcolonial science, he established a coterie of like-minded scientists around himself, among them S. S. Bhatnagar, director-general of the Council of Scientific and Industrial Research, P. C. Mahalanobis, the statistician behind India’s planning regime, and Homi K. Bhabha, chair of India’s Atomic Energy Commission.”¹⁷⁸

“Under Nehru, India saw an eightfold increase in the national science budget between 1948–1949 and 1958–1959. His government inherited a set of colonial scientific bodies, such as the Council of Scientific and Industrial Research, and to these, as prime minister, he added others, like the Atomic Energy Commission, which drew on the model of similar institutions in the West. In a speech that anticipated his later reference to hydroelectric dams as ‘temples of the new age,’ he spoke in 1954 of India’s national laboratories as “temples of science built for the service of our motherland’.”¹⁷⁹

The Basic Spirit of Science

In his speech at the annual convocation of the engineering students of Jadavpur University, Kolkata, 24 December 1957, he spoke about the prevailing time which is

¹⁷⁷ Ibid, pp. 365-366.

¹⁷⁸ Ibid, p. 367.

¹⁷⁹ Ibid, p. 368.

changing every minute and how we are supposed to acknowledge this revolutionary and developing pattern of science and work for the progress of this spirit. To quote him,

We live in an age of very rapid progress or change in technology, in the applications of science. Have you ever thought what amazing changes have been brought about by science and technology in the last let us say one hundred and fifty or two hundred years? Take communication. You can take almost anything. Since the beginning of human history and till about one hundred and fifty years ago, there was no great change in the speed of communications. It is a fact to remember. The fastest way of communicating, or sending a message was, probably on the back of a fast horse¹⁸⁰.

Then suddenly something revolutionary comes. Steam, electricity and other things come one after another. Now, the wireless, the radios, etc, are commonplace, leave out telephone and telegraph and we come to the radar. See the enormous difference that has taken place in a hundred years or so, many good things coming in our lifetime, in the last twenty to thirty years.

I do not know what more a person of my age or my generation is likely to see in the shape of revolutionary change, because the pace is great. But whether I see any great changes or not, it is dead certain that you young men, who have taken your degrees or diplomas today, you will see enormous changes based on scientific or like discoveries, changes which change the shape of the world, the shape of human relationship. So, I want you to view this world in this revolutionary or changing pattern and not in a static way, and therefore, try to adapt yourselves to it, try to understand it. If you want to serve it, you have to understand it and be in tune with this changing pattern¹⁸¹.

So, you and I have to accept the basic spirit of our times and fit into it. What the basic spirit is you might argue about, of course. Essentially, it is the spirit produced by science and technology. We should aim at an integrated human being who fits in with the spirit of the age and yet represents these essential cultural features which mark the advance of man from the brute stage to what he is today.

¹⁸⁰ Mridula Mukherjee (ed), *Selected Works of Jawaharlal Nehru*, Vol 40, Teen Murti House, New Delhi, 2009, p. 197.

¹⁸¹ *Ibid*, pp. 198-199.

Let us hope that in this age of science and technology we shall progress in India, but let us also hope that in doing so we shall never let go of the deeper wisdom which a civilized person should possess.¹⁸²

Science in Universities

“Science was in the curriculum of all the universities in under-graduate and post – graduate levels in the British regime. Before the establishment of post-graduate teaching departments in some of the universities- for which the lead was taken by the Calcutta University during this period 1915-1917 under the stewardship of Asutosh Mookerjee- some of the premier affiliated colleges housed the science departments. The Presidency College of Calcutta, for instance was the venue of the researches of J.C. Bose in physics and plant science, and of P.C. Ray in chemistry. With the establishment of post-graduate science departments in the universities, scientific research progressed under the leadership of outstanding scientists. Notable names in this connection are: C.V. Raman in acoustics and optical spectroscopy (Calcutta); M.N Saha in astrophysics, thermodynamics and nuclear physics (Allahabad and Calcutta); S.N. Bose in quantum statistics (Dacca and Calcutta); S.S Bhatnagar in chemistry and chemical technology (Benares and Punjab University, Lahore); Birbal Sahni in paleo-botany (Lucknow). This leadership had a quality reminiscent of that in the legendary *ashram* system of ancient India, with an intensely personal relationship and loyalty between the leader as the *guru* and the junior scientific workers in the group.”¹⁸³

“In the scientific effort in India in the immediate post-independence period, both within and outside the universities, the one person whose ideology and vision was crucial was Jawaharlal Nehru. Perhaps more than any Indian of his time, he was aware that the days of scientists working for their own intellectual satisfaction in relative isolation, and with relatively meager resources support on the one hand, and on the other, requiring a

¹⁸² Ibid, pp. 200-201.

¹⁸³ J. Mahanty, Science in the Universities Since 1947 in B.R Nanda (ed) *Science and Technology in India*, Vikas Publishing House, New Delhi, 1977, p. 112.

policy framework in which the social, political, economic and other implications of the scientific effort are better understood and articulated.”¹⁸⁴

Scientific Expansion

“The scientists were also keen to promote the scientific expansion in another direction. It was to assess the scientific manpower needs and develop facilities for the education and training of scientific personnel. The latter was studied by the Scientific Manpower Committee (1947), many of the recommendations of which have been adopted in the plans pertaining to technical education. In respect of the former, the important decision seems to have been that the kind of research productivity which the government wanted could be achieved only outside the universities. The three organizations which were responsible for the main thrust in this direction were the Department of Atomic Energy (DAE) under Bhabha; the Council of Scientific and Industrial Research (CSIR) under Bhatnagar, and the Defence Science Organisation (DSO) under D.S. Kothari.”¹⁸⁵

“It was the tryst between these two men, Nehru and Bhabha that was the most glorious chapter of the Indian Science after independence. Nehru gave liberally of his trust and time; Bhabha reciprocated with high talent and practical achievement. Events followed each other rapidly. The Board of Research in Atomic Energy, with Bhabha as its Chairman, met eleven days after India attained independence. The Atomic Energy Commission was set up in April 1948 and a full-fledged Department of Atomic Energy, with Bhabha as its secretary, in August 1954. The measure of its significance was that Nehru himself was the minister-in-charge of the department all along.”¹⁸⁶

Nehru wanted the existing and the future governments of India to be committed to a policy of promotion of science. So, in the year 1958, Parliament passed the “Science Policy Resolution” drafted by Nehru. It proclaimed that the country’s policy would be to foster, promote and sustain the cultivation of science and scientific research by all

¹⁸⁴ Ibid, p. 113.

¹⁸⁵ J. Mahanty, Science in the Universities Since 1947 in B.R Nanda (ed) *Science and Technology in India*, Vikas Publishing House, New Delhi, 1977, p. 118.

¹⁸⁶ G.H. Keswani, Jawaharlal Nehru and Science in B.R Nanda (ed) *Science and Technology in India*, Vikas Publishing House, New Delhi, 1977, pp. 15-16.

appropriate means. This was an unusual thing to do. Parliaments hardly ever pass such resolutions. But in a country which had been slumbering for a thousand years, a clarion had to be sounded again and again. In 1962, Nehru constituted the Indian Parliamentary and Scientific Committee to involve the Parliament in science.¹⁸⁷

Development of the Scientific Outlook

In another address to the National Academy of Sciences at their annual meeting, held in Allahabad on March 5, 1938, Nehru, an ardent admirer of the scientific developments and an enthusiast of the technological advancements, spoke about the importance of science for the humanity. To quote him,

“Who indeed can afford to ignore science today? At every turn, we have to seek its aid and the whole fabric of the world today is of its making. During the ten thousand years of human civilization, science came in with one vast sweep a century and half ago, and during these 150 years, it proved more revolutionary and explosive than anything that had gone before. We who live in this age of science live in an environment and under conditions which are totally different from those of the pre-scientific age. But few realize this in its completeness, and they seek to understand the problems of today by a reference to a yesterday that is dead and gone.

Science has brought all these mighty changes and not all of them have been for the good of humanity. But the most vital and hopeful of the changes that it has brought about has been the development of the scientific outlook in man. It is true that even today vast numbers of people still live mentally in the pre-scientific age, and that most of us, even when we talk glibly of science, betray it in our thought and actions. Even scientists, learned in their particular subjects, often forget to apply the scientific method outside that charmed sphere. And yet it is the scientific method alone that offers hope to mankind and an ending of the agony of the world. This world is racked by fierce conflicts and they are analyzed and called by many names. But essentially the major conflict is between the method of science and the methods opposed to science.”¹⁸⁸

¹⁸⁷ Ibid, pp. 17-18.

¹⁸⁸ Jawaharlal Nehru, *Unity of India: Collective Writings (1937-1940)*, The John Day Company, INC., New York, 1942, pp. 178-179.

“Nehru had firm faith in modern science and its achievements. He believed that unless our traditional beliefs and ways of thinking were replaced by modern habits of thinking, the former would act as a dead weight in our efforts to improve our economic condition. India is a country wherein religion, tradition, caste, etc, still play an enormously important role in the life of the people. The struggle against obscurantist ideas is not an easy one especially when mixed up with religion. It is bound to be long and arduous, but the struggle has to be waged and won. One of the greatest contributions of Nehru to the development of modern India was the festering care with which he looked after our various scientific institutions like the National Laboratories and also encouraged scientists like Bhabha and Mahalanobis.”¹⁸⁹

It was fortunate that the government of independent India was headed by a man, who considered science and technology as essential levers for lifting the country out of poverty and backwardness. As Nehru told an assembly of Indian scientists, ‘Politics led me to economics and this led me inevitably to science and scientific approach to all our problems and to life itself. It is science alone that would solve the problems of hunger and poverty’. During the years 1939-41, as chairman of the National Planning Committee of the Indian National Congress, Nehru gained a deep insight into the basic problems of the Indian Economy. ‘There are three fundamental requirements for India’. He wrote in 1940, ‘and these are a heavy engineering and machine building industry, scientific research institutions and electric power. These must be the foundations of all planning’.¹⁹⁰

In conclusion, it can be said that the evolution of present-day political economy can be attributed in a large measure, to Nehru’s leadership and his faithful adherence to the philosophy of a combination of freedom and socialist planning. It was mainly due to the early pioneering efforts of Nehru at India’s industrialization, although some would

¹⁸⁹ C. Achutha Menon, ‘Architect of Modern India’, in B. K Ahluwalia (ed) *Jawaharlal Nehru: India’s Man of Destiny*, Newman Group of Publishers, New Delhi, 1978, pp. 166-167.

¹⁹⁰ B. R Nanda, ‘Introduction’, in B. R Nanda (ed) *Science and Technology in India*, Vikas Publishing House, New Delhi, 1977, p. xii.

argue that it came with a high cost of failures elsewhere, that it was possible for India to join the ranks of newly industrialized countries by the early 1980's.¹⁹¹

“Nehru indicated the new status of scientific research in India by agreeing to be the President of the Council of Scientific and Industrial Research, and by keeping the Department of Atomic Energy under the direct control of the Prime Minister. Several new research institutions- or example the Central Statistical Organization, the National Sample Survey, the Indian Standards Institution and the Indian Science Academy- owe their origins or development to the inspiration or the support they received from Nehru.”¹⁹²

It must be stated that Nehru was instrumental in generating scientific temper among the people of India. He was indeed a modernist with a scientific bent of mind. He regarded science as a powerful tool of renovation of social values and attitudes. The result of Nehru's contribution in this sphere was that to-day India possesses the third largest scientific manpower in the world, a network of scientific research institutions for development in the future. Nehru's vision of a strong vibrant India with a substantial input of science and technology was basically correct and today's policy makers have to continue to build up the original Nehruvian insight in this area.

Nehru's faith in science was an instrument for ushering India into the modern age. He saw research in science and technology not as an end in itself, but as an essential part of socio-economic framework. He assigned to science a crucial role in planning, and went so far as to describe planning as “science in action”. It was Nehru's government which lifted Indian science from its small beginnings to a national effort.¹⁹³

¹⁹¹ D.R Sardesai, Anand Mohan (ed), *The Legacy of Nehru*, Promilla and Co. Publishers, New Delhi, 1992, p. 173.

¹⁹² B. R Nanda, Introduction, in B. R Nanda (ed) *Science and Technology in India*, Vikas Publishing House, New Delhi, 1977, p. xiii.

¹⁹³ *Ibid*, p. xiii.

Conclusion

Education is the fundamental key in the progression of human development. Higher education, being the heart of learning, is the source of power behind the economic progress of any country. Nehru knew this importance of education in developing the newly freed country and thus worked towards its development. In addition, he continues to be remembered for his contribution to the institutionalization of democracy, the establishment of institutions of technical excellence, and his belief that poverty and inequality in India can be eradicated only with the help of education.

As it is discussed in the dissertation, if we chronologically analyze the educational policies implemented under Nehru's reign, be it the recommendations given by the first Education Commission headed by Dr. Radhakrishnan, Mudaliar Commission, Kothari Commission, or those of Prof. Yashpal Committee, we see the Indian Education system, going through an evolution. During the first few years of independence, the proper structure of Indian education system from elementary to university education evolved throughout due to Nehru's constant efforts. Regulatory framework of higher education along with system of governance of higher education institutions and regulatory bodies, such as University Grants Commission, are still known as the benchmark of his policies.

Expansion of higher education in India since Independence is, therefore, completely credited to Nehru's endeavors whereby the number of universities and colleges and other institutions of higher education were built after Independence resulting in larger teaching faculty and a hike in the enrolment of students. Similarly, expenditure sanctioned by the Central Government on higher education also increased, and has been progressing since then.

In the initial years, Nehru being the first prime minister of independent India, made sure that educational facilities were available to all. He suggested ways to make education cost-effective throughout the country, with an up to date curriculum. In

addition, a focus on reinforcing the basic methods essential for developing the system by using the learning resources efficiently, were also suggested. For example, Mudaliyar Committee recommended that along with educating children, actions must be taken to teach proficiencies which will help the students to survive in the viable world. The acquired skills would help them in becoming self-reliant or even turning into an entrepreneur. Supporting the clause of the secondary education, Nehru said that,

All our planning ultimately depends upon the human material that we produce. We talk about training personnel for specific duties. That is of course necessary. But unless we give some training of the right type to the children as they grow up, we shall be overwhelmed by masses of untrained or ill-trained people who have no discipline and who only make demands and demonstrate for them. It is, therefore, basic importance that we should give very serious thought to this training of large numbers of our children and boys and girls. They will be the foundation of our planning and future progress.¹⁹⁴

Moreover, Nehru understood that the prime concern of a successful educational scheme should be to direct the interests and scientific investigations into advantageous channels. He was acquainted with the fact that education was the key to social change, and thus, this made it necessary to bring in suitable changes in the educational system. The expected result was social transformation for the children of the country as they were the future leaders in the service of the country.

As prime minister, Nehru took care of the democratic institutions. He wrote fortnightly letters to the chief ministers of the States, elucidating his policies, and welcoming their feedback. He lived up to his enduring belief that India belonged to the people who had contributed to its history and civilization. Therefore, the majority communities should shoulder the responsibility of protecting the rights, and ensuring the welfare of the minority communities.

¹⁹⁴ S Gopal, *Selected Works of Jawaharlal Nehru*, Vol 19, Teen Murti House, New Delhi, 1996, p. 120.

In both, policies of the government and in his personal beliefs, Nehru supported the idea of India in which people of every religion, caste, ethnicity, and language were given equal respect. At the same time, in many areas, the Nehruvian policies gave the country the capacity which it did not have and which the private sector would have been unsuccessful in fashioning. It was Nehru's efforts that led to the building of a scientific foundation for India's space and engineering triumphs, which continues to flourish even today. In today's scenario, without the setting up of the Indian Space Research Organisation, there would have been no Mangalyaan and Chandrayaan space investigations; without the Indian Institutes of Technology, we would not have the global standing for engineering brilliance; or have set up 40 percent of the startups in Silicon Valley. In the present day, we are one of the world leaders in the arena of information technology, digital services, and at the launching of rockets and satellites.

In all these aspects, we are maintaining and enduring the legacy of the first Prime Minister of India whose vision ascended above the poverty and misery that foreign occupation had left the country with. He saw unmistakably that if backwardness is to be eradicated, the only cure is the suitable application and advancement of science and technology in the country.

Developing science was not an easy task. To ensure its use in the socio-cultural milieu of a country that kept tradition as a priority was even harder. A lot of difficulties were solved because Nehru devoted science and technology his special attention and was himself passionately interested in the theme.

Not only this, he strongly rejected caste prejudices, religious bigotry, social inequalities, the problems which crippled the country, and believed that they could be abolished only by developing the scientific spirit. Also, having a scientific bent of mind and a scientific inclination of thoughts was just as significant. Science was not only a hunt for the truth, but also a source of improvement for the human beings. "Jawaharlal Nehru's interest lay as much in the customs of science as in its material achievements. He frequently cited what he termed the "**scientific temper**" and the "**spirit of science.**"¹⁹⁵

¹⁹⁵ Jawaharlal Nehru, *The Discovery of India*, Oxford University Press, Delhi, 1989, pp. 409, 512.

Thus, scientific policies were taken up by the government, in addition to laboratories being set up transversely around the country. Indian Institutes of Technology were set up to give birth to trained recruits in the field of engineering. Other subjects like space and atomic energy were also personally looked after by him.

Today, there is an enormous growth of engineering aptitude of immense array and variety. Within a small span of time, we have built aptitude as well as proficiency in the field of scheming, putting up, and financing rather intricate technology in some areas. All of this accounts for a remarkable nationwide asset.

It is a known fact that developing science needs nurturing as it is a complicated process. But Nehru knew his people, as we can see in the case of Dr. Homi Bhabha. He encouraged him to go ahead with his plans of technology. And he went ahead to give the country the gift of progress. Till today, the constructions and customs that Dr. Homi Bhabha created have been carried on. That is one of the many examples of Nehru's long-lasting contribution which is of tremendous significance for the country's present as well as future.

To evaluate the lifelong importance of Jawaharlal Nehru, one cannot simply look into what his thought process was and what he achieved in the aspects of political arrangement and the making of a national state, or his role in the advancement of economic development, national integration, and the developing of science and technology, but there is a need to observe the work he accomplished in the field of art and culture.

To quote him,

The real problems for me remain problems of individual and social life, of harmonious living of a proper balancing of an individual's inner and outer life, of an adjustment of the relations between individual and between groups, of a continuous becoming something better and higher, of social development, of the ceaseless adventure of man. In the solutions of these problems, the way of observation and precise knowledge and deliberate reasoning, according to the method of science, must be followed. This method may not always be applicable in our quest of truth, for art and

poetry and certain psychic experiences seem to belong to a different order of things and to elude the objective methods of science.¹⁹⁶

The Present-day Scenario

The planning and reforming of higher education is a difficult task for any country. India is an odd Third World country for the reason that it is among the first ones to have developed higher education institutions, and it has now the leading academic system. This study, in a way, sheds light on India's experience with transformation, modification, and growth in higher education. Higher education in India has grown radically in the past seventy years but this growth has remained unaltered by many policies and proposals. There are suggestions but the difficulty is of implementation. The reforms of the education commissions are not forcefully implemented because the politicians have manipulated the existing state of affairs to serve their selfish ends. Also, there is still much work to be done in the sphere of primary and secondary education. The progress of the primary and secondary education still lags behind in contrast to the higher education. A closer look at these commissions will reveal that the government has given greater priority to the higher education sector. Even though, education in general, has paved the way for a renaissance in the country, teachers, students, and management should be acquainted with Nehru's concept of true education and its diverse goals and purposes. Education needs to function as the key to social change as well as for modernization. These doctrines are kept alive in all these years due to timely efforts and endeavors of Nehru, and the various Education Commissions, discussed in this dissertation.

Thus, to conclude, this study has analyzed the Nehruvian educational policies and perspectives throughout his prime ministerial period, i.e., for seventeen years. It not only discusses the problems and setbacks faced by the Commissions and Committees but also their solutions under the authority of Nehru. The study also explores how Nehru's ideology and outlooks are mirrored in these policies and frameworks; and how these policies have ultimately led to the changing of the contour of Indian education system

¹⁹⁶ Jawaharlal Nehru, *The Discovery of India*, Oxford University Press, Delhi, 1989, p. 17.

throughout the seventy years of Indian independence. Nehru stood for rationality, logic, science, and reason. Additionally, he believed that all ignorance could be eradicated through the agency of Education. His thoughts and opinions are reflected in his many letters, correspondences, and speeches which he shared with the people of his beloved country. Nehru's attempts to stabilize the country via educational reform stand as a legacy of his visionary approach. This legacy undoubtedly continues to hold visible importance till date.

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