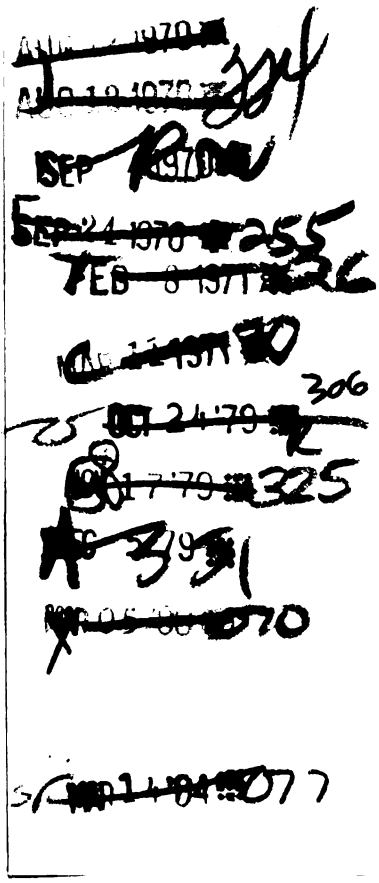

ABSTRACT

THE ROLE OF THE FEDERAL GOVERNMENT IN INDIAN HIGHER EDUCATION SINCE INDEPENDENCE, 1947

by Raghu Nandan Singh

Purpose of the Study

The primary purpose of this study was to examine critically the role of the Federal Government in Indian higher education since independence and to review its development in the total historical perspective. An additional purpose was to identify some of the continuing problems of the Indian society which must be effectively dealt with by higher education in the future.

Sources and Methods

Since complete first-hand information was not available in the United States, the writer sought the relevant data from historical works, government reports, publications of the Ministry of Education, and unpublished doctoral dissertations.

Secondary sources of information included books on India and Pakistan, and numerous articles published in various periodicals by eminent scholars, foreign visitors, and advisers to the Government of India.

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Historical, descriptive, and analytical methods are used as a basis for drawing conclusions and formulating recommendations intended to assure sound economic and educational developments in the future.

Major Findings

1. The ancient Indian higher education was very selective, philosophical, and theological. It could never become popular and remained mostly confined to the Brahmans.
2. The British introduced scientific and technical education but emphasized it to only a minor degree.
3. After independence the Government of India has expanded higher education enormously by giving huge grants to universities and colleges.
4. The Federal Government has put a premium on technical education after independence.
5. The expanding enrollments in Indian universities and colleges have lowered the academic standards and created unemployment problems before the government.
6. The state governments have failed to finance higher education; therefore it has become necessary for the Federal Government to increase its contribution.

Conclusions

1. The Federal Government should raise the quality of higher education and provide jobs for the university graduates.

2. As the provinces cannot meet the growing costs of higher education, the Federal Government should increase its financial aid substantially.
3. For better utilization of its educated manpower, the Government of India needs more realistically planned development in the sphere of higher education.

THE ROLE OF THE FEDERAL GOVERNMENT IN INDIAN HIGHER EDUCATION SINCE INDEPENDENCE, 1947

By

Raghu Nandan Singh

A THESIS

Submitted to
Michigan State University
in partial fulfillment of the requirements
for the degree of

DOCTOR OF PHILOSOPHY

College of Education

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CHAPTER I

INTRODUCTION

India has a very ancient tradition of higher learning. The institutions in the past known as "asramas" were run by individual scholars and imparted education in various fields. The aim of traditional education was not to seek worldly advancement but to achieve salvation. These institutions are still alive in limited numbers and are known today as "Gurukulas."[1] Their curriculum contains the authoritative texts of ancient wisdom to preserve the traditional culture and civilization from perishing. These institutions have survived without any apparent change for many centuries, and their ideals still appeal to the modern scholars of India.

In November, 1961, Dr. N. M. Pusey, the President of Harvard University, was invited by the University of Delhi's Chancellor, the distinguished Brahmin philosopher, Dr. Sarvepalli Radhakrishnan, to deliver the commencement speech before the university graduates. What the University of Delhi had to say to its trained young people was

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[1]Gurukula--the word literally means "the family of the teacher."

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distributed in the form of a booklet. The message of the university was in the form of quotations taken from the Upanishads and presented under two headings: the "Advice" and the "Commandment." Dr. Pusey describes his feelings in these words:

> At the Delhi commencement, degrees were awarded in nursing, medicine, agriculture, engineering, business, and in other subjects for professional training. . . . Here were new recruits ready for the task. But . . . what the university seemed to be trying most to say to its new graduates had very little to do with jobs or development. Its deeper concern was spoken through a little booklet, a copy of which was given to each graduate. This little pamphlet carried two quotations from ancient wisdom literature of India.[2]

Neither Buddhist education, which started in the sixth century B.C., nor the Muslim influence, which dates back to 1192 A.D., significantly changed the traditional Indian thinking. Buddhist education actually was not much different from the ancient Hindu education; therefore, there was no major open conflict. Muslim education laid great emphasis on worldly achievement which was the root cause for the failure of Muslim rulers to impose their education on the Indians.

The East India Company of England started its trade in India from 1600, but it was the Charter of 1813 which forced the company to spend not less than one lakh of

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[2]Nathan M. Pusey, The Age of the Scholar--Observations on Education in a Troubled Decade (Cambridge, Mass.: Harvard University Press, 1963), pp. 191-92.

rupees per year on the education of the natives of India. Thus started a new era in Indian education.

For some time there raged a battle between the Orientalists and Anglicists about the curriculum, but in 1835 the famous Minute of Macaulay, the Governor-General, brought the controversy to an end. Since then the study of European science and literature has flourished in India and laid the foundation of her modern education. In 1857 three presidential universities were established--at Bombay, Calcutta, and Madras--on the model of London University. India's university system is still basically the same as it was in 1857.

On August 15, 1947, India achieved independence, and with independence came the new demands of the free nation. India rapidly expanded her education in all directions and at all levels. By 1963 she had increased by more than three times what she had in 1947. She greatly emphasized the technical and scientific fields of education which were ignored by the British because of their business interests. As a consequence, the employment problem of the educated has become acute. India's expensive large plans which emphasize heavy industries have drained the country's capital. At present India is looking for generous foreign aid to save her economy from being shattered.

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Purpose of the Study

The main purpose of this study is to examine the role of the Federal Government in Indian higher education after independence, 1947. During these eighteen years of independence the expansion of higher education has been revolutionary. This thesis will attempt to give exact figures of enrollment and financial allocations to indicate the efforts of the government.

The government today is engaged in a Herculean effort to promote the economic growth of the country by utilizing all its resources. The two centuries of British rule contributed little toward removing the backwardness and poverty of the people in India. It ignored the Indian industries, or worse, to promote the industrial sector of England. Furthermore, the famines of 1877, 1878, 1889, 1892, 1897, and 1900, which carried off fifteen millions of people, indicate the primitive condition of agriculture and the institution of food distribution.[3] The failure of improvement in agriculture has retarded industrial growth even after independence.

Education, which was made the responsibility of the colonial government, laid emphasis on the training of an elite at the university level. Technical and scientific

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[3]Romesh Dutt, "The Nationalist Critique," The British in India--Imperialism or Trusteeship? ed. Martin D. Lewis (Boston: D. C. Heath and Co., 1962), p. 2.

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training and education were found to be in an almost primitive stage at the time independence was achieved.

Free India started with these disadvantages, and she now wants to jump the centuries by putting emphasis on heavy industries and on technical education. The major limiting factor to industrial development today is the enormous lack of capital in the country. Agriculture is today virtually the only source of national wealth in India. And as the country is restricted by the amount of money she can afford to spend on a particular item, she has not made much progress in the absence of improved seeds, fertilizer, and irrigation facilities. True, India's five year plans have made provision for agricultural development, but the writer believes that the country would not have faced the hazards of inflation and devaluation if agriculture had been considered of utmost importance. The agrarian revolution is imperative to create a solid base for industrial progress.

As regards the expansion in the number of university students, the government has reiterated that it needs trained people of all types to develop the national economy. The purpose of this thesis, then, is to trace the development of higher education from the days of the Upanishads to 1963 which will give a clear picture of the country's educated personnel and the interests taken by the past governments in it.

Another matter that will merit attention in this dissertation is a graphic description of Indian institutions and conditions which will largely determine how well or poorly the nation's trained manpower is to be used.

More specifically, then, the purpose of this dissertation is to describe the efforts of the Indian Government after independence in the field of higher education and to analyze their adequacy in the light of the national economy.

Some General Assumptions

When the writer starts considering the expansion of Indian higher education in the cultural and economic setting of the country, some of the important assumptions which underlie his thinking are as follows:

1. That the colonial administration prepared the university graduates for jobs with the government, and that the rush for the government jobs will hardly decline in the future though agriculture might absorb more people at present and in the near future.
2. That India is already overpopulated, that she has a stagnant agriculture, and that capital investments in agriculture are very important.
3. That the aspiration of a free country for a higher level of living does not necessarily indicate the country's ability to translate the desire into

action programs which will result in achievement of the cherished goal. It is especially true when the country has been ruled by a ruthless foreign government and her industries have been strangled to avoid competition and to keep her weak and helpless.

4. That the issue is not whether India needs technical and scientific education or more heavy industrialization, but whether, in her present economic situation, she can afford to invest in the long-range plans without bringing the country's economy to a crisis.
5. That the Government of India has recognized her responsibility in the field of education as never before, but her assistance for educational expansion has been meager in relation to total needs and thus university education has been unable to maintain its quality.
6. That the provincial governments are experiencing increased difficulties in meeting the financial burdens of higher education due to their enlarging enrollments.
7. That the number of graduates turned out by the universities has increased disproportionately to the jobs that are available in government, industry, and other professions.

8. That the new graduates of the universities, if not incorporated into the plans of the government, will remain unemployed because of lack of capital and credit required to start something new and establish themselves.
9. And finally, the intended policies of the government will fail recurrently if it lacks proper administrative staff.

Sources and Methods of Study

As it was not possible for the writer to go to India to collect material for this study due to many factors, such as lack of funds, immigration rules, and time limits, this study has relied for its primary sources of data upon historical works and government documents. To collect data for the period before 1947 the writer was able to take advantage of the opportunity to secure inter-library loans through the Michigan State University library. Through one of his friends in India he was able to secure all the important government reports and publications on higher education published after 1947.

The secondary sources of data have been derived from works in humanities and social sciences, various periodicals, and Indian newspapers. The literature on Indian philosophy, culture, and social conditions is abundant in this library, but for its analysis the writer had to depend largely upon his background and his experiences as a teacher

in several Indian colleges. In addition, his discussions with American professors who have been to India have contributed significantly to his understanding and analysis of the problems.

The methods used in this research are historical, analytical, and statistical. At some points description has been considered more necessary than the giving of figures to stress the importance of a problem. Quotations from eminent writers have been used generously to add vitality to this study, especially when they appeared to have expressed the feelings of the writer more felicitously.

Organization of the Study

The organization of the chapters which comprise the thesis will be presented briefly at this point.

Chapter II indicates the major characteristics of ancient Indian higher education. As the educational system of a society reflects the values held by its people, this chapter at some length traces the teachings of the Upanishads which formed the basic curriculum in the ancient institutions of higher learning. This chapter also presents the structure of that education to help the reader understand traditional educational procedures and goals. It also discusses the values of Buddhist and Muslim education in India and gives the reasons for their failure to change the stream of Indian thinking.

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Chapter III presents the highlights of educational developments during the period of British rule. The Charter of 1813 provided government funds for education. Macaulay's Minute of 1835 made English the medium of instruction. Lord Hardinge's Resolution of 1844 favored the English-knowing Indians among applicants for government jobs. Wood's Despatch of 1854 recommended the establishment of the universities of Calcutta, Madras, and Bombay. In brief, the history of higher education during the British rule has been described to indicate the gradual changes which have taken place in Indian thinking. The British system of education made the worshippers of the West forget their ancient education and culture and adopt new education and manners to advance in the modern world.

Chapter IV gives relevant information about financing and the quantitative growth of higher education in India from 1780 to 1963. An account of the development of higher education requires exact information about financing and enrollments, and such data are given.

Chapter V discusses the role of the central government in higher education since 1947. It describes the major advisory bodies of the government and gives particular attention to the University Grants Commission which occupies a unique place in Indian higher education. As it gives financial aid to colleges and universities, its description at some length has been considered necessary.

Chapter VI considers the efforts of the five year plans to modernize higher education by putting emphasis on scientific and technical education. The plans needed scientific and technical personnel to introduce new processes of production in Indian industries. The British did not emphasize technical education in India because they were not much interested in helping to expand the Indian industries. This chapter thus completes the presentation of the total picture of Indian higher education.

Chapter VII identifies the major strains in Indian economy and the problems created by the rapid expansion of higher education. The shortcomings of India's administration and economy have been discussed in detail because on their efficiency depends the fate of the millions of the writer's countrymen. Thousands of technical graduates who are able and willing to work will not be able to find employment if the obstacles to economic development of the country are not removed.

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CHAPTER II

THE MAJOR CHARACTERISTICS OF ANCIENT INDIAN EDUCATION

Indian education before the British was based on the philosophical ideas found in the teachings of the Upanishads. It was religious in nature and put minimum emphasis on mundane affairs. The teachings of the Upanishads not only framed the traditional Indian philosophy of education; they became a part of the mental structure of the people of India.

The purpose of this chapter is to provide insight into the ancient higher education of India by discussing the philosophy of the Upanishads, which was the core of that education. The atmosphere of the asramas and the characteristics of teachers favored to achieve the ideal held in the Upanishads and produced a well-run system of education which lasted for more than two thousand years.

Later on, the adherents of Islam invaded India several times. They destroyed the institutions and killed the teachers. Their rule in India continued for centuries, but the pre-existing aim of education--that every possession, even one's life on this earth, is transitory and is

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not a thing to be pursued or sought out--remained constant. The spiritual aspiration of the Hindu sages was in the air and people breathed it. The efforts of the Muslim rulers to transform the traditional philosophy proved futile.

This chapter is divided into two parts. The first part gives the essentials of the teachings of the Upanishads, and the second gives the distinctive details of the administrative structure of that education. To proceed to describe modern education without giving an accurate picture of Indian education as it existed before the British would be to mislead the reader. Higher education in the modern sense was initiated by the British, no doubt, but the seeds of movement in this direction were sown thousands of years ago by the Indian sages prior to the advent of the East India Company. Though their aims differed altogether from those of the British, yet they need to be clearly pointed out so that the context in which British modernization of Indian higher education took place can be properly understood.

Part I.--The Main Teachings of the Upanishads

Existence of One Supreme Reality

About the age of the Upanishads there is a great controversy. But if the date of the Vedas is about 4000 B.C., as is generally held, then the date of the Upanishads cannot be later than 1500 B.C.

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It is very hard to ascertain precisely what are the teachings of the Upanishads because they contain conflicting views. But one thing is clear: they are consistently concerned with one god. They use different names for God, such as "the Brahman," "the Absolute," "the Supreme Reality," "the Self," etc.

The concept that behind all the manifestations of God there is only one Brahman and that the Self of man is no different from Him has been suggested by many stories and parables. To illustrate, one such parable is quoted here from the Chandogya Upanishad wherein the teacher is trying to convey to the mind of the young learner the idea that the nature of the Self and of the Absolute is identical:

1. "Bring hither a fig from there."
   "Here it is, Sir."
   "Divide it."
   "It is divided, Sir."
   "What do you see there?"
   "These rather fine seeds, Sir."
   "Of these, please divide one."
   "It is divided, Sir."
   "What do you see there?"
   "Nothing at all, Sir."

2. Then he said to him: "Verily, my dear, that finest essence which you do not perceive--verily, my dear, from that finest essence this great Nyagrodha (sacred fig) tree thus arises."

3. "Believe me, my dear," said he, "that which is the finest essence--this whole world has that as its

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> Self. That is Reality. That is Atman. That art thou, Svetaketu. . . ."[1]

Once it was determined that Brahman and Atman are one, this became one of the central teachings of the Upanishads. And from here they proceeded to discover the true nature of the world.

The World Is an Illusion

"The world comes out of Brahman as a web from a spider and has no individuality" is the way they express its nature. Radhakrishnan examines this relationship between God and the world and finds the arguments of the ancient thinkers inadequate:

> If we raise the question as to how the finite rises from out of the bosom of the infinite, Samkara [one of the greatest expositors of the Vedic philosophy] says that it is an incomprehensible mystery, maya. We know that there is the absolute reality, we know that there is the empirical world, we know that the empirical world rests on the Absolute, but the how of it is beyond our knowledge. . . . Samkara believes that it is not possible to determine logically the relation between God and the world. . . .[2]

However, whether the ancient thinkers could prove the relationship of the world to God or not, "the world is essentially an illusion" is the dominant thought in the Upanishads. A dialogue in the Brhadaranyaka Upanishad

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[1] S. Radhakrishnan and Charles A. Moore (trans. and eds.), A Source Book in Indian Philosophy (Princeton, N.J.: Princeton University Press, 1957), p. 69.

[2] S. Radhakrishnan, The Hindu View of Life (London: George Allen and Unwin, Ltd., 1928), pp. 66-67.

between Yajnavalkya and Maitreyi reveals the general thinking of that time:

> Yajnavalkya wants to leave the world and become a hermit. One of his two wives, Maitreyi, requests him to take her with him:
>
> 1. "Maitreyi!" said Yajnavalkya, "Lo verily, I am about to go forth from this state. Behold! let me make a final settlement for you and that Katyayani."
>
> 2. Then said Maitreyi: "If now, sir, this whole earth filled with wealth were mine, would I be immortal thereby?"
>
> "No," said Yajnavalkya. "As the life of the rich, even so would your life be. Of immortality, however, there is no hope through wealth."
>
> 3. Then said Maitreyi: "What should I do with that through which I may not be immortal? What you know, sir--that, indeed, tell me!"[3]

The temporary nature of the world perplexed the Indian mind from the earliest historical periods. They wanted to transcend the world and especially death. Even Lord Buddha faced the same problem of the transitory nature of all earthly objects. Like the Upanishadic thinkers, he was also in search of the ultimate reality. Life to him looked "like an echo, a dream, the note of a lute, the lightning that flashes for an instant, and is gone."[4]

The conclusion reached by Buddha after three enlightening incidents was contained in the teachings of the Upanishads about two thousand years earlier. A brief

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[3]Radhakrishnan and Moore, op. cit., p. 80.

[4]Charles D. B. Mills, Buddha and Buddhism: A Sketch (Northampton, Mass.: Journal and Free Press Co., 1876), p. 18.

description of the three incidents would reveal how he reacted to these natural phenomena:

> One day, starting from the eastern gate of the city with a numerous retinue for a ride to the garden of Lumbini, . . . he met upon the way an aged man. He was broken, decrepit, covered with wrinkles, . . . scarcely able to walk. "Who is this man?" he asked of the coachman. . . .
>
> "Sir," replied the coachman, "this man is borne down by old age. . . . In every creature youth is overcome by old age. . . ."
>
> "Alas then," answered the prince, "are creatures so weak, so ignorant and foolish . . . not seeing the old age that awaits? For myself, I will away. Coachman, turn my chariot quickly. I, the future prey of old age, what have I to do with pleasure or joy?"
>
> Another day, going out as before, he met a sick man, . . . dying in destitution and filth. And again he met a corpse upon a bier, borne by weeping friends, for the tomb. He interrogated his coachman, and learned that these too were under the lot of humanity. . . . Once again he met a bhikshu, a mendicant. He interrogated his coachman, and was answered, "This man has renounced all pleasures, all desires, and leads a life of severe austerity. He tries to conquer himself. He has become a devotee. . . ."
>
> "Well said," replied the prince; "the life of a devotee has always been praised by the wise. It shall be my refuge and the refuge of other creatures; it will lead us to a real life, to happiness and immortality."[5]

The above discussion establishes the fact that the Upanishads have considered mainly the infinite reality which is limitless and illimitable. The Indian thinkers sought to retire from the world which they regarded as a great illusion so that they might attain immortality.

There was no wide gap between philosophy and higher education in ancient India. Those who renounced worldly life became the teachers and leaders of society. They

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[5] Ibid., pp. 19-20.

colored the whole of Indian education with their deep longing for the infinite. The young students' main problem was, like their teachers, how to escape from Maya or illusion and immerse themselves in formless and unchanging substance. They rejected all the enjoyments of life and the bewitchments of material and earthly objects. The story of Naciketas in the Katha Upanishad shows how the young minds of those days were imbued with the philosophic coloring of asceticism:

> The father of Naciketas, while performing a sacrifice, gave away all of his possessions. Upon Naciketas' asking again and again, "To whom will thou give me?" the father in anger said, "To death." To fulfill the words of the father, Naciketas set out to see the god of death. When Naciketas reached the abode of Yama (the god of the world of departed spirits), he was not there. So Naciketas waited for three days. Since he was willing to wait for three days without eating, Yama offered him three boons for the hospitality which was due in Yama's absence.
>
> Naciketas' first wish was that his father should forgive him when he returned to earth. Next, he asked for instruction regarding the sacrificial fire that leads to heaven. The third wish he made constitutes the quintessence of the teachings of the Upanishads and is quoted to illustrate my point:
>
> Naciketas: "He exists," say some; "he exists not," say others. This would I know. . . .
>
> Death: Even the gods had doubt as to this of yore! . . . Another boon, O Naciketas, choose! . . .
>
> Naciketas: . . . No other boon the equal of it is there at all.
>
> Death: Choose centenarian sons and grandsons, many cattle, elephants, gold, and horses. . . .

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Naciketas: Ephemeral things! . . . Thine be the vehicles! Thine be the dance and song! . . .[6]

Part II.--The Administrative Structure of Education

Upanishadic Period

Now the question arises, what steps did the ancient Indian teachers take to incorporate these two fundamental conceptions of the Upanishads--there is only one Supreme Reality and the World is Illusion--in the education they were giving at their asramas?

First, they divided the whole life span of the individual into four parts, known as asramas or stages:

1. The Stage of a Student.
2. The Stage of a Householder.
3. The Stage of a Hermit.
4. The Stage of a Sanyasi.

Throughout this dissertation, the writer is concerned with the first stage only.

The Stage of a Student.--The life of a student started ordinarily between the eighth and the twelfth years. Education was not compulsory and the individual had to decide whether he wanted education or not: "Once upon a time Satyakama Jabala addressed his mother Jabala: 'Madam!

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[6]Radhakrishnan and Moore, op. cit., pp. 43-44.

I desire to live the life of a student of sacred knowledge.'"[7]

Admission to Studentship.--Students were admitted from three castes only: Brahmans, Kshattriyas, and Vaishyas. In case of unknown caste identity, the teacher had to ascertain it on the basis of the student's other qualities. The story of Satyakama in Chandogya Upanishad is a fine example of India's selectiveness in this sphere:

> Teacher: "Of what family, pray, are you, my dear?"
>
> Student: "I do not know this, sir, of what family I am. I asked my mother. She answerd me: 'In my youth, when I went about a great deal serving as a maid, I got you. So, I do not know this, of what family you are. However, I am Jabala by name; you are Satyakama by name.' So I am Satyakama Jabala, sir."
>
> Teacher: "A non-brahmin would not be able to explain this. Bring the fuel, my dear. I will receive you as a pupil. You have not deviated from the truth."[8]

Period of Studentship.--There was no fixed period for higher education since it required the dedication of an entire lifetime. To realize the knowledge of Brahman, the legend is the Saint Bhardwaja lived all three of his lives as a student. (This conception is based on the Hindu belief that one's next birth is determined by one's good and bad deeds in his previous life. Bhardwaja's three successive births as a human being imply that the life of a

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[7] Ibid., p. 66.

[8] Ibid.

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student was considered to be good, but was not good enough for the realization of Brahman.) In the Chandogya Upanishad, Indra lived for more than a hundred years with Prajapati as a student:

> Then he (Indra) lived with him (Prajapati) for five years more. That makes one hundred and one years. Thus it is, that people say, "Verily, for one hundred and one years Maghavan lived the chaste life of a student of sacred knowledge (brahmacarya) with Prajapati."[9]

Normally, the period was twelve years according to Mookerji. He gives the example of Svetaketu who returned home after spending twelve years with his preceptor.[10]

On the basis of the Chandogya Upanishad, Johri and Pathak conclude:

> . . . this period was sufficient for the study of one Veda. In case a student wanted to study all the four Vedas, he had to devote twelve years to each. Generally, students were satisfied with the twelve years required for studying one Veda. The students of literature and Dharmashastras completed their course in ten years.[11]

Subject of Study.--The ancient Indian teachers prepared their students not only for this life but for life beyond. Emphasis was on the study of the Vedas. In

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[9]Robert Ernest Hume (trans.), The Thirteen Principal Upanishads (Madras: Oxford University Press, 1949), p. 272.

[10]Radha Kumud Mookerji, Ancient Indian Education: Brahmanical and Buddhist (Delhi: Motilal Banarsidass, 1960), p. 134.

[11]B. P. Johri and P. D. Pathak, An Outline of Indian Education (Agra: Vinod Pustak Mandir, 1963), p. 12.

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Brahmin families the Vedas were studied all the time to influence the mind. T. N. Siqueira says:

> Education was meant to be a religious initiation: the teacher had to teach the pupil how to pray, to offer sacrifice, to perform his duties according to his stage of life. . . . Early Indian education was essentially religious and personal.[12]

The ancient educators were always conscious of the presence of the Supreme Person in the universe. And this consciousness led them to put into the personality of the student some of their own mystic findings. Reflection on the nature of the Supreme Self was more important to them than the student's skill in reading and writing. Spalding says:

> This spiritual ideal controls the Hindu conception of education for the masses, to read and write is of small account. Men learn more by the spoken than by the written word.[13]

Teacher's Qualities.--Knowledge of the Absolute was thought to be not attainable through the written word. People felt that knowledge could only be acquired directly from the Guru (the venerated teacher whose disciple the student became). One interesting episode is that of Kabir. He heard Ramananda Swami, one of the great teachers of his age, in the streets of Benares and was profoundly impressed

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[12]T. N. Siqueira (S. J.), The Education of India (Bombay: Oxford University Press, 1952), p. 5.

[13]H. N. Spalding, Civilization in East and West: An Introduction to the Study of Human Progress (London: Oxford University Press, 1939), pp. 209-10.

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with his teachings and personality. He knew that a teacherless mystic was no good for a life of higher devotion and contemplation. So he went to Ramananda for initiation.[14]

In ancient India the teacher had very high status. He was respected by everyone, for he refused all sensual pleasures and aspired to transcend this world through his quest for truth. In the following passage Radhakrishnan gives his eulogy of the teachers:

> From the beginning of her history, India has adored and idealized, not soldiers and statesmen, not men of science and leaders of industry, not even poets and philosophers, . . . but those rarer and more chastened spirits, . . . who have stamped infinity on the thought of life of the country, men who have added to the invisible forces of goodness in the world. To a world given over to the pursuit of power and pleasure, wealth and glory, they declare the reality of the unseen world and the call of the Spiritual life. Their Self-possession and Self-command, their strange deep wisdom, their exquisite courtesy, their humility and gentleness of soul, their abounding humanity, proclaim that the destiny of man is to know himself and thereby further the universal life of which he is an integral element. This ideal has dominated the Indian religious landscape for over forty centuries.[15]

The attitude of his mind, the way of his living, and his modesty attracted students from far and wide. His spiritual and intellectual qualities made him the leader of

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[14] H. P. Shastri, "Kabir," Indian Inheritance--Literature, Philosophy and Religion, ed. K. M. Munshi and R. R. Diwakar (Bombay: Bharatiya Vidya Bhavan), Sec. III, Chap. XV, p. 182.

[15] S. Radhakrishnan, Eastern Religions and Western Thought (New York: Oxford University Press, 1959), p. 35.

the society and, to seek his guidance, even the mighty kings went to him in a humble spirit. McKee writes:

> The teachers of these forest schools, or asramas, were hermits who had left the haunts of men and the vanity of life and had given themselves to meditation and to the study of reality, religion, and philosophy. Their lives were often marked by a spirit of humility, reverence, meditation, hospitality, and piety. No travelers, pilgrims, or seekers for truth were turned away from their doors. Simple living, deep thinking, and a willingness to assist those who came to them for guidance and help often marked their lives.[16]

Teacher-pupil Relationship.--The relation between the teacher and the student was that of father and son. The teacher was to infuse the great ideals into the personality of his student. It was not possible without intimate contact between them. Rai writes:

> In fact, the taught lived like the family member of his teacher. Some of the students (Shishyas) became so closely connected with their teachers (Guru) that they remained with them for their whole life and forgot their homes even.[17]

Teacher's Duties to His Student.--One of the most important duties of the teacher was to teach truth to the student. The highest truth was taught when the teacher was satisfied with the student's nobler qualities. All knowledge was divided into two parts: the Para Vidya (higher knowledge) and the Apara Vidya (lower knowledge). Knowledge

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[16]William John McKee, New Schools for Young India (Chapel Hill, N.C.: The University of North Carolina Press, 1930), p. 3.

[17]B. C. Rai, History of Indian Education (Lucknow: Kendra, 1965), p. 25.

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of physical matter was the lower knowledge, and knowledge of the Spirit by which Brahman could be known was the higher knowledge.

To the ancient Indian teachers the realization of the Self was essential, which depended upon contemplation and meditation, and not on great stores of information and facts gathered by the student during the period of his studies. One such example is that of Narad which reveals the supermundane attitude of the teachers:

> Narada states that he had studied subjects like the Rigveda, the Yajurveda, the Samaveda, the Atharva Veda as fourth, Itihasa-Purana as the fifth Veda, Grammar (called Vedanam Vedam, "the Veda of Vedas"), Biology (Bhuta-Vidya), Arithmetic (Rasi). . . . Said Narada: "These subjects, sir, have I studied. Therefore am I learned in the scripture (Mantravit), but not yet learned in the Atma (Atma-vit). Yet have I heard from such as are like you that he who knows that Atman vanquishes sorrow. I am in sorrow. Lead me then over, I pray, to the farther shore that lies beyond sorrows."[18]

Teacher's Farewell Address to Students.--Indian saints did not encourage withdrawal from life. They emphasized attainment of the higher life through life in the world. The next stage after the stage of the student--that of the householder--has been glorified in Indian literature. But after marriage one should not completely forget the religious life. The spirit of service and sacrifice is the main thing to provide continuity with the other stages of life. But Keay very aptly observes:

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[18]Mookerji, op. cit., p. xxxiii.

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> Owing, however, to the current philosophy which taught the unreality of this world of time, and that the highest wisdom was to seek release from the worldly fetters which held the soul in bondage, and that the highest knowledge was to become acquainted with the method by which release could be obtained, there was a tendency to despise the practical duties of life and the preparation for them. The idea of the four stages, or asramas, seems to have been formulated to try and check this tendency by inculcating the desirability of a student passing to the state of a householder before he became a forest hermit or wandering ascetic; but, many passed straight from the student life to the life of complete renunciation of the world, and the Upanishads show us how there was a tendency amongst the more earnest to despise the ordinary learning of the schools and preparation for this life in comparison with the higher philosophic knowledge which was concerned with the life beyond.[19]

A student who finished his studies had to leave the home of the teacher and go back to his parents. The teacher's last address to the student for his welfare contains the quintessence of the traditional Indian philosophy of education:

> Say what is true! Do thy duty! Do not neglect the study of the Veda! After presenting gifts to thy teacher, take care that the thread of thy race be not broken! Do not swerve from truth, from duty! Do not neglect your health! Do not neglect your worldly prosperity! Do not neglect the learning and teaching of the Veda!
>
> Do not neglect the (Sacrificial) works due to the Gods and Manes! Let thy mother be to thee like unto a God! Let thy father be to thee like unto a God! Let thy preceptor be to thee like unto a God! Let thy guest be to thee like unto a God! Whatever actions are blameless, those should be regarded, not others. Whatever good works have been performed by us, those should be observed by thee--not others.
>
> Thus, conduct thyself. This is my admonition. This is the teaching. This is the true purport (Upanishad)

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[19] F. E. Keay, Ancient Indian Education: An Inquiry into Its Origin, Development and Ideals (London: Oxford University Press, 1918), p. 171.

> of the Veda. This is the command. Thus you should observe. Thus should this be observed.[20]

India has not forgotten these injunctions even in the modern days. Though the system of higher education in India today is completely different from that of the ancient times, the Vice-Chancellor of the Banaras Hindu University still reads the Pali version of the Upanishadic exhortation on the Convocation day to the students:

> Etad attha Katha, etad attha mantana, etad attha Upanisa, etad attha sotavadhanam.
> This is the command. This is the teaching. This is the secret doctrine of the Veda. This is the instruction. Thus should one worship. Thus indeed should one worship.[21]

Before discussing the financial aspect of administering the asramas, a description of the location of the educational centers seems necessary.

The Location of Educational Institutions.--The house of the teacher was the center of education. Teachers often lived in forests. The forest offered them peace as well as the daily necessities. Basu expresses it in these words:

> . . . education in ancient India was esoteric; the school was the home of the teacher, a hermitage amid Sylvan surroundings away from the hubbub of town life, amidst silence and in a calm atmosphere, a place of

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[20]Mookerji, op. cit., pp. 99-100.

[21]S. Radhakrishnan (ed.), The Principal Upanishads (New York: Harper and Brothers, 1953), p. 539.

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> solitude, an ideal place for contemplation and meditation on Truth or Reality.[22]

It is difficult for others to understand the role that forests play in the life of an Indian. The whole of Indian civilization is based on them. "The forest entered into a close living relationship with their work and leisure, with their daily necessities and contemplations."[23]

India is a hot country. The cool shade of the trees, rivers and lakes, air and open sky are very comforting and give opportunity to pay homage to the unknown in solitude. They could not be satisfied in any other surroundings once they adopted the ideal of unity in the universe. Nakamura observed:

> Nearly every Indian religious thinker seeks to live in the bosom of nature, and there to have direct communion with the Absolute. He renounces the world, lives in the depths of the forest, sits under a tree or on a rock, and keeping himself aloof from all secular affairs, concentrates his thoughts on the quest for truth. . . . The main current of Indian civilization has been not in the cities, but in the woods. It has been the civilization of the tranquil life in the forest.[24]

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[22]Sobharani Basu, "Forest Universities of Ancient India," Education and Philosophy--The Yearbook of Education 1957, ed. George Z. F. Bereday and Joseph A. Lauwerys (New York: World Book Co., 1957), Sec. IV, Chap. I, p. 319.

[23]Rabindra Nath Tagore, Creative Unity (New York: The Macmillan Company, 1922), p. 45.

[24]Hajime Nakamura, Ways of Thinking of Eastern Peoples: India--China--Tibet--Japan (Honolulu, Hawaii: East-West Center Press, 1964), p. 163.

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Finances of the Asramas.--Their needs for the life of a student were very few. Students lived with the family of the teacher and were fed and taken care of by him. Teachers got gifts and grants from kings and wealthy people to support themselves. The life of the teacher and the student was simple and unpretentious. Education was free, but the pupil had to perform certain services for his teacher. Begging was one of them:

> It was the usual rule of the Brahmacharin to go about begging for his teacher. In the Chandogya (iv, 3, 5) while the householders . . . were being waited on at their meal, a religious student begged of them.[25]

The great teachers were rewarded for their wisdom in debates organized by kings. One such example is that of Yajnavalkya in the Brihadaranyaka Upanishad:

> 1. Janaka, (king) of Videha, sacrificed with a sacrifice at which many presents were distributed. Brahmans of the Kurupanchalas were gathered together there. In this Janaka of Videha there arose a desire to know which of these Brahmans was the most learned in scripture. He enclosed a thousand cows. To the horns of each ten padas (of gold) were bound.
>
> 2. He said to them: "Venerable Brahmans, let him of you who is the best Brahman drive away these cows."
>
> Those Brahmans durst not.
>
> Then Yajnavalkya said to his pupil: "Samasravas, my dear, drive them away."
>
> He drove them away.[26]

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[25]Mookerji, op. cit., p. 93.

[26]Hume, op. cit., p. 107.

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There is a dialogue between Janaka and Yajnavalkya in the Brihadaranyaka Upanishad from which it can be interpreted that in times of need the teachers went to the kings for some assistance:

> Janak, (king) of Videha, was seated. Yajnavalkya came up. To him he said: "Yajnavalkya, for what purpose have you come? Because you desire cattle or subtle disputations?"
> "Indeed, for both, your Majesty," he said. . . .[27]

Cows too were a great help and saved the forest dwellers from starvation. Good care was taken of them by the students, and the teacher kept an eye upon their multiplicity to save the asrama economy from hazards. There are instances when the students risked their lives to protect them. Tending the teacher's cows was one of the sacred duties of a student. In the Chandogya Upanishad, after accepting Satyakama Jabala as his student, Haridrumata Gautama (the teacher):

> Separated out four hundred lean, weak cows and said: "Follow these, my dear."
> As he was driving them on, he said: "I may not return without a thousand." So he lived away a number of years. . . .[28]

Buddhist Period

Buddhism began in the sixth century B.C. when the Lord Buddha started preaching that the cause of human misery is desire which must be overcome. It comes next to the Upanishadic period which has been described above.

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[27] Ibid., p. 127.

[28] Ibid., p. 218.

Buddhism has been considered as a refined form of Hinduism with almost no significant difference from the Upanishads. Buddhist monks, too, strove for the highest knowledge through austerities. The Vedas formed the nucleus of education in both systems. But the most remarkable change was that Buddhism opened its doors to all, whereas Brahmanic education did not admit the Sudras.

As regards the similarity, Max Muller gives a specific account:

> The Upanishads are to my mind the germs of Buddhism, while Buddhism is in many respects the doctrine of the Upanishads carried out to its last consequences, and, what is important, employed as the foundation of a new social system. In doctrine the highest goal of the Vedanta, the knowledge of the true Self, is no more than the Buddhist Samyaksambodhi; in practice the Sannyasin is the Bhikshu, the friar, only emancipated alike from the tedious discipline of the Brahmanic student, the duties of the Brahmanic householder, and the yoke of useless penances imposed on the Brahmanic dweller in the forest. The spiritual freedom of the Sannyasin becomes in Buddhism the common property of the Sangha, the Fraternity, and that Fraternity is open alike to the young and the old, to the Brahman and the Sudra, to the rich and the poor, to the wise and the foolish. In fact, there is no break between the India of the Veda and the India of the Tripitaka, but there is an historical continuity between the two, and the connecting link between extremes that seem widely separated must be sought in the Upanishads.[29]

The size of educational institutions increased during this period and the ruins of their magnificent universities can still be seen. These universities were destroyed by

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[29]F. Max Muller (ed.), The Sacred Books of the East, Vol. XV (Oxford, London: Clarendon Press, 1884), pp. li-lii.

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the Muslim invaders who came before the Mughals. N. N. Law writes:

> We have harrowing tales of old universities broken up, libraries looted and the votaries of indigenous learning, Hindu or Buddhist, murdered or driven away homeless.[30]

Muslim Period

Brahmanic and Buddhist systems of education were flourishing side by side when Mahmud of Ghazni invaded India in 1001 A.D. Though Muslim invasions had started during the eighth century, India was not subjugated until the year 1192, when Muhammad Ghori executed Prithviraj, the only powerful king in the north. Monier Williams has very aptly summarized the Muslim rule in India in the following passage:

> Muhammad's successors, after occupying Damascus for about one hundred years, fixed their capital at Baghdad in 750, and thence their power extended into Afghanistan. The Arabs, however, never obtained more than a temporary footing in India. Under the Khalif Walid I, in 711, Muhammad Kasim was sent at the head of an army into Sinde, but the Muslims were expelled in 750; and for two centuries and a half India was left unmolested by invaders from the west. About the year 950, when the power of the Arabs began to decline in Asia, hardy tribes of Tartars, known by the name of Turks (not the Ottoman tribe which afterwards gained a footing in Europe, but hordes from the Altai mountains), were employed by the Khalifs to infuse vigour into their effeminate armies. These tribes became Muhammadans, and gradually took the power into their own hands. In the province of Afghanistan, Sabaktagin, once a mere

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[30] N. N. Law, "Promotion of Learning in India During Muhammadan Rule," quoted in Bhagwan Dayal, The Development of Modern Indian Education (Bombay: Orient Longmans, Ltd., 1955), p. 1.

> Turkish slave, usurped the government. His son Mahmud founded an empire at Ghazni in Afghanistan, and made his first of thirteen incursions into India in the year 1000. During the thirteenth century the Mongol or Mogul hordes, under the celebrated Jangiz Khan, overthrew the Turkish or Tartar tribes; and in 1398 Timur, uniting Tartars and Mongols into one army, made his well-known invasion of India. After desolating the country he retired, but the sixth in descent from him, Baber (Babar), conquered Afghanistan, and thence invading India about 1526, founded the Mogul empire, which his grandson Akbar (son of Humayun) established on a firm basis in 1556; a very remarkable man, Shir Shah Sur, having previously usurped the empire of Hindustan, and raised it to great prosperity. The power of the Moguls, which rapidly increased under Akbar, Jahangir, and Shahjahan, until it culminated under Aurangzib, began to decline under Shah 'Alam (Bahadur Shah), Jahandar Shah, and Farrukh-siyar; and under Muhammad Shah, the fourth from Aurangzib, took place the Persian invasion of Afghanistan and thence of India, undertaken by Nadir Shah (A.D. 1738) to avenge on the Afghans their inroads into Persia.[31]

Education in the Muslim Period.--Muslim education was for the followers of Islam. Very great emphasis was laid on religion and worldly affairs. For Indians who for thousands of years had observed the tradition of seeking the highest realization of the Self, it was difficult to accept what was completely based on mundane life.

The Muslims destroyed all the great centers of Hindu learning and made the study of the Holy Quran compulsory. But these actions did not touch the Indian mind because it continued to worship the teacher who led an austere life and escaped from maya to realize the Self. Humayun Kabir

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[31]Monier Williams, Indian Wisdom or Examples of the Religious, Philosophical, and Ethical Doctrines of the Hindus (London: Wm. H. Allen and Co., 1875), pp. xix-xx.

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enumerates some of the principal reasons why the reign of the mighty Muslim rulers did not fundamentally change the Indian stream of thought:

> The appearance of Islam on the Indian scene did not lead to any marked change in the educational thought or practice of the country. Various reasons may be advanced to explain this fact. Education among the Muslims, like education in most other communities, started with a religious bias. Madrasas (schools of higher learning) were essentially schools of theology, with linguistic and philosophical studies occupying a subsidiary position. They aimed at stabilizing the body of belief and ensuring that the code of conduct conformed to these beliefs. As these were, at least in outward form, quite distinct from the religious beliefs and practices of the Hindus, the two systems of education flowed in parallel streams and did not interpenetrate except in the case of a few rare individuals. Those who followed the ancient modes of Indian learning rarely if ever took to the serious study of Islamic thought. Nor did Moslem scholars or students at various stages of education, with a few rare exceptions, pay any attention to the rich and complex heritage of ancient India.[32]

East India Company

The Muslim conquerors invaded India with the sword and the Quran but could not change the Indian stream of thought which was busy with the unperceived reality. But when Queen Elizabeth accepted the application of the trading corporation entitled "Governors and Company of London Merchants Trading to the East Indies" on December 31, 1600, a new era started. The company's growth can be noted from the following:

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[32]Humayun Kabir, Indian Philosophy of Education (Bombay: Asia Publishing House, 1961), p. 189.

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> The first factory was built at Surat, near the mouth of the Tapty, north of Bombay, in 1613. In 1661 the island of Bombay was ceded to the British by Portugal, as the marriage portion of the Infanta Catharine, on her marriage with Charles II, but its final possession was withheld for four years. It was handed over by Charles to the East India Company in 1669. Another factory was built on the Hooghly above Calcutta in 1636; Madras came into the Company's possession in 1640, and they purchased Calcutta itself in 1698. The battle of Plassy, from which dates the real foundation of the British empire, was fought June 23, 1757.[33]

The modern age in Indian education begins with the British. They refashioned the old thinking. By this time the Hindu centers of learning were all destroyed, and no great teachers were left to inspire the youth. Traditions had become burdensome and superfluous. Thus, with the advent of the British, starts a fresh era in Indian higher education. Nevertheless, some worshippers of the Indian way of life and education did not like the renaissance brought by the English educational system. Annie Besant was one of them:

> Such was Education in India under Indian Rule, whether Hindu, Buddhist or Muslim. When that great bird of prey, the East India Company, winged its way eastward and descended on her land, ravaging and destroying, filling itself fat with ill-gotten spoil, education naturally shared in the general ruin.[34]

Conclusion

The aim of ancient education was very lofty. It put great emphasis upon the understanding of God. The truly

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[33]Williams, op. cit., p. xx.

[34]Annie Besant, India Bond or Free? (London: G. P. Putnam's Sons, Ltd., 1926), p. 111.

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educated man was one who understood the nature of the Self. Students once accepted were treated with great love and care, and they were the torch-bearers of their teachers in the real sense.

Teachers were great personalities, and through their constant quest for something permanent, they have made India's cultural inheritance rich in the fields of philosophy, poetry, and religion. Their influence has not completely faded out, even after four thousand years. Even today the foreigner still gets the impression that "India seeks God as no other civilization has done."[35]

The ancient education was very good for character building and specialization in one subject, and that subject was God. On the whole, it still has more admirers than fault-finders.

The Muslim rule could not influence Indian education due to its orthodoxy. How the British changed the face of higher education in India is the subject of the next chapter.

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[35]H. N. Spalding, Civilization in East and West: An Introduction to the Study of Human Progress (London: Oxford University Press, 1939), p. 214.

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CHAPTER III

HISTORY OF HIGHER EDUCATION SINCE THE BRITISH

Christian missionaries were the first to show an interest in education and to start schools in India. But more important to them, than providing India with modern educational institutions, was the spread of Christianity. The first Portuguese who landed in India did not even pretend that they had come to India with any other purposes than "to seek Christians and spices."[1] Therefore, the educational historians of India discount their efforts in this direction and begin with the India Act of 1813 for modern Indian education.

In the previous chapter, pre-British education has been discussed which consisted of the Upanishadic, the Buddhist, and the Muslim educational periods. By the twelfth century A.D. Indian education had been destroyed by the numerous invasions of the Muslims. When the British occupied India, accordingly, the country was suffering from

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[1]Quoted in Ram Gopal, British Rule in India: An Assessment (New York: Asia Publishing House, 1963), p. 210.

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complete chaos. Unfortunately, in the beginning the East India Company also was not concerned with the promotion of education in India. The zealous efforts of missionaries and other scholars, however, compelled the Parliament of England to add a clause in the charter of the East India Company in 1813 which authorized the company to spend not less than one lakh of rupees on the education of the natives of India. Afterward a long controversy rose about the medium of instruction which resulted in the triumph of the English language in 1835. From 1835 to 1857 there is little to narrate regarding the development of collegiate education. But, when in 1857 the first three universities were opened at Calcutta, Bombay, and Madras on the pattern of the London University, then ensued a new era in the higher education of India.

This chapter examines the efforts of the East India Company and the British government to introduce modern higher education in India. To understand the present development in higher education, one must first become acquainted with the historical events that have provided the pattern and resources as well.

Early Attempts of the East India Company

In the beginning the East India Company, as has been indicated, did not pay any attention to the education of the country. It was primarily a business concern, so the making of profit was its watchword.

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Toward the end of the eighteenth century, the company, through the efforts of several Englishmen, was forced to concern itself with the education of Indians. Charles Grant was one of these. In his treatise of 1792, entitled Observations on the State of Society Among the Asiatic Subjects of Great Britain, Particularly with Respect to Morals, and on the Means of Improving It, he described the condition of the people of India in these words:

> Upon the whole we cannot help recognizing in the people of Hindoostan, a race of men lamentably degenerate and base, retaining but a feeble sense of moral obligation. . . .[2]

Grant's description has been considered as full of exaggeration, but his motive deserves admiration because he wanted to attract the attention of the British public toward the needs of the inhabitants of India for education.

The First Contribution to Higher Education

A college for Mohammedans was established in 1781, named the Calcutta Madrissa, by Warren Hastings, the Governor-General of India. It was the first educational institution to be founded in India by an officer of the East India Company. The idea of establishing a college did not originate with him. It was the request of the leading

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[2]Quoted in Bhagwan Dayal, The Development of Modern Indian Education (Bombay: Orient Longmans, Ltd., 1955), p. 186.

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Muslims and an outstanding maulvi that he responded to and implemented. O'Malley gives some of the details:

> The arrival in Calcutta, in 1780, of one Majid-ud-Din, a maulvi renowned for piety and scholarship, and the solicitation on his and their behalf of a number of leading Muslims, gave Warren Hastings the opportunity of showing the new government in the guise of a patron of learning. The establishment of the maulvi in suitable quarters, with forty stipendiary students and a sweeper on RS.3 a month, begins the history of educational action in India as a concern of the British government.[3]

As regards the financing and object of the Madrissa, Jagdeesh Prasad Vyas summarizes it as follows:

> Mr. Hastings provided a building at his own expense and at whose recommendation the government assigned lands of the estimated value of 29,000 rupees per annum for the founder was to produce from this seminary well qualified officers for the courts of justice. It was never attained to the extent of his expectations. . . . A sum of nearly a lakh or a half was given for the erection of an edifice. . . .[4]

Establishment of the Benares Sanskrit College

In 1791, Jonathan Duncan founded the Benares Sanskrit College which was supported by the Earl of Cornwallis. The reasons for its establishment, as given by Duncan, were:

> Two important advantages seemed derivable from such an establishment, the first to the British name and

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[3]J. R. Cunningham, "Education," Modern India and the West, ed. L. S. S. O'Malley (London: Oxford University Press, 1941), p. 140.

[4]Jagdeesh Prasad Vyas, "Central Government's Role in Indian Education 1813-1961" (unpublished Ph.D. dissertation, University of Saugar, 1962), p. 56.

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> nation in its tendency towards endearing our government to the native Hindus. . . . The second principal advantage that may be derived from this institution will be felt . . . by preserving and disseminating a knowledge of the Hindu law, and proving a nursery of future doctors and expounders thereof, to assist European judges in the due, regular, and uniform administration of its genuine letter and spirit to the body of the people.[5]

The Madrissa and the Sanskrit College were not successful. Both were mismanaged and followed the traditional lines of teaching. The company did not want to interfere in the social, cultural, and religious life of the country, and so Arabic and Sanskrit continued in the above institutions.

The Fort William College

In 1800, Lord Wellesley started the Fort William College to provide instruction in Hindu and Muslim laws, Indian history, Arabic, Persian, Sanskrit, and Modern Indian languages. It provided instruction only for the civil servants of the company, so educational historians omit any consideration of it in their discussion of higher education though its staff consisted of such distinguished scholars as Dr. Gilchrist, Dr. Colebrooke, Dr. Carey, and Pandit Ishwar Chandra Vidyasagar.

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[5]Quoted in Syed Nurullah and J. P. Naik, A History of Education in India (During the British Period) (Bombay: Macmillan and Co., Ltd., 1951), pp. 58-59.

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Reasons for the East India Company's Indifference to Education

Why the company did not recognize the need for education in India can be summarized under two heads:

1. Indigenous education was considered standard and adequate.
2. Fear of losing the country as a result of the advancement of education.

Indigenous Education Considered Standard and Adequate

Certain documents which deal with the Madras and Bombay Committees of Public Instruction of that time contain passages of the following type:

> . . . there is hardly a village, great or small, throughout our territories, in which there is not at least one school, and in larger villages more, many in every town, and in large cities in every division, where young natives are taught reading, writing, and arithmetic upon a system so economical from a handful or two of grain to perhaps a rupee per month to the schoolmaster, according to the ability of the parents, and at the same time so simple and effectual, that there is hardly a cultivator or petty dealer who is not competent to keep his own accounts with a degree of accuracy, in my opinion beyond what we meet with amongst the lower orders in our own country whilst the more splendid dealers and bankers keep their books with a degree of ease, conciseness and clearness I rather think fully equal to those of any British merchant.[6]

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[6]A. N. Basu, Indian Education in Parliamentary Papers, Part I (1832) (Bombay: Asia Publishing House, 1952), p. 10.

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Fear of Losing the Country with Advancement of Education

The missionaries, through the efforts of Wilberforce and Charles Grant, were always trying to compel the company to send teachers and missionaries to India to change things there. Their endeavors gathered momentum at the time of the renewal of the charter of the East India Company in 1793. (The charter of the company had to be renewed after every twenty years.) Charles Grant through his friend Wilberforce tried to have some new clauses inserted in the charter to make the company responsible for education, but he failed in this attempt. What the company was really afraid of has been clearly expressed by J. C. Marshman:

> For a considerable time after the British Government had been established in India, there was great opposition to any system of instruction for the natives. The feelings of the public authorities in this country were first tested upon the subject in the year 1792, when Mr. Wilberforce proposed to add two clauses to the Charter Act of that year, for sending out schoolmasters to India; this encountered the greatest opposition in the Court of Proprietors, and it was found necessary to withdraw the clauses. That proposal gave rise to a very memorable debate, in which, for the first time, the views of the Court of Directors upon the subject of education, after we had obtained possession of the country, were developed. On that occasion, one of the Directors stated that we had just lost America from our folly, in having allowed the establishment of schools and colleges, and that it would not do for us to repeat the same act of folly in regard to India; and that if the natives required anything in the way of education, they must come to England for it. For twenty years after that period, down to the year 1813, the same feeling of opposition to the education of the natives

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> continued to prevail among the ruling authorities in this country.[7]

The Charter of 1813

The charter of the East India Company again came for renewal in 1813. That year is very important in the history of Indian education because in 1813 the British Parliament first authorized the company to spend money on education.

By Act 53 of King George III, the following clause was added to the Charter of 1813:

> It shall be lawful for the Governor-General in Council, that out of any surplus which may remain of the rents, revenues and profits arising from the said territorial acquisitions after defraying the expenses of the military, civil and commercial establishments and paying the interest of the debt, a sum of not less than one lac of rupees in each year shall be set apart and applied to 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. . . .[8]

Education became the duty of the company from that time on and thus was laid the foundation of the modern Indian educational system. But the spending of one lakh of rupees on education was still conditional because it depended upon the attainment of surplus revenues. Moreover,

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[7]Quoted in B. D. Basu, History of Education in India under the Rule of the East India Company (Calcutta: Modern Review Office, 1922), pp. 5-6.

[8]Vyas, op. cit., pp. 69-70.

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the authorities were unwilling to carry out the order of the Parliament sincerely.

When it was realized a decade later that almost nothing had been done for education since 1813, the Governor-General adopted a resolution on July 17, 1923:

> . . . there should be constituted a general committee of public instruction, for the purpose of ascertaining the state of public education, and of the public institutions designed for its promotion, and of considering, and from time to time submitting to government the suggestion of such measures as it may appear expedient to adopt, with a view to the better instruction of the people. . . .[9]

The directors of the company were so unwilling to spend money on education of the Indian people that even after expenditure of the money for this purpose was authorized by the British Parliament and a general committee of public instruction was formed, no one claimed the arrears:

> Mr. C. H. Cameron, in his examination before the Select Committee of the House of Lords on the government of Indian Territories in 1853, was asked by Lord Monteagle of Brandon on July 7, 1853:
> "When you were at the head of the Council of Public Instruction, did you ever endeavor to obtain the payment of any portion of the arrears of that lakh of rupees which had been left unpaid for so many years?"
> His answer was, "No, we never did."[10]

The Charter of 1833

The Charter of 1813 gave freedom to the missionaries, so they increased their activities in the field of education. The company had recognized the importance of

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[9]Quoted in Gopal, op. cit., p. 216.

[10]Quoted in Basu, op. cit., p. 37.

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education, so occasionally their institutions received grants also. The other parties or individuals also came forward and the period between 1813 and 1833 saw the rise of several institutions for higher learning. A glimpse of the colleges started during this period can be had from the following account:

> . . . the Hindu College [was] established in 1817 through the joint efforts of Raja Ram Mohan Roy and David Hare. In 1818, three missionaries, Carey, Marshman and Ward started a Mission College at Serampore which received a Charter from the King of Denmark nine years later empowering it to confer degrees. In 1820, the Bishop's College was established at Sibpur, a suburb of Calcutta by the Church of England Mission. In 1830, Alexander Duff started the General Assembly's Institution which soon grew into a college.[11]

The fact which supported the spread of education in the act is notable:

> No Native of the said Territories, nor any natural born Subject of His Majesty resident therein, shall, by reason only of his religion, place of birth, descent, color, or any of them be disabled from holding any Place, Office, or Employment under the said Company.[12]

As the opportunity for employment was made available to everyone without prejudice, the triumph of the English language became certain. It seems necessary, however, to discuss the language controversy which persisted for many years between the two groups known as Oriental and Occidental over the preferred medium of instruction. With the

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[11]Dayal, op. cit., pp. 36-37.

[12]Quoted in Syed Mahmood, A History of English Education in India: 1781-1873 (Aligarh: M.A.O. College, 1895), p. 48.

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passing of the Charter Act of 1813, which authorized the company to spend one lakh of rupees annually for the revival and improvement of literature and the encouragement of the learned natives of India, a great controversy began as to which methods should be employed to achieve the above mentioned end. The Orientalists favored the education of the Indian people through their classical languages. The Occidentalists advocated the medium of English for progress.

The greatest defender of English education was Raja Ram Mohan Roy, widely known as the Father of Modern India. Excerpts from his speech and his letter of December 11, 1823, to Lord Amherst would represent the thinking of the Occidentalist party:

> . . . I allude to that wise, that benevolent, that noble clause which enacts that no native of our Indian Empire shall, by reason of his color, his descent, or his religion, be incapable of holding office. . . . I must say that, to the last day of my life, I shall be proud of having been one of those who assisted in the framing of the Bill which contains that clause. . . .[13]

He was greatly disappointed by the company's decision to start a Sanskrit College at Calcutta and submitted a memorial to the Governor-General on December 11, 1823:

> . . . We now find that the government are establishing a Sanskrit School under Hindoo Pundits to impart such knowledge as is already current in India. . . . The Sanskrit System of education would be best calculated to keep this country in darkness. But as the improvement of the native population is the object of the government, it will consequently promote a more liberal and enlightened system of instruction,

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[13]Quoted in Nurullah, op. cit., p. 196.

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> embracing mathematics, natural philosophy, chemistry and anatomy, with other useful sciences which may be accomplished with the sum proposed by employing a few gentlemen of talent and learning educated in Europe, and providing a college furnished with the necessary books, instruments and other apparatus.[14]

The older officials of the company formed the Orientalist group. H. T. Prinsep was the leader of the party and secretary to the government of Bengal in the Education Department. The fact that the Occidentalists were gaining the upper hand was very frustrating to him, as is illustrated by the following quotation:

> I saw in that Resolution, said Mr. Prinsep, the announcement that the time was come for an important change, and I dreaded and still dread the effect of the disposition . . . to disparage and deprecate all knowledge save that in which they have themselves been brought up. . . . It is thought to be kindness to cram the a, b, c, of the West down the throats of Eastern adults, even though it ends in their never reaching beyond the reading and spelling point in the language taught. . . .[15]

But the arrival of Lord Macaulay on the scene tipped the balance in favor of the Anglicists.

Macaulay's Minute, 1835

Macaulay came to India as a Law Member of the Council of Governor-General on June 10, 1834. He was soon appointed as the President of the general Committee of Public

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[14]Quoted in Gopal, op. cit., pp. 214-15.

[15]Minute, August 15, 1834, quoted in B. K. Boman-Behram, Educational Controversies in India: The Cultural Conquest of India under British Imperialism (Bombay: Taraporewala, 1943), pp. 265-66.

Instruction by Lord William Bentinck. He was asked to give his advice on the meaning of Section 43 of the Charter Act of 1813 and about the method of spending one lakh of rupees sanctioned by the Parliament. This gave him an opportunity to write his decisive and justly famous Minute of February 2, 1835, which is quoted in length below:

> It does not appear to me that the Act of Parliament can by any art of construction be made to bear the meaning which has been assigned to it. It contains nothing about the particular languages or sciences which are to be studied. . . . It is argued, or rather taken for granted, that by literature the Parliament can have meant only Arabic and Sanskrit literature. . . . This does not appear to be a very satisfactory interpretation. . . .
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> All parties seem to be agreed on one point, that the dialects commonly spoken among the natives of this part of India contain neither literary nor scientific information, and are moreover so poor and rude . . . that it will not be easy to translate any valuable work into them. It seems to be admitted on all sides that the intellectual improvement . . . can at present be effected only by means of some language not vernacular amongst them. What then shall that language be? One half of the Committee maintain that it should be English. The other half strongly recommend the Arabic and Sanskrit. The whole question seems to me to be which language is the best worth knowing? I have no knowledge of either Sanskrit or Arabic. . . . I have never found one . . . who could deny that a single shelf of a good European library was worth the whole native literature of India and Arabia. . . .
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> How then stands the case? We have to educate a people who cannot at present be educated by means of their mother tongue. We must teach them some foreign language. The claims of our own language it is hardly necessary to recapitulate. . . . Whether we look at the intrinsic value of our literature or at the particular situation of this country we shall see the strongest reason to think that of all foreign tongues the English tongue is that which would be the most useful to our native subjects. . . .
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> To sum up what I have said. I think it clear that we are not fettered by any pledge expressed or implied; that we are free to employ our funds as we choose; that we ought to employ them in teaching what is best worth

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> knowing; that English is better worth knowing than Sanskrit or Arabic; that the natives are desirous to be taught English, and are not desirous to be taught Sanskrit or Arabic; that neither as the languages of law nor as the languages of religion have the Sanskrit and Arabic any peculiar claim to our encouragement; that it is possible to make natives of this country thoroughly good English scholars, and that to this end our efforts ought to be directed.[16]

The Governor-General was not at all impressed by the views of the Orientalists so he paid no attention to their opposition to Macaulay's Minute. He promptly approved the minute and issued a Proclamation on March 7, 1835.

The attitude of the Governor-General was not at all liked by the Orientalists and Prinsep wrote in his diary:

> . . . When the subject came under consideration in Council, there was a very hot argument between myself and Mr. Macaulay. The issue was the resolution that was published not abolishing existing colleges, but requiring them to teach English as well as native literature and making the former obligatory, also giving some encouragement to vernacular studies, but declaring that all government pecuniary aid in future should be given exclusively to promote the study of European Science through the medium of the English language. Lord W. Bentinck would not even allow my memorandum to be placed on record. . . .[17]

Presentation of some crucial passages from that Proclamation also seems to be necessary here because it suppressed the oriental learning altogether:

1. His Lordship in Council is of opinion that the great object of the British government ought to be the promotion of European literature and science among

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[16]Ramsay Muir, The Making of British India: 1756-1858 (London: University of Manchester Press, 1923), pp. 298-301.

[17]Quoted in Nurullah, op. cit., p. 138.

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the natives of India; and that all the funds appropriated for the purposes of education would be best employed on English education alone.

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3. It has come to the knowledge of the Governor-General in Council that a large sum has been expended by the Committee on the printing of Oriental works; his Lordship in Council directs that no portion of the funds shall hereafter be so employed.

4. His Lordship in Council directs that all the funds which these reforms will leave at the disposal of the Committee be henceforth employed in imparting to the native population a knowledge of English literature and science, through the medium of the English language. . . .[18]

However, the controversy did not end with this resolution. It was Lord Auckland, the successor of Lord William Bentinck, who ended the conflict by assigning some additional funds to satisfy both parties. On the whole, he gave very little to the Classicists and the spread of English was reaffirmed.

Thus, the English language came to the forefront and with it came the modern institutions. The Proclamation of Lord Hardinge in 1844 gave preference to men in public employment who had received English education. It linked English education with government service and thus helped in its promotion beyond all bounds. But the epoch-making event in the history of Indian higher education had yet to take place. It occurred at the time when the charter of the East India Company came up for renewal in 1853.

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[18]Quoted in Basu, op. cit., pp. 88-89.

Education Despatch of 1854

The Despatch of Sir Charles Wood in 1854 outlined the complete and systematic organization of Indian education. The establishment of the universities resulted from it. By this time the authorities felt completely assured that educating the people of India would in no way endanger their hold over the country. On the contrary, the educated Indians would actually prove a source of strength to the British government. With this object the despatch was outlined by Sir Charles Wood who was then President of the Board of Control of the East India Company.

The despatch, dated July 19, 1854, consists of 100 paragraphs and was addressed by the Court of Directors of the East India Company to the Governor-General of India. Two significant paragraphs relevant to this study are as follows:

> 2. Among many subjects of importance, none can have a stronger claim to our attention than that of Education. It is one of our most sacred duties to be the means, as far as in us lies, of conferring upon the natives of India those vast moral and material blessings which flow from the general diffusion of useful knowledge. . . .
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> . . . . . .
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> 24. Some years ago, we declined . . . to a proposal . . . for the institution of an university in Calcutta. The rapid spread of a liberal education . . . the high attainments shown by the native candidates . . . have led us to the conclusion that

> the time has now arrived for the establishment of universities in India. . . .[19]

The despatch suggested many things, but what seems most significant to the writer is that it recommended the establishment of universities in the three presidency towns, that is, Calcutta, Bombay, and Madras.

The despatch also recommended that the Indian universities should be designed according to the pattern of London University.

The principles laid down for the universities at that time were reaffirmed in 1859 after the Great Mutiny of 1857 when the East India Company was abolished and administration of the country went directly to the Crown. Indian universities are still following the same pattern. Therefore, it becomes essential here to examine briefly the pattern of London University which provided the model for the Indian universities.

London University

Some of the important facts regarding London University can be summarized as follows:

1. The University of London was opened in 1828 without a charter.
2. The University of London was vested with power to examine and confer degrees on certified students from University and King's Colleges and other

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[19]Roper Lethbridge, High Education in India: A Plea for the State Colleges (London: Wm. H. Allen and Co., 1882), pp. 6, 7, and 20.

institutions. Thus it became known as the Examining Body of students from numerous schools privileged to grant certificates of attendance.

3. The charter of 1858 abolished the exclusive connection of the University with the affiliated institutions and so it opened its degrees to all males able to pass its examinations. It required evidence of attendance for medical degrees.

4. In response to the complaints that a university should not only examine and confer degrees, but also teach and advance research, the government appointed a commission which reported that one university could do both the jobs of teaching and examining.

5. The highest governing and executive body is the senate, consisting of 56 members, inclusive of the Chancellor. Within the senate are three committees from whom it receives reports to decide upon the matters within the province of the committees.[20]

The British government founded three universities in India at Calcutta, Bombay, and Madras. The Indian Universities Act of 1857 states:

> . . . it has been determined to establish the university for the purpose of ascertaining by means of examination the persons who have acquired proficiency in different branches of Literature, Science and Art, and of rewarding them by academical degrees as evidence of their respective attainments. The Acts went on to state that except by special orders of the Senate no person shall be admitted as a candidate for a degree unless he shall present to the university a certificate from an institution authorized in that behalf by the Governor-General or Governor in Council to the effect that he has completed the course of instruction prescribed by the university in the bylaws to be made by them under the power in that behalf given by the Acts. It is observed from the text of these Acts that the Universities in India were constituted on the general plan of the University of London, that they were purely examining bodies and that institutions affiliated to

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[20]George Edwin Maclean, Studies in Higher Education in England and Scotland, Bulletin 1917, No. 16 (Washington, D.C.: Bureau of Education, 1917), pp. 67-70.

> them were only such as were approved by the Governor-General in Council in the case of the Calcutta University or by the Governor in Council in the case of the Universities of Bombay and Madras. The power of affiliating colleges to a university vested not in the universities themselves but in government. The Acts of 1882 and 1887 constituting the Universities of the Punjab and Allahabad respectively followed the lines of the Acts of 1857 in making provision for the university being only an examining corporation, the power of affiliating colleges vesting in government.[21]

The above description shows that all the teaching was done by the affiliated colleges, and the university was simply an administrative body to conduct examinations and award degrees. In the beginning, no doubt, it facilitated higher education but soon after people in India as in London started complaining that a purely examining and affiliating university was inadequate to provide an atmosphere of learning and maintain the standards of university life. To what extent the London University shocked the people of England can be seen in the poetic description of Thwing:

> The comparison of the University of London with Oxford and Cambridge presents a contrast almost as sharp as the contrast between the violet-crowned cities on the Isis and Cam and the Babylonian town on the Thames. The University in the metropolis has little or none of academic atmospheres or associations. It has no noiseless and shadowy quadrangles of velvety turf made soft and fine by seven hundred years of cropping.
>
> Its towers are not crowned with either time or ivy. Its common rooms play an insignificant part in academic fellowship. Its chapels have small relation to kings or to Christ Church Cathedral. Neither prestige nor tradition rests upon it with a hand at once as loving as life and as heavy as death. The Middle Ages have

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[21] R. Littlehailes (ed.), Progress of Education in India: 1922-27, Ninth Quinquennial Review, Vol. I (Calcutta: Government of India, 1929), p. 52.

> flung over it no spell. Unreasoned and unreasonable beliefs have not troubled its students, nor have artificial or arbitrary discriminations proved determinative. What Oxford and Cambridge count as of primary worth . . . London regards as secondary. And what London might regard as of first significance, the ancient foundations interpret as of less worth. . . .[22]

To the Hindu mind, too, higher education was something to be carried on in secluded places under the wise guidance of an ascetic sitting by the bank of the Ganges, "watching the phantasmagoria of existence with indifference."[23] It can easily be seen how far these examining universities fell short of an ideal so lofty.

But the question arises, why did the rulers take the University of London to be the model for the Indian universities? The reasons given for this decision can be summed up in the following points:

1. It was going to cost very little.
2. It enabled all the existing collegiate institutions to be incorporated into the same scheme and provided an impartial mode of examination.
3. It not only gave freedom to the mission colleges to carry on their work but made it possible to help them with public funds.[24]

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[22]C. F. Thwing, Universities of the World (New York: Macmillan, 1911), pp. 32-33.

[23]Commission on Christian Higher Education in India, Report of the Commission: an Enquiry into the Place of the Christian College in Modern India (London: Oxford University Press, 1931), p. 51.

[24]Arthur P. Newton, The Universities and Educational Systems of the British Empire (New York: Henry Holt and Co., 1924), p. 34.

4. It met the immediate need better than any other system could have done.

5. Most colleges were not ready to assume responsibility for freedom of teaching, hence a uniform system of examinations was necessary to preserve standards.

6. The Indian universities were founded in the year of the Mutiny so it was wise for the government not to undertake a program involving great expenditure.[25]

Commission of 1882

The Despatch of 1854 had promised the withdrawal of the government from the field of higher education but, in fact, the government kept on financing higher education and due attention was not paid to primary education. So the missionaries started criticizing the policy of the government and made the enquiry necessary.

Lord Rippon appointed the commission on February 3, 1882, and Sir William Hunter was appointed as its President. This commission is known as the "Hunter Commission."

The commission was mainly to examine the state of primary education and had to report whether or not the government had paid greater attention to higher and secondary education at the cost of primary education.

The commission enquired into the condition of primary education but instead of suggesting that grants to higher education should be curtailed, it recommended their enlargement to assure its improvement.

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[25]Report of the Calcutta University Commission, Vol. I, quoted in Nurullah, op. cit., p. 276.

Since this thesis is concerned only with higher education, the selected recommendations of the commission regarding higher education are given below:

1. The grant-in aid to be given to a college should be determined by the strength of the staff, the expenditure on its maintenance, the efficiency of the institution, and the wants of the locality.

2. If necessary, special grants should be given to colleges for the supply and renewal of buildings, furniture, libraries, and other apparatus of instruction.

3. A larger number of Indian graduates who have also graduated in European universities should be employed in government colleges. . . .[26]

As is obvious, the recommendations of the commission were favorable to collegiate education so more and more private colleges were established. The growth in the number of colleges after 1882 has been summarized by Nurullah as follows:

> In 1882 the total number of colleges affiliated to Indian universities was 68 only. . . . In the next decade, 1882-91, sixty-one new colleges were affiliated. . . . In the decade 1892-1902, fifty more colleges were affiliated. . . . In 1901-02, therefore, the total number of Arts colleges affiliated to Indian universities was 179. . . .[27]

Indian Universities Commission (1902)

Three universities were opened in 1857, namely, Calcutta, Bombay, and Madras, on the model of the London

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[26]Quoted in B. P. Johri and P. D. Pathak, An Outline of Indian Education (Agra: Vinod Pustak Mandir, 1963), p. 156.

[27]Quoted in Nurullah, op. cit., p. 285.

University. The Acts of 1882 and 1887 opened two more universities--the Punjab and the Allahabad. The Punjab University was different from the previous universities as can be noted from the Quinquennial Review of the Progress of Education in India, 1897-1902:

1. It has a Faculty of Oriental Learning, and confers the degrees of Bachelor, Master, and Doctor of Oriental Learning . . . through the medium not of English but of Urdu.

2. It maintains an Oriental College and a Law College. . . .[28]

About the University of Allahabad which opened in 1887, the following extract from the Quinquennial Review of the Progress of Education in India, 1897-1902 is worth noticing:

> . . . It was felt that Calcutta was too far distant, and that the regulations of that university were not altogether suitable to the development of higher education in Northern India. . . . An Act was accordingly passed in the Council of the Governor-General in the year 1887, incorporating the University of Allahabad. The local government carefully considered the exact form the University should take, and in especial whether in addition to prescribing courses and conducting examinations it should maintain a staff of professors . . . after the pattern of the Universities of Germany. While recognizing the great value of a University of this type the lieutenant-governor considered that . . . the University should confine its operations to the direction of the methods and aims of instruction. . . . The Act imposes no limitations, . . . but hitherto Allahabad has conformed to the practice of the three original Universities. . . .[29]

In 1899 Lord Curzon came to India as Viceroy. He gave preference to higher education and a part of his speech

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[28] Ibid., p. 277.

[29] Ibid., p. 278.

at the Simla Conference in 1901 gives reasons for the appointment of the commission on January 27, 1902:

> . . . Here the University . . . is a body that controls courses of study and sets examination papers to the pupils of affiliated Colleges. . . . The affiliated Colleges of the Calcutta University are scattered in regions as remote as Burma and Ceylon. Then look at the Colleges. They are not residential institutions, with a history, a tradition, a genius loci, a tutorial staff, of their own. They are for the most part collections of lecture-rooms, and classrooms, and laboratories. . . .[30]

The purpose of the commission was not to change the system of the universities. It simply made suggestions to improve and strengthen the existing system. The commission submitted its report on June 9, 1902 to the government with some of the following recommendations:

1. New universities should not be established.
2. Existing universities should be reorganized as teaching bodies.
3. While under-graduate work should be left to affiliated colleges, provision for advanced courses of study should be made in universities.
4. No private student should be admitted to the Intermediate Examination, or to the examination for the degree of B.A. or B.Sc. unless by a special order of the Senate. . . .[31]

Though many criticisms have been made of its recommendations, this commission at least, for the first time, suggested direct teaching in the Indian universities.

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[30] Ibid., p. 459.

[31] Quoted in Johri, op. cit., pp. 175-76.

Indian Universities Act, 1904

On the basis of the recommendations of the commission, Lord Curzon framed an educational act on March 11, 1904 which was passed on March 21, 1904 and became a law. The provisions of the act are summarized by Zellner as follows:

1. The functions of the University are enlarged.
2. The University Senates are cut down to manageable size. . . .
3. It increased the number of fellows to be elected. . . .
4. Syndicates were given statutory recognition and University teachers on syndicates were given adequate representation.
5. Stricter conditions were provided for affiliating colleges to the University, including inspection.
6. The government was vested with powers regarding the regulations framed by the University Senate.
7. The Governor-General in Council was empowered to define the territorial limits of the Universities.[32]

The Indian Universities Act was violently opposed. People looked at the act with suspicion because it seemed to them that the government was going to control the universities directly.

The fear that government wanted to control by creating a majority of Europeans in the university senates was to only a limited extent true, as can be seen in Table 1.

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[32]Aubrey Albert Zellner, Education in India: A Survey of the Lower Ganges Valley in Modern Times (New York: Bookman Associates, 1951), pp. 109-10.

TABLE 1

NUMBER OF EUROPEAN AND INDIAN SENATE MEMBERS IN UNIVERSITIES

Universities	No. of Fellows Authorized		Totals
	European	Indian	
1. Calcutta	41	43	84
2. Bombay	41	59	100
3. Madras	36	34	70
4. Punjab	35	40	75
5. Allahabad	39	36	75

Source: Syed Nurullah and J. P. Naik, A History of Education in India (During the British Period) (Bombay: Macmillan and Co., Ltd., 1951), p. 470.

What can unquestionably be credited to the act, however, is the fact that the universities were authorized to provide teaching from now onward. It was Sir Ashutosh Mookerjee who started utilizing this provision of the act. But no significant progress could be made in this direction because the tradition of centralized examining was still very strong.

The number of affiliated colleges also decreased because the conditions of affiliation and periodical inspection were more strict now, so the weaker colleges were struck off the list.

On the whole, however, the act of 1904 could not be judged a success because conflicts were going on which were due to suspicion of the government's intention on the part of the Indian public.

Educational Policy of 1913

The King-Emperor George V visited India in 1912. In the Darbar (Darbar is an open court held at the consent of a sovereign for diplomatic or social purposes) which was organized at Delhi, the Calcutta University presented an address to him on January 6, 1912. The attitude of the government can be seen in his reply to the address:

> It is my wish that there may be spread over the land a network of schools and colleges, from which will go forth loyal and manly and useful citizens. . . . It is through education that my wish will be fulfilled, and the cause of education in India will ever be very close to my heart.[33]

This expression of the King-Emperor compelled the government to reformulate its policy. The main recommendations regarding higher education made by the "Government Resolution on Educational Policy," which was published on January 21, 1913, were as follows:

1. Universities have done good work under conditions of difficulty, but as the condition of university education is not satisfactory, they need reform.

2. India still needs affiliating university and that day is far when she can dispense with this type of university.

3. At present there are five universities and 185 colleges. They are not sufficient to meet the needs of the country. Hence, the number of universities should be increased and one university should be established in each of the leading provinces.

4. Teaching and residential universities should be established. . . .

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[33]Quoted in Zellner, op. cit., p. 122.

5. To free the universities for higher work, Provincial Governments and Native States should be authorized to grant recognition to high schools.

6. Universities should create an atmosphere from which students should imbibe good social, moral, and intellectual influence.

7. Colleges which have attracted students from distant places should be developed into universities. . . .[34]

The above quotation shows that the government was in favor of opening more universities. Previously, the growing demand for higher education was met by creating more colleges and by expanding their enrollment. The number of affiliated colleges in 1917 is given in Table 2 which indicates that they were becoming burdensome to the universities.

TABLE 2

NUMBER OF AFFILIATED COLLEGES AND THEIR ENROLLMENT IN 1917

University	Colleges	Students
Calcutta	58	28,618
Bombay	17	8,001
Madras	53	10,216
Punjab	24	6,558
Allahabad	33	7,807
Totals	185	61,200

Source: Syed Nurullah and J. P. Naik, A History of Education in India (During the British Period) (Bombay: Macmillan and Co., Ltd., 1951), p. 505.

[34]Quoted in Johri, op. cit., pp. 197-98.

Calcutta University Commission, 1917

The Government of India's Resolution on Educational Policy of 1913 made many recommendations to improve and expand higher education, but when the First World War broke out in 1914 all innovations were suspended for the time being.

Lord Chelmsford, the Viceroy, announced the creation of the Calcutta University Commission in 1917. Sir Michael Sadler, the Vice-Chancellor of Leeds University, was appointed as its chairman. The purpose of the commission was as follows:

> . . . to inquire into the working of the present organization of the University of Calcutta and its affiliated colleges, the standards, the examinations, . . . to examine the . . . constitution of the University and make such suggestions as may be necessary for their modifications. . . .[35]

The commission submitted its report in March, 1919. This very comprehensive report is regarded as a classic. Some of its major suggestions for higher education are quoted below:

1. Immediate establishment of a unitary teaching university at Dacca is necessary.
2. The teaching resources of the Calcutta city should be so organized as to create a teaching university.
3. Mofussil colleges should be developed in such a way as to make the gradual rise of new university centres possible. . . .

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[35]Quoted in Zellner, op. cit., p. 142.

4. Government control over universities should be less rigid. . . .

5. In the place of Senate and Syndicate, there should be Court and Executive Council.

6. Provision should be made for imparting instruction in engineering, education, medicine, law, agriculture and technological courses. . . .

7. . . . Muslim education should be encouraged. . . .[36]

The commission's attentions were confined to the Calcutta University, but its recommendations were relevant and of great value to the entire system of higher education throughout India.

Since the terms "examining," "affiliating," "residential," "teaching," and "unitary" are going to be used again and again in this thesis, it seems necessary to present some of their distinctive characteristics.

Examining University

Its main function is to examine candidates for degrees. It does not concern itself with the teaching which the students have received prior to examination nor with their residence and discipline.

Affiliating University

It affiliates to itself or associates with itself in a quasi-subordinate capacity such colleges which make provision for the instruction of students according to the instructions of the university. The university controls

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[36]Quoted in Johri, op. cit., pp. 202-03.

externally. The internal control vests entirely in the college authorities.

Residential University

Its essential condition is residence at the center or centers of the university for those desiring its membership.

Teaching University

A "teaching" university is one in which some or all of the teaching is not only controlled but also conducted by persons appointed by the university.

Unitary University

A "unitary" university is one, usually localized in a single center, in which the whole of the teaching is conducted by university teachers appointed by the university authorities. It is always a teaching university, though every teaching university is not a unitary university.[37]

Hartog Committee Report, 1929

In the period after the war, Mahatma Gandhi had started openly condemning the British system of education. His basic arguments against it can be summarized in a few words: it represents a foreign culture, is taught through a foreign medium, and ignores the culture of the heart and

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[37]Littlehailes, op. cit., p. 54.

the hand. Some representative passages from Gandhi's speeches are as follows:

> . . . I hold it to be unmanly . . . to receive grants for our education from a government which we heartily dislike. . . .
>
> Our children should receive their education in a free atmosphere, even though it may be given in humble cottages or in the shade of trees and under teachers, who being themselves free, would breathe into our children the spirit of freedom. . . .
>
> . . . Surely they do not need government university degrees. . . .
>
> . . . A systematic study of Asiatic culture is no less essential than the study of the western sciences.
>
> . . . The ideal is a synthesis of the different cultures that have come to stay in India. . . . This synthesis will naturally be of the swadeshi type . . . and not of the American pattern, where one dominant culture absorbs the rest and where the aim is . . . toward an artificial and forced unity. . . .[38]

The impact of Gandhi's views made it essential for the government again to make an inquiry into the existing system of education. A committee was appointed in 1927 under the chairmanship of Sir Philip Hartog to inquire into the various aspects of Indian education which presented its report in September, 1929. It did not deal with university education in detail, but it put forward some relevant recommendations, as follows:

1. Teaching and unitary university is much better than affiliating university for imparting higher education. . . .

2. The standard of university education should be raised. . . .

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[38] D. G. Tendulkar, Mahatma: Life of Mohandas Karamchand Gandhi, Vol. Two, 1920-1929 (Delhi: Ministry of Information and Broadcasting, 1961), pp. 23-24.

3. In order to check unemployment among graduates, technical training should be developed. . . .[39]

Higher Education under Dyarchy: 1921-37

In 1919 the Government of India Act was passed by the British Parliament which introduced dyarchy in the provinces in 1921. Its basis was the report of Montagu, the then Secretary of State, and Lord Chelmsford, the then Governor-General. Rai explains its formation and function more clearly:

> When British Government made India a partner in the Second World War, it promised to give freedom to it. But when the war came to a close, the British Government did not keep their promise. This . . . made Indian people restless. A new political unrest was in the offing. In order to meet the situation the Government gave to India, Government of India Act, 1919. This created a diarchy in the provincial administration. Certain subjects were transferred to be administered by the Ministers as the representatives of the people, while certain subjects were kept back as Reserve. These subjects were to be administered by the administrative officers who were responsible to the Governor-General or the Secretary of the State for India in England. Education was transferred to the representatives of the people. . . .[40]

As public education became the responsibility of the provinces by this act and central government stopped giving them financial aid for this purpose, the development of education was checked. But the improvement in the financial position of the provinces assisted in additional expenditure on education. So higher education could be

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[39]Quoted in Johri, op. cit., p. 223.

[40]B. C. Rai, History of Indian Education (Lucknow: Prakashan Kendra, 1965), pp. 192-93.

expanded and reorganized during this period, five universities were started:

1. Delhi University--unitary, teaching, and residential (1922).
2. Nagpur University--affiliating (1923).
3. Andhra University--teaching and affiliating (1926).
4. Agra University--teaching and affiliating (1927).
5. Annamalai University--unitary, teaching, and affiliating (1929).

A good deal of reorganization took place in the older universities. For example, the Madras University took up teaching and research, and the Bombay University organized post-graduate teaching.

Technical Education

Since the government felt that technical education was needed, the following institutions were established:

1. Bose Research Institute, Calcutta.
2. Harcourt Butler Technological Institute, Kanpur.
3. Imperial Agricultural Research Institute, New Delhi.
4. Indian Institute of Science, Bangalore.
5. Indian School of Mines, Dhanbad.

Education of Women

After the First World War, great change occurred in the outlook of Indian women toward education. Though men like Karve and women like Annie Besant and Mrs. Ranade laid

the foundation-stone in this direction, the greatest influence was that of Gandhi. His call "Serve the Mother" (Mother stands for India) appealed to all the women throughout the length and breadth of India:

> . . . Tenderly nurtured women, physically underdeveloped because of the rigours of former seclusion, women used to soft silky garments, bejewelled, sheltered, economically dependent, women a short while ago too shy even to speak freely to a stranger and too proud to grant a glimpse of their face . . . these women, dressed in plain rough garments . . . suddenly . . . [were] found in the streets. . . .[41]

It is obvious from the above quotation that the women were eager to serve the country, and as soon as Gandhi made an appeal, they came forward, throwing away their age-long chains:

> Mother is in chains--sacrifice for her, suffer for her! This was a tremendous idealistic appeal to the very heart of the . . . Indian womanhood. . . . They were ready to march forth in defiance of all edicts, as the women of antiquity had done who stormed the gates of their own city and went forth to greet the coming Buddha.
>
> Gandhi's profound knowledge of the heart of his people was never better shown than in his special appeal for women to come and serve. . . .[42]

Sarda Act, 1929

The "Prohibition of Child-Marriage Act" is generally known as the "Sarda Act" because the bill was sponsored by Rao Bahadur Harbilas Sarda. The passing of this act in 1929 removed the evils of child-marriage because the age of

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[41]Frieda Hauswirth, Purdah: The Status of Indian Women (New York: Vanguard Press, 1932), p. 10.

[42]Ibid., p. 231.

fourteen was fixed as minimum for the marriage of girls. It gave great impetus to the education of women, as well.

Higher Education for Women in 1937

The foregoing description presents enough evidence that nationalism became the greatest driving force in the field of female education. From this point women started demanding opportunities for education. And as a result of all the above influences, the colleges for girls, which were 12 in 1921-22, rose to 31 in 1936-37.

Abbot and Wood Report, 1937

The Central Advisory Board of Education was formed in 1921 to coordinate the activities of the central and provincial governments in the sphere of education. It was dissolved after two years for the sake of economy. In 1935 it was revived on the recommendation of the Hartog Committee. It advised the government to lay more stress on technical and vocational education. To implement this recommendation the government appointed the Abbot and Wood Committee in 1937.

A. Abbot was Ex-Chief Inspector of Technical Schools, Board of Education, England, and S. H. Wood was Director of Intelligence, Board of Education, England. Their joint report, which contained many valuable suggestions for the improvement of vocational education, was submitted in June, 1937. But when the Second World War broke out, two years

later, the government locked it up for safekeeping as a valuable document but failed to implement it.

Sargent Report, 1944

The Second World War was a period of severe disorganization for India. Though India was not directly involved in the war, yet it disrupted all her progressive schemes. After the war the Central Advisory Board of Education deputed Sir John Sargent, then the Educational Adviser to the Government of India, to prepare a plan for the development of Indian education. He submitted his Memorandum to the board in 1944. The board completely endorsed his recommendations and supported their implementation. Some of its major conclusions relating to university education are as follows:

a. Indian Universities . . . do not fully satisfy the requirements of a national system of education. . . .

b. The minimum length of a University degree course should be three years. . . .

c. An Indian University Grants Committee should be constituted. . . .[43]

The educational standards basic to Sir John Sargent's report were those of the existing educational system of England. His memorandum presented a complete picture of Indian education with suggestions for its corresponding improvement.

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[43]Government of India, Bureau of Education, Post-War Educational Development in India (Delhi: Manager of Publications, 1944), p. 35.

Radhakrishnan Commission, 1948-49

After the achievement of independence on August 15, 1947, the number of students increased rapidly and the number of universities also went up to cope with the needs of the new nation. With freedom, people complained that the universities were not prepared to meet the unprecedented demands of the country. Hence, on the recommendation of the Inter-University and the Central Advisory Boards of Education, the government appointed another commission on November 4, 1948, under the chairmanship of Dr. Radhakrishnan. This commission was to suggest ways to improve numerous aspects of university education in India. It submitted its report on August 25, 1949.

The Radhakrishnan Commission's Report is very comprehensive and covers all aspects of university education, but its most important characteristic is that its suggestions have been made in accordance with the changed conditions of India. In discussing the aims of university education it states:

a. Great changes have taken place in . . . Indian society. . . . Universities . . . have to provide leadership. . . .

b. . . . the aim of university education should be to produce intellectual adventurers.

c. We are engaged in a quest for democracy through the realization of justice, freedom, equality and fraternity. Hence, it is necessary that our

universities should be the emblems and protectors of these ideals.[44]

Higher Education in Free India, 1947-63

The expansion of education after independence has been almost without limit. The British had provided an outline which was totally inadequate to the needs of the country. Barbara Ward summarizes India's condition in the following passage:

> In 1939, after a hundred years of British investment . . . India still had an industrial establishment of only two million workers, a steel output of less than a million tons. . . . Not by any stretch of the imagination can this be called a record of dynamic growth. It is simply the first sketch of a first beginning.[45]

Since hundreds of writers have dealt with this topic--the blame of England for keeping a huge nation so underdeveloped--and since it goes beyond the scope of the present study, it will not be discussed further here.

There has been great expansion in higher education in free India. In 1947 there were only 19 universities, but by 1965-66 the number is expected to have tripled to 61. To assure a many-sided improvement in the field of higher education, the Radhakrishnan Commission had recommended establishment of the University Grants Commission. This

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[44]Quoted in Rai, op. cit., pp. 242-43.

[45]Barbara Ward, "Modernization Begun But Not Completed," The British in India: Imperialism or Trusteeship? ed. M. D. Lewis (Boston: D. C. Heath and Co., 1962), p. 63.

proposal was accepted and in 1953 the University Grants Commission was established.

Tables and figures in the next chapter will document the expansion of Indian higher education from 1857 to 1963. But this discussion would be incomplete without a description of some of the Indian experiments in higher education which depart from the regular pattern.

Experiments in Higher Education

In 1921 Mahatma Gandhi's voice rose high to boycott everything foreign. Summarizing his views about education, he said:

> . . . My experience has proved . . . that literary training by itself adds not an inch to one's moral height and that character-building is independent of literary training. I am firmly of the opinion that the government schools . . . have rendered us helpless and Godless. . . . They have made us what we were intended to become--clerks and interpreters. . . .[46]

Hindu patriots enthusiastically came forward to start new institutions to revive the values of traditional Indian culture. Gurukulas (a literal translation of "Gurukula" is: the family of the teacher) were the first to be established.

Gurukula Kangri

Swami Shraddha Nand was the founder of a Gurukula in 1903. In 1924 that Gurukula was transferred to Kangri from Saharanpur where the river Ganges flows. The institution

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[46]Tendulkar, op. cit., p. 45.

is dedicated to the revival of Vedic culture. Brahmacharya, meditation, contact with nature, seclusion from the influences of the cities are some of the prominent characteristics of this institution.

The Gurukula was thought to be the only institution committed to the purpose of reviving and enhancing the feelings of nationalism in Indian youth.

Gurukula, Vrindaban; Kanya Gurukula, Dehradun; Kanya Gurukula, Sasni; Arya Kanya Mahavidyalaya, Baroda; and Kanya Mahavidyalaya, Jallundur, are all very much alike, being based on the model of Gurukula Kangri in aims and functions.

Vidyapiths

There is no significant difference between the Gurukulas and the Vidyapiths with regard to their objectives. The Vidyapiths, however, are a little closer to the ideals of Mahatma Gandhi and thus have more modern curricula than the Gurukulas. But both aim to impart education in the ancient Indian culture in order to develop the physical, moral, and intellectual qualities of the students. Vanasthali Vidyapith, Kashi Vidyapith, and Gujarat Vidyapith are very famous throughout India and have produced a number of distinguished national leaders.

Jamia Millia Islamia

Mahatma Gandhi's Non-Cooperation Movement also inspired the Muslims, leading to the establishment of the Jamia Millia Islamia at the outskirts of New Delhi. The aim of the Jamia Millia in the beginning was to generate feelings of nationalism and unity in both Hindus and Muslims. Now it gives more emphasis to basic education and other subjects which deal with rural life.

Shrimati Nathi Bai Damodar Thakersey Women's University, Poona

Maharshi Karve was the founder of this institution for women. Here education is given in practical subjects which contribute to the preparation of successful housewives and mothers.

Vidya Bhavan Udaipur

This institution was to give training to boys in scouting. With the passage of time, however, it has developed into a training college. Its main aim is to reform society through social service and public education.

Arvind Ashram

Sri Arvind, the famous modern Indian philosopher, established this Ashram in 1910. In 1952 an International Center of University Education was founded to provide a three-year course of higher training for those who abide by

the rules of the Ashram. The educational philosophy of the Ashram consists of spiritualism, discipline, and yoga.

Vishva Bharati

Rabindranath Tagore established the Shantiniketan school in 1901. This school was converted into a university on May 6, 1922. Tagore was a great worshipper of Indian culture. Freedom, creativity, love of nature, and mother-tongue formed the basic tenets of his educational philosophy. To incorporate his broad philosophy into education the curriculum of the university has been made very comprehensive and students can select from a wide range of subjects according to their interests and aptitudes.

Conclusion

Though the Charter of 1813 initiated interest of the East India Company in education, yet no progress was made in the modernization of Indian education until 1835. The adoption of Macaulay's Minute in that year contributed to the firm establishment of English education in India. Lord Hardinge's Resolution in 1844, which favored English-knowing Indians for government jobs, was another important stimulus to the spread of English education.

Wood's Despatch of 1854 recommended the foundation of the universities in India. As a result, in 1857 three universities came into existence--at Calcutta, Madras, and Bombay--as examining bodies based on the pattern of the

London University. Subsequently, reviews of education were ordered from time to time, but they did not achieve any significant changes in higher education. In 1887 two other universities, Punjab and Allahabad, were added, which brought the total number of Indian universities to five. These were all affiliating universities. By 1916 the number of affiliated colleges had become burdensome to these universities since their number had increased to 185. The Government Resolution on Educational Policy recognized the need of new teaching universities in 1913. But the government's recommendation alone would have been unable to achieve much in the direction of adding more universities if local and provincial patriotism had not given it strong implementation. Creation of the Universities of Benares (1916), Patna (1917), Osmania (1918), Aligarh (1920), Rangoon (1920), Lucknow (1920), Dacca (1921), Delhi (1922), Nagpur (1923), Andhra (1926), and Agra (1927) indicates the rising interest of the people and provinces in higher education.

The Calcutta University Commission, appointed in 1917, helped to modify and improve the administrative structure of the universities. The Sargent Report, 1944 and the Radhakrishnan Commission, 1948 submitted comprehensive reports which contributed to the improvement and expansion of higher education.

India gained freedom on August 15, 1947. Since then the volume of grants in aid has increased many times. This strengthening of financial support has caused the expansion of higher education in many directions.

A precise account of the development of higher education calls for some quantitative treatment. The purpose of this chapter has been to present the landmarks in the history of university education in India. The next chapter will round out the development by giving the relevant information about financing and quantitative growth which is essential to an analysis and understanding of the role of government in Indian higher education.

CHAPTER IV

REVIEW OF THE GROWTH OF FINANCING OF HIGHER EDUCATION IN INDIA FROM 1780 TO 1963

The purpose of this chapter is to give the figures on expanding enrollments and increasing financing which will help the reader better understand the development in India of college and university education in its historical perspective.

Colleges in India sometimes have high schools, junior high, and even primary schools. But in this review only those colleges have been included which provide instruction leading to a bachelor's degree in arts, science, or a higher profession. A college degree in India requires successful completion of a four years' course after matriculation. For convenience, all the colleges have been divided into two parts: (1) arts colleges, and (2) professional colleges.

Arts Colleges

Arts colleges provide instruction in the sciences as well as the arts. Subjects such as English, history, vernacular languages, philosophy, politics, geography,

mathematics, physics, chemistry, botany, zoology, geology, and physiology are taught in these colleges.

Professional Colleges

These colleges train men and women for the professions, such as medicine, law, engineering, teaching, agriculture, and commerce. All the arts and professional colleges are affiliated to some university. Colleges cannot examine students or award degrees. These are functions of the university. However, there are some independent professional colleges as Chinnappa describes:

> There are, however, a few special professional colleges which are not affiliated to any university although they are of a very high order, such as the Thomason Civil Engineering College, Roorki, United Provinces; the Agricultural Colleges at Cawnpore and Lyallapur; the Veterinary College at Lahore; and a few Oriental Colleges. These colleges confer their own diplomas on the successful candidates at the termination of courses lasting from two to four years.[1]

The first college known as Calcutta Madrissa was established in 1780. Data from 1963 onward are not available in full at the time of writing this dissertation, so it is not possible to report on the period after that. To facilitate understanding and to make the educational picture more clear, the present chapter is divided into three periods:

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[1]S. Paul Chinnappa, The British System of Education in India (Bangalore: Radha Power Printing Press, n.d.), pp. 175-76.

1. Period from 1780 to 1857.

2. Period from 1857 to 1947.

3. Period from 1947 to 1963.

Period from 1780 to 1857

Calcutta Madrissa (1780)

The first educational institution for higher education established by the East India Company was the Calcutta Madrissa in 1780. Atmanand Misra summarizes its finances from Howell:

> . . . Warren Hastings . . . purchased a piece of ground for the erection of a suitable building for it, at his own expense amounting to RS.5,641. The monthly cost of the College was RS.625 . . . until 1782. . . .[2]

B. D. Basu presents more details:

	RS.
Cost of original building in 1781	75,745
Revenue of lands granted to the institution as an endowment of the estimated value of 29,000 rupees per annum, from A.D. 1782 to 1793, 12 years.	348,000
Actual expenditure from 1794 to 1818, 25 years as per account exhibited in July, 1819.	494,197
Charges on account of the Madrissa as fixed by Government,	
A.D. 1819	30,000
1820	30,000
1821	30,000
1822	30,000
1823	30,000
1824	30,000

[2]Quoted in Atmanand Misra, Educational Finance in India (Bombay: Asia Publishing House, 1962), p. 54.

Sum appropriated in July, 1823 for the purchase of ground, and erection of a new Madrissa	140,537
Total	1,238,479[3]

Benares Hindu Sanskrit College (1791)

Jonathan Duncan founded the Benares College in 1791 to supply Hindu assistants to European judges. Its finances were as follows:

> The Governor in Council wrote, we entirely approve of the plan of the Hindoo College. . . . From the commencement of the fussly year 1200, we authorise . . . RS.20,000 per annum. . . .[4]

Basu summarizes the finances of the college in the following manner:

	RS.
For the year 1791	14,000
From 1st January, 1792 to 31st December, 1824, being 33 years at 20,000 rupees per annum	660,000
Total	674,000[5]

In the above sums are included the high salaries of the two Anglo-Indian superintendents who were appointed to supervise these institutions. The Superintendent of the

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[3]B. D. Basu, History of Education in India Under the Rule of the East India Company (Calcutta: Modern Review Office, 1922), pp. 32-33.

[4]Quoted in J. P. Vyas, "Central Government's Role in Indian Education: 1813-1961" (unpublished Ph.D. dissertation, University of Saugar, 1962), p. 58.

[5]Basu, op. cit., p. 33.

Calcutta Madrissa got RS.6,000 and that of the Benares College RS.5,400 a year.[6]

Colleges were opened seventy-seven years earlier than universities. But these early colleges were not really imparting higher education in its strict sense. The word "college" was used vaguely and some colleges taught classes at a level even lower than that of the high school.

When the Governor-General appointed a "General Committee of Public Instruction" on July 17, 1823, it helped in the expansion of college education. In a period of ten years, i.e., from 1823-33, the committee did the following:

1. Reorganised the Calcutta Madrissa and the Benares Sanskrit College;
2. Established a Sanskrit College at Calcutta in 1824;
3. Established two more Oriental Colleges at Agra and Delhi. . . .[7]

In 1835 the Calcutta and Madras Medical Colleges also came into existence. In 1847 Thomason established a Civil Engineering College at Roorki. The details regarding many other colleges which were started during this period by the government, missionaries, Indians, and Englishmen cannot be given here for lack of space. However, Table 3

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[6]Ibid., p. 34.

[7]Syed Nurullah and J. P. Naik, A History of Education in India (During the British Period) (Bombay: Macmillan and Co., Ltd., 1951), p. 92.

gives the numbers of colleges, classified by type and by location, that existed between 1780 and 1857.

TABLE 3

LOCATION AND TYPE OF COLLEGE IN INDIA, 1780-1857

Location by Province	Arts	Medical	Engineering
Bengal	15	1	. .
United Provinces	4	. .	1
Bombay	4	1	1
Madras	3	1	. .
Total	26	3	2

Source: S. Paul Chinnappa, The British System of Education in India (Bangalore: Radha Power Printing Press, n.d.), p. 165.

As regards finances, separate accounts for higher education covering this period are not available. From Table 4 some idea can be had about the total annual educational expenditure of the company. Figures which are available date from 1813, when the company was authorized to spend one lakh of rupees annually on the education of the natives of India.

Table 4 indicates, by the meagerness of support given, that until 1853 the company was not thinking seriously of promoting higher education in India. Higher education there really began with the famous Despatch of 1854 which authorized the establishment of the universities.

TABLE 4

STATEMENT SHOWING THE TOTAL EXPENDITURE ON EDUCATION FROM 1813 TO 1853

Year	Total RS.	
1813	51,290	
1814	125,850	
1815	54,220	
1816	62,040	
1817	64,520	
1818	63,210	
1819	89,410	
1820	76,880	
1821	79,560	
1822	101,550	
1823	72,080	
1824	218,840	
1825	665,630	
1826	274,120	
1827	453,130	
1828	358,410	
1829	380,760	
1830	443,300	
Total		3,634,800
1831-34	Figures not available	
1834-35	416,418	
1837-38	587,777	
1840-41	604,315	
1843-44	773,089	
1846-47	876,869	
1849-50	960,378	
1852-53	1,002,134	
Total (from 1834-35 to 1852-53 all years)		14,279,410

Source: From 1813-30--Anath Nath Basu (ed.), Indian Education in Parliamentary Papers, Part I, 1832 (Bombay: Asia Publishing House, 1952), p. 143; from 1834-1853--Syed Nurullah and J. P. Naik, A History of Education in India (During the British Period) (Bombay: Macmillan and Co., Ltd., 1951), p. 163.

Period from 1857 to 1947

Period from 1857-1902

Number of Universities.--In 1857 three universities were established at Calcutta, Bombay, and Madras. Punjab and Allahabad were added to these in 1882 and 1887, respectively. After 1887 no new university was established until 1916.

Number of Colleges.--The number of colleges in 1857 has been given in Table 3. In 1882 there was a significant increase in the number of colleges because more and more students were seeking higher education for government employment which depended upon their having university degrees. Table 5 indicates the number of colleges in 1882.

The Indian Education Commission appointed by Lord Ripon in 1882 had suggested the expansion of secondary education. Consequently, the colleges were opened to absorb the successful matriculates who needed college education for better jobs. Nurullah writes:

> In 1901-02 . . . the total number of Arts colleges affiliated to Indian universities was 179 of which 136 were in British India, 32 in Indian States, 9 in Ceylon and 2 in Burma. . . .[8]

College Enrollment.--The number of students in all 179 affiliated colleges in 1902 is indicated in Table 6.

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[8]Nurullah, op. cit., p. 285.

TABLE 5

COLLEGES IN INDIA IN 1882

Province	Conducted by Government	Aided	Unaided	Total
Bengal				
English	12	5	4	21
Oriental	6	. .	. .	6
Bombay				
English	3	2	1	6
Oriental	. .	. .	. .	. .
Madras				
English	10	11	3	24
Oriental	1	. .	. .	1
North-Western Province				
English	3	2	3	8
Oriental	1	2	. .	3
The Punjab				
English	1	. .	. .	1
Oriental	. .	1	. .	1
Central Provinces				
English	1	. .	. .	1
Total	38	23	11	72

Source: Syed Nurullah and J. P. Naik, A History of Education in India (During the British Period) (Bombay: Macmillan and Co., Ltd., 1951), p. 281.

TABLE 6

NUMBER OF STUDENTS IN COLLEGES ON MARCH 31, 1902

	Students
Arts Colleges	
English	
Male	16,971
Female	177
Oriental	
Male	503
Female	. .
Colleges for Professional Training	
Law	
Male	2,767
Female	. .
Medicine	
Male	1,390
Female	76
Engineering	
Male	865
Female	. .
Teaching	
Male	179
Female	11
Agriculture	
Male	70
Female	. .
Total	23,009

Source: Syed Nurullah and J. P. Naik, A History of Education in India (During the British Period) (Bombay: Macmillan and Co., Ltd., 1951), p. 287.

Finance.--The revenue of the Government of India was restricted due to its policy of not opening industries in India. Instead, it taxed the poor in the form of land revenues and the salt tax. As enough funds were not available, there was no question of the progress of education. Table 7 indicates the funds allocated to higher education by the Government of India from 1870-1902.

TABLE 7

GOVERNMENT'S EXPENDITURE ON INSTRUCTION OF HIGHER EDUCATION, 1870-1902

Year	Higher Education	Professional and Technical Education
	(RS. in Lakhs)	
1870-71	10.54	11.85
1880-81	14.16	13.28
1886-87	22.49	13.63
1891-92	25.17	25.40
1896-97	30.41	28.28
1901-02	33.74	34.77

Source: Atmanand Misra, Educational Finance in India (Bombay: Asia Publishing House, 1962), p. 460.

Table 8 gives a complete picture of the finances of higher education for the year 1901-02. The figures make it clear that by far the largest expenditure in 1901-02--about two-thirds of the total--was on the English arts colleges.

Period from 1902-22

During the second half of the nineteenth century, nationalist sentiment began to germinate in the minds of

TABLE 8

FINANCES OF HIGHER EDUCATION, 1901-02

	Provincial Revenues (RS.)	Local Funds (RS.)	Municipal Funds (RS.)	Fees (RS.)	All Other Sources		
					Private (RS.)	Public (RS.)	Total (RS.)
Arts Colleges							
English	895,556	7,932	19,609	973,501	620,696	45,654	2,562,948
Oriental	28,573	157	74	262	9,013	100	38,179
Colleges for Professional Training							
Law	5,317	. .	. .	107,733	5,248	2,213	120,511
Medicine	279,287	2,979	3,262	134,994	3,341	. .	423,863
Engineering	448,383	. .	. .	50,470	5,264	. .	504,117
Teaching	84,951	325	78	550	843	. .	86,747
Agriculture	56,092	. .	. .	572	5,693	. .	62,357
Total	1,798,159	11,393	23,023	1,268,082	650,098	47,967	3,798,722

Source: Syed Nurullah and J. P. Naik, A History of Education in India (During the British Period) (Bombay: Macmillan and Co., Ltd., 1951), p. 288.

individual native thinkers. But it was checked because their mother language did not provide an adequate framework upon which to erect a theory of nationalism. The impact of European thought upon the mind of the educated class reawakened the spirit of Hindu India.[9]

The great social and political awakening precipitated a great expansion of collegiate education. The progress of higher education between 1901-02 and 1921-22 is recorded in Table 9.

TABLE 9

PROGRESS OF HIGHER EDUCATION, 1901-02 TO 1921-22

Type of Institution	No. of Institutions		No. of Scholars	
	1901-02	1921-22	1901-02	1921-22
Universities	5	10	*	*
Arts Colleges	145	165	17,651	45,418
Professional Colleges	46	64	5,358	13,662
Total	196	239	23,009	59,080

*Figures not available.

Source: Syed Nurullah and J. P. Naik, A History of Education in India (During the British Period) (Bombay: Macmillan and Co., Ltd., 1951), p. 444.

The figures quoted above look especially impressive when compared with the statistics of 1855 in Table 10.

[9]B. T. McCully, English Education and the Origins of Indian Nationalism (New York: Columbia University Press, 1940), pp. 240 and 242.

TABLE 10

INSTITUTIONS FOR HIGHER EDUCATION IN 1855 AND 1921-22

	1855	1921-22
Universities	. .	10
Arts Colleges	21	165
Professional Colleges	13	64

Source: Syed Nurullah and J. P. Naik, A History of Education in India (During the British Period) (Bombay: Macmillan and Co., Ltd., 1951), p. 595.

Finances.--The financial situation of education during this period is discussed by Misra as follows:

> During the first twenty years of the new century, education received larger finances than it had ever done before. . . . During the period the Government of India made recurring grants amounting to RS.299 lakhs and non-recurring grants totalling RS.493.38 lakhs for education. Such huge grants by the Central Government were unheard of before and they enabled the education of the country to expand and improve in an unprecedented manner. The other sources of educational income too contributed in larger measure.[10]

This was the time of Lord Curzon. He gave priority to higher education. To promote university education he appointed the Indian University Commission in 1902. Two years later, according to the recommendations of the commission, he framed an Educational Act. Thus the first grant of RS.5 lakhs was made in 1904 to the universities as can be seen in Table 11.

[10]Misra, op. cit., p. 149.

TABLE 11

CENTRAL GOVERNMENT'S GRANTS FOR COLLEGE EDUCATION FROM 1904-22

Year	Rupee Value of Grant (in lakhs)	Recurring or Non-recurring	Purpose of Grant
1904-05	5	Recurring	Universities and colleges
	2.5	Recurring	Technical education
1912-13	10	Recurring	Higher education
1914-15	10	Non-recurring	For Calcutta University hostels
1918-19	30	Recurring	Agricultural, commercial, and technical education
Total	57.5		

Source: Seventh Quinquennial Review of Progress of Education in India, adapted from Atmanand Misra, Educational Finance in India (Bombay: Asia Publishing House, 1962), p. 514.

About the grant Nurullah writes:

> . . . prior to 1904, government did not give any grants-in-aid to any university except the Punjab which received an annual grant of about RS.30,000 because it conducted the Oriental and Law Colleges. No grant was also felt to be necessary as the only items of expenditure in a university were a small office establishment and examinations. . . .[11]

[11] Nurullah, op. cit., pp. 472-73.

Period from 1922-47

In the beginning of this period higher education did not progress significantly because two influences were working against it. One was the economic distress caused by the first Great War and the other was the personality of Gandhi opposed to English education. Panikkar writes:

> From 1920 to 1948 the Indian stage was dominated by the frail figure of Mahatma Gandhi. . . . In the period of discontent and political frustration that followed the first Great War, Gandhi ji . . . announced his new programme for the immediate attainment of self-government of India. . . . It was a call to young India to cast aside all that it had so far cherished as essential for progress. Lawyers were to give up their practice, students to turn their backs on colleges and institutions maintained or supported by government. . . .[12]

But after 1924 the economic condition of the country improved gradually which helped in the expansion of higher education. Littlehailes remarks:

> . . . a period which has witnessed great political changes, some economic improvement and the gradual cessation of non-cooperation activities has also witnessed an exceptionally large increase in the numbers of educational institutions . . . the undertaking of many new educational ventures. . . .[13]

In very condensed form, Tables 12, 13, and 14 show, respectively, the expansion in numbers of institutions, in

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[12]K. M. Panikkar, The Foundations of New India (London: George Allen and Unwin, Ltd., 1963), p. 99.

[13]R. Littlehailes (ed.), Progress of Education in India--1922-27, Ninth Quinquennial Review, Vol. I (Calcutta: Government of India, 1929), p. 1.

numbers of students enrolled, and financial support for higher education during 1921-47.

TABLE 12

NUMBERS OF INSTITUTIONS OF HIGHER EDUCATION BY TYPES, IN 1921-22, 1936-37, AND 1946-47

Institution	1921-22	1936-37	1946-47
Universities	10	18	21
Arts and Science Colleges	165	271	297
Professional Colleges	64	75	140
Totals	239	364	458

Source: From 1921-37--Syed Nurullah and J. P. Naik, A History of Education in India (During the British Period) (Bombay: Macmillan and Co., Ltd., 1951), p. 619; from 1946-47--Government of India, Ministry of Education, Review of Education in India: 1947-1961 (New Delhi: National Council of Educational Research and Training, 1961), p. iii.

To sum up, the total number of universities rose from 10 in 1921-22 to 21 in 1946-47. Data are not available for enrollment in universities during the same period, but it increased from 9,697 in 1936-37 to 16,148 in 1946-47. The total expenditure on instruction in the universities rose from RS.73.41 lakhs in 1921-22 to RS.229.77 lakhs in 1946-47.

As regards arts and science colleges, their number was 165 in 1921-22 which rose to 297 in 1946-47. The total number of scholars increased from 45,418 in 1921-22 to 212,000 in 1946-47. The total expenditure on instruction

TABLE 13

NUMBERS OF SCHOLARS IN INSTITUTIONS OF HIGHER EDUCATION IN 1921-22, 1936-37, AND 1946-47

Institution	Numbers of Scholars		
	1921-22	1936-37	1946-47
Universities	Figures not available	9,697	16,148
Arts and Science Colleges	45,418	86,273	212,000
Professional Colleges	13,662	20,645	44,000
Totals	59,080	116,615	272,148

Source: From 1921-37--Syed Nurullah and J. P. Naik, A History of Education in India (During the British Period) (Bombay: Macmillan and Co., Ltd., 1951), p. 619; from 1946-47--Government of India, Ministry of Education, Review of Education in India: 1947-1961 (New Delhi: National Council of Educational Research and Training, 1961), p. iv.

rose from RS.110.42 lakhs in 1921-22 to RS.439.15 in 1946-47.

Significant expansion can also be seen in professional colleges. In 1921-22 the total number of professional colleges was 64. It rose to 140 in 1946-47. The enrollment increased from 13,662 in 1921-22 to 44,000 in 1946-47. The total expenditure on instruction was RS.59.78 lakhs in 1921-22 which increased to 186.59 in 1946-47.

The above figures show that India's social and political awakening helped significantly to expand collegiate education. The enrollment in arts colleges increased

TABLE 14

ALLOCATION OF EXPENDITURES FOR INSTITUTIONS OF HIGHER EDUCATION IN 1921-22, 1936-37, AND 1946-47

Institution	Expenditures in Lakhs of Rupees		
	1921-22	1936-37	1946-47
Universities	73.41	126.03	229.77
Arts and Science Colleges	110.42	196.19	439.15
Professional Colleges	59.78	77.92	186.59
Totals	243.61	400.14	855.51

Source: From 1921-37--Syed Nurullah and J. P. Naik, A History of Education in India (During the British Period) (Bombay: Macmillan and Co., Ltd., 1951), p. 619; from 1946-47--Government of India, Ministry of Education, Review of Education in India: 1947-1961 (New Delhi: National Council of Educational Research and Training, 1961), p. 135.

more than four times between 1921 and 1947. The enrollment in professional colleges during this period increased a little more than three times. According to Anderson the causes for this increase were as follows:

> A burst of enthusiasm swept children into school with unparalleled rapidity; an almost childlike faith in the value of education was implanted in the minds of the people; parents were prepared to make almost any sacrifice for the education of their children; the seed of tolerance towards the less fortunate in life was begotten; ambitious and comprehensive programmes of development were formulated, which were calculated to fulfil the dreams of a literate India; . . . enlightened women began to storm the citadel of old-time prejudice against the education of Indian girls. Government, with the full concurrence of Legislative Councils, poured out large sums of money on education,

which would have been regarded as beyond the realm of practical politics ten years previously.[14]

Period from 1947 to 1963

With the attainment of independence on August 15, 1947, there began a new era of progress in the field of education. India aims at providing free and compulsory education for all children in the age group 6-14 years. The increase in enrollment at the primary, junior high, and secondary level can be seen in Table 15.

TABLE 15

ENROLLMENT IN SCHOOLS FROM 1946-47 TO 1965-66

Year	6-11 Age Group (Primary)	11-14 Age Group (Junior High)	14-17 Age Group (Higher Secondary)
		(In Lakhs)	
1946-47	141	20.4	8.7
1950-51	192	31.0	12.0
1955-56	252	43.0	20.0
1960-61	330	61.0	30.0
1965-66*	504	100.0	44.0

*Target.

Source: Barbara Ward, India and the West (New York: W. W. Norton and Company, 1964), p. 163.

With the expanding base at the elementary and secondary levels of education, the demand for higher

[14]Sir George Anderson (ed.), Progress of Education in India--1927-32, Tenth Quinquennial Review, Vol. I (Delhi: Government of India, Manager of Publications, n.d.), p. 3.

education has increased greatly. Tables 16 and 17 indicate this growth.

TABLE 16

NUMBERS OF INSTITUTIONS FOR HIGHER EDUCATION FROM 1946-47 TO 1963-64

Institution	1946-47	1963-64
Universities	21	55
Arts and Science Colleges	297	1,418
Professional Colleges	140	693
Totals	458	2,166

Source: Government of India, University Grants Commission, University Development in India: Basic Facts and Figures--1963-64 (New Delhi: University Grants Commission, 1964), p. 20.

TABLE 17

NUMBERS OF SCHOLARS IN INSTITUTIONS OF HIGHER EDUCATION IN 1946-47 AND 1963-64

Institution	1946-47	1963-64
Universities	16,148	*
Arts and Science Colleges	212,000	*
Professional Colleges	44,000	*
Totals	272,148	1,184,697

*Figures not available separately.

Source: From 1946-47--Government of India, Ministry of Education, Review of Education in India: 1947-1961 (New Delhi: National Council of Educational Research and Training, 1962), p. iv; from 1963-64--Government of India, University Grants Commission, University Development in India: Basic Facts and Figures--1963-64 (New Delhi: University Grants Commission, 1964), p. 42.

Allocation of Expenditures for Higher Education in 1946-47 and 1962-63

The financial assistance to universities and colleges amounted to RS.855.51 lakhs in 1946-47. Since then grants have been given in many directions to promote higher education. Since more money is needed to develop technical education for industrial progress and the utilization of natural resources, the government is giving huge grants as can be seen from Table 18.

In 1946-47 the government grants for all types of aid to higher education amounted to RS.855.51 lakhs. In 1962-63 it increased to RS.1,067.82 lakhs which shows a definite increase.

Foreign aid to higher education is provided in the form of personnel, equipment, and fellowships as is indicated in Table 19.

The magnitude of this support shows that the Government of India has placed a premium on technical education after independence. During the reign of the British, higher education was mostly humanistic and literary. Though the British educators as early as 1891 pointed out that technical education in India would need to come into sharp focus to provide material prosperity, yet it was treated as a stepchild until 1947. In 1891 Thomas wrote:

> . . . the spread of technical education and practical science is a matter scarcely second in importance to the spread of primary education itself. It is from

TABLE 18

GOVERNMENT GRANTS FOR VARIOUS TYPES OF AID TO HIGHER EDUCATION DURING 1962-63

Type of Aid	Amount in Rupees
1. Administration Charges	1,337,239
2. Block Grants to Central Universities	18,500,000
3. Block Grants to Institutions Deemed to be Universities	4,091,646
4. Maintenance Grants to Constituent and Affiliated Colleges of Delhi University	4,578,468
5. Grants to Central Universities for Schemes not Covered under Block Grants	42,007
6. Grants to Central and State Universities for Humanities	7,344,837
7. Grants to Central and State Universities for Higher Scientific Education and Research	14,911,172
8. Grants to Central and State Universities for Engineering and Technology	8,204,053
9. Grants to Constituent and Affiliated Colleges	8,182,029
10. Grants to Central and State Universities for Miscellaneous Schemes	39,574,260
11. Expenditure Incurred by U.G.C. on Seminars and Conferences, etc.	16,287
Total	106,781,998

Source: Government of India, University Grants Commission, Report for the Year: 1962-63 (New Delhi: University Grants Commission, 1964), p. 52.

TABLE 19

FOREIGN AID TO TECHNICAL EDUCATION
PROMISED OR RECEIVED UP TO 1960

Aid Program/Country	No. of Experts	Value of Equipment in Rs. Lakhs	No. of Fellowships for Training of Indian Staff
T.C.M. of the U.S.A.	88	163.27*	106
Colombo Plan	37	52.08	24
UNESCO and UNTAA	18	13.47	30
USSR Aid for Indian Institute of Technology, Bombay, under UNESCO Program	18	166.80	20
USSR for Indian Institute of Technology, Bombay	. .	36.00	. .
West Germany	24	170.00	20
Totals	185	601.62	200

*Exclusive of aid of RS.107.5 lakhs provided by the U.S.A. out of the Rupee Fund for Indian Institute of Technology, Kanpur, for buildings and indigenous equipment.

Source: S. N. Mukerji (ed.), Administration of Education in India (Baroda: Acharya Book Depot, 1962), p. 250.

> this source chiefly that we must look for the vast increase in material wealth for which the country supplies such great natural advantages. Such an increase is not only desirable; it is imperative . . . it is only by creating an interest in the practical applications of science, by making it understood that a high education is not merely a literary and quasi-scientific or mathematical training, but embraces every kind of

> knowledge which is considerable in extent, well-ordered, and clearly grasped.[15]

Conclusion

The history of modern higher education in India is a little more than one hundred years old. Prior to 1947 professional and technical education was not developed according to the needs of the country because the British did not want to see India develop as an outstanding industrial country. Whatever they started in the direction of scientific and technological education was to promote their own interest. Panikkar writes:

> . . . the great irrigation projects required engineers. The development of railways under Company management required skilled technicians . . . there was no interest in scientific research or learning, and no institutions existed for such specialization. The beginning of the century found India living in an almost pre-scientific age. . . .[16]

After independence India embarked on a policy of expanding technology for an industrial revolution which depends upon a large number of highly educated people. This required an expansion in the number of universities and colleges. The number of institutions of higher learning rose from 458 in 1946-47 to 2,166 in 1963-64.

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[15] F. W. Thomas, The History and Prospects of British Education in India (Cambridge, London: George Bell and Sons, 1891), pp. 140-41.

[16] K. M. Panikkar, Common Sense about India (New York: The Macmillan Company, 1960), p. 106.

The great expansion in the field of higher education has been possible due to the interest of the government. Mr. Nehru, the Prime Minister of India, took personal interest in the advancement of Indian science. The rapid advancement of science and technology after 1947 indicates the evolution of a philosophy almost alien to India. Before the British rule, other worldliness was the main characteristic of Indian higher education and when the British model was adopted it also underemphasized the scientific education:

> Indian intellectuals had diagnosed correctly the sources of Western strength . . . namely, their science and literature. But when they sought it for themselves the literary and cultural proportion was greater and overwhelmed the rest. . . . A hundred years of its operation still did not bring India close to the practical world of living, and, in the light of comparatively rapid progress in science and technology elsewhere.[17]

What has been the policy of the Government of India after 1947 toward higher education needs to be discussed in detail in the succeeding chapter before making an analysis of its long-term effects on the country.

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[17]S. R. V. Rao, "Higher Education in India: with Special Reference to the Third Five Year Plan" (unpublished Ph.D. dissertation, Cornell University, 1963), p. 74.

CHAPTER V

ROLE OF THE CENTRAL GOVERNMENT IN HIGHER EDUCATION SINCE 1947 WITH SPECIAL REFERENCE TO UNIVERSITY GRANTS COMMISSION

Education is the state responsibility in India. The Central Government finances and supervises the four central universities, namely, Aligarh, Benares, Delhi, and Visva Bharati (Visva Bharati was declared as a central university in May, 1951). It is also responsible for the coordination of higher education, research, and scientific and technical education. The Seventh Schedule of the Constitution of India has restricted the role of the Central Government to the following institutions only:

62. The institutions known at the commencement of this Constitution as the National Library, the Indian Museum, the Imperial War Museum, the Victoria Memorial, and the Indian War Memorial, and any other like institution financed by the Government of India wholly or in part and declared by Parliament by law to be an institution of national importance.

63. The institutions known at the commencement of this Constitution as the Benares Hindu University, the Aligarh Muslim University and the Delhi University, and any other institution declared by Parliament by law to be an institution of national importance.

64. Institutions for scientific or technical education financed by the Government of India wholly or in

part and declared by Parliament by law to be institutions of national importance. . . .

. . . . . .

66. Co-ordination and determination of standards in institutions for higher education or research and scientific and technical institutions.[1]

In this chapter first a brief description will be given of the principal bodies functioning under the Ministry of Education (General) and the Ministry of Scientific Research and Cultural Affairs. These bodies are mainly responsible for the role that the Central Government plays after independence in higher education. Later the role of the government in higher education will be discussed by describing the University Grants Commission which offers funds of magnitude for the development of the universities. As the universities are greatly handicapped by scarcity of funds and the nation is in a highly developed state of underdevelopment, the pressure from the government on higher education is naturally increasing which to some extent disturbs the autonomy of the universities. But it is too early to predict the outcome of federal financing in higher education in India.

In brief the Government of India discharges its responsibilities toward higher education on the advice of the Ministry of Education.

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[1]Government of India, The Constitution of India: As Modified Upto the 1st November, 1956 (Delhi: Manager of Publications, 1956), p. 259.

Ministry of Education

The Department of Education was first established in 1910. It was amalgamated with the Department of Health and Lands in 1923. In 1945 education was separated from the other two heads of health and lands and became an independent department. At the time of independence in 1947 the Department of Education became the Ministry of Education. In 1957 when great emphasis was laid on technical education and scientific research, the ministry was renamed the Ministry of Education and Scientific Research. In 1958 it was divided into two--the Ministry of Education (General) and the Ministry of Scientific Research and Cultural Affairs--and each branch has been headed by a separate Minister of State since then.[2]

Ministry of Education (General)

Since the reorganization, this ministry in higher education is responsible for the four centrally administered universities, namely, the Benares Hindu University, the University of Delhi, the Aligarh Muslim University, and the Visva Bharati at Santiniketan.

There are many advisory bodies functioning under this ministry, but for higher education only four of them need to be discussed here:

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[2]S. N. Mukerji (ed.), Administration of Education in India (Baroda: Acharya Book Depot, 1962), pp. 36-37.

1. Central Advisory Board of Education.
2. University Grants Commission.
3. National Council for Rural Higher Education.
4. Inter-University Board.

Central Advisory Board of Education

The Central Advisory Board of Education was first organized in 1920 to assist provincial governments with expert advice. In 1923 it was abolished on the recommendations of the Inchcape Retrenchment Committee to save money. The same year the Department of Education was also amalgamated with the Department of Health, Revenue, and Agriculture for the same reasons. But the Hartog Committee seriously criticized the government's policy:

> We are of opinion that the divorce of the Government of India from education has been unfortunate. . . . We have suggested that the Government of India should serve as a center of educational information for the whole of India and as a means of coordinating the educational experience of the different provinces. . . .[3]

As a result of the above recommendation, the Central Advisory Board of Education was revived in 1935. The main functions of this Board are:

a. To advise on any educational question which may be referred to it by the Government of India or by any state government; and

b. To call for information and advice regarding educational developments of special interest or value to

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[3]Quoted in Syed Nurullah and J. P. Naik, A History of Education in India (During the British Period) (Bombay: Macmillan and Co., Ltd., 1951), p. 617.

> India; to examine this information and circulate it with recommendations to the Government of India and to the state governments.[4]

The board meets once a year to discuss and make recommendations regarding matters of educational policy. Its recommendations are not followed literally because it has no powers of implementation. However, the state governments consider its recommendations seriously because the Minister for Education and Scientific Research is the Chairman of the Board and the Secretary of the Department of Education acts as its Secretary.

University Grants Commission

A University Grants Committee was first appointed in 1945 to recommend to the Ministry of Education the grants to be paid to various universities. It continued to retain this responsibility until 1948 without any funds at its disposal. The Radhakrishnan University Education Commission recommended specifically that a University Grants Commission should be appointed with funds of its own. This recommendation was supported by the Inter-University Board. As a result of these recommendations the University Grants Commission was established on December 23, 1953.

> . . . the Government of India decided to establish a University Grants Commission and on the 23rd of December, 1953, at a brief ceremony, with Pandit Jawaharlal

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[4]Indian Institute of Public Administration, The Organisation of the Government of India (Bombay: Asia Publishing House, 1958), p. 260.

Nehru present Moulana Azad inaugurated the Commission. . . .[5]

The commission consists of nine members, and they are chosen as follows:

a. not more than three members from among the Vice-Chancellors of Universities;

b. two members from among the officers of the Central Government to represent that Government; and

c. the remaining number from among persons who are educationists of repute or who have obtained high academic distinctions. . . .[6]

Some of the functions and powers of the commission are:

1. Inquire into the financial needs of universities.

2. Allocate and disburse, out of the Fund of the Commission, grants to universities established or incorporated by or under a Central Act for the maintenance and development. . . .

3. Allocate and disburse . . . grants to other universities as it may deem necessary for the development of such universities. . . .

. . . . . .

4. For the purpose of ascertaining the financial needs of a university or its standards of teaching, examination and research, the Commission may, after consultation with the university, cause an inspection. . . .

5. If any university fails within a reasonable time to comply with any recommendation made by the

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[5]Samuel Mathai, "The University Grants Commission: a Retrospect," The Journal of University Education, III, No. 3 (March, 1965), 176.

[6]Government of India, Ministry of Law, The University Grants Commission Act, 1956: 3 of 1956 (Delhi: Manager of Publications, 1963), p. 2.

> Commission . . . the Commission . . . may withhold from the university the grants proposed to be made out of the Fund of the Commission. . . .[7]

The commission took into account the limited resources of the country and succeeded in developing the strengths of the universities by emphasizing an inter-disciplinary approach to knowledge. The commission's stress is on the quality of higher education rather than its quantitative expansion. In his speech introducing the University Grants Commission Bill, 1955, Shrimali said:

> . . . research and higher education are expensive and there are certain subjects which cost an enormous amount if research is to be carried on, on proper lines. Take for example, aero-engineering and naval architecture. These are highly specialized subjects and it is not possible for all the universities to make provision for subjects like these. Even in Great Britain, for an important subject like nuclear physics, there is provision only in six out of their seventeen universities. Nuclear physics is a very important subject but no country can afford to establish an unlimited number of laboratories and carry on scientific research in this subject. We shall, therefore, have to coordinate our work and distribute the subjects in such a way that the universities can make a real contribution to higher research.[8]

National Council for Rural Higher Education

The Indian University Commission in 1948-49 pointed out the need of higher educational institutions which would assist in the development of rural India. To implement the

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[7] Ibid., p. 3.

[8] K. L. Shrimali, Problems of Education in India: Selected Speeches, 1955-1960 (Delhi: Ministry of Information and Broadcasting, 1961), pp. 109-10.

recommendation of the commission, the Ministry of Education appointed a team of experts to study the working of the Danish Folk High Schools and Colleges in 1953. It submitted its report in 1954. Following its report the Government of India appointed the Rural Higher Education Committee in October, 1954. The terms of reference were as follows:

1. To undertake a comprehensive survey and appraisal of promising ideas, institutions and experiments in the field of higher education in rural areas;

2. to determine what specific projects and institutions should be encouraged to carry on experimental work in this field;

3. to recommend a possible pattern for rural universities; . . .

4. to suggest ways and means of making education in the existing universities more useful and more closely related to rural needs and problems, so that a sound and reasonably uniform system of rural higher education suited to our needs and resources may be evolved for the whole country.9

The committee recommended the establishment of rural institutes in its report. In pursuance of the recommendations of this committee, the National Council for Rural Higher Education was set up in 1956. The main functions of the council are:

a. To serve as an expert body to advise the Central and the state governments about the improvement and expansion of rural education in all its aspects;

b. to advise the rural education institutions and act as a coordinating agency amongst them;

9Quoted in S. N. Mukerji, Higher Education and Rural India (Bardoa: Acharya Book Depot, 1956), p. 90.

c. to examine and appraise proposals in this behalf referred to it by the Government of India and the state governments and assist them in the implementation of approved programmes; . . .

d. to advise the Government of India on grants to be made to institutions participating in the rural development schemes. . . .[10]

The Minister of State in the Ministry of Education and Scientific Research is the Chairman of the council. The post of the Vice-Chairman goes to the Secretary of the Department of Education. The Secretary of the council is one of the senior officers of the Department of Education. The remaining sixteen members--nine non-official and seven official--are nominated by the Chairman.

It is interesting to note that it was Tagore who first provided leadership in the reconstruction of villages through agricultural education. Government was slow to recognize the problem of the villages. Tagore's correspondence with L. K. Elmhirst, an Englishman, who was studying agriculture at the Cornell University in 1921, is a clear evidence of his deep interest in agricultural education of India. Elmhirst writes:

> I remember well the morning in the spring of 1921 when a telegram reached me at Ithaca, from Tagore, which read, "Come and See Me in New York." . . . I made a hurried journey to New York, and shall never forget the friendly welcome I received. "I have," said Tagore, "an institution of learning and the arts at Santiniketan which is mainly academic. It is surrounded by villages, some Hindu, some Muslim, some Santal, but

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[10]Indian Institute of Public Administration, op. cit., p. 261.

> all are decaying, all had an ancient culture, but today they appear sick. They are dying. Will you come and help me to find out why? . . .[11]

Tagore did not like the intricate life of the city. He worshipped a simple and clean life which he believed could be found only in the villages. In the introduction of Reconstruction and Education in Rural India he wrote:

> Villages are like women. In their keeping is the cradle of the race. They are nearer to nature than towns, and are therefore in closer touch with the fountain of life. They have the atmosphere which possesses a natural power of healing. It is the function of the village, like that of women, to provide people with their elemental needs, with food and joy, with the simple poetry of life, and with those ceremonies of beauty which the village spontaneously produces and in which she finds delight. . . .[12]

Elmhirst arrived at Santiniketan on November 28, 1921, and under his leadership Tagore's agricultural institution came into existence in 1922 at Shri Niketan which is about a mile and a half from Santiniketan. The education given at Sriniketan, the Institute of Rural Reconstruction, supplemented the education given at Visva Bharati. Subjects like poetry, philosophy, literature, art, religion, history, and science formed the basic curriculum at Santiniketan while agriculture, weaving, dyeing, village welfare, cooperatives, scouting, medical care, sanitation,

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[11]John Murray (distributor), Rabindranath Tagore, Pioneer in Education: Essays and Exchanges between Rabindranath Tagore and L. K. Elmhirst (London: John Murray, 1961), p. 20.

[12]Prem Chand Lal, Reconstruction and Education in Rural India (London: George Allen and Unwin, Ltd., 1932), p. 15.

and vocational education were the main activities at Sriniketan.

In 1956 after adopting the scheme of rural higher education approved by the Ministry of Education, Sriniketan was reconstituted as the Institute of Higher Education.

Inter-University Board

The Inter-University Board was formed after the Conference of Indian Universities held at Simla in 1924. It was convened by the Government of India and was inaugurated by Lord Reading, the then Viceroy of India. In his inaugural address he pointed out:

> . . . it is essential to ensure the preservation of the highest standards of university education and to safeguard against any falling away from the ideals of the best class of university training. With a multiplication of institutions, . . . there is no small risk of deviation from the right road to educational efficiency. . . . It is a time for mutual help and co-operation between universities. . . . There must be a joint effort to develop higher education in India to the highest standard. . . . The Government of India will always take a profound interest in the progress of the universities, and it is with the hope of strengthening the structure as a whole and of adding solidarity to the general system that they have initiated this conference.[13]

As a result of this conference the Inter-University Board was established in 1924. Its main purpose was to bring together the universities of the country. Some of its aims are as follows:

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[13]Quoted in P. Seshadri, "The Universities of India," The Year Book of Education: 1935 (London: Evans Brothers, Ltd., 1935), Sec. VII, Chap. I, p. 739.

a. To act as an inter-university organization and bureau of information;

b. to facilitate the exchange of professors;

c. to serve as an authorised channel of communication and facilitate the coordination of university work;

d. to assist Indian universities in obtaining recognition for their degrees, diplomas and examinations in other countries. . . .[14]

The board consists of one representative of each university in India. The Government of India also sends one representative as an adviser to the board. The board has no mandatory powers over universities, but its contributions are very significant because it organizes discussions of educational problems at different universities once a year.

Ministry of Scientific Research and Cultural Affairs

All-India Council for Technical Education

In the field of technical education, the Central Government discharges its responsibilities through the All-India Council for Technical Education. It was established on November 30, 1945. The council is presided over by the Minister of Scientific Research and Cultural Affairs.

The council has made valuable contributions toward the development of technical education. It deals with all technical institutions above the high school stage except

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[14] Ibid.

the technological departments of universities. As the council does not have any controlling powers, its work, which falls under three categories, is usually purely advisory:

i. framing of courses of technical studies and laying down of standards;

ii. improvement and strengthening of the existing institutions; and

iii. establishment of new institutions and development of facilities in new fields of technical education.[15]

For the purpose of maintaining standards in technical education:

> . . . The Council has appointed seven boards of studies in different fields, viz., Engineering and Metallurgy, Chemical Engineering and Chemical Technology, Textile Technology, Architecture and Regional Planning, Applied Art, Commerce, and Management. In addition to the 7 Boards, the Council has appointed 4 Regional Committees, one each for the Eastern, Western, Southern, and Northern Regions of the country to survey the facilities in those regions, determine regional needs in consultation with the State governments concerned, foster liaison between the industry and technical institutions and assist and advise on the desirable and coordinated development in their respective regions. . . .[16]

The council has proved very useful and effective in the advancement of technical education in India.

There are many other advisory bodies attached to the ministry, but the drive for development in technical education comes mainly from this council.

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[15]Indian Institute of Public Administration, op. cit., p. 277.

[16]Ibid., pp. 277-78.

Research Institutions

When India achieved freedom in 1947 it had scientists and industrial laboratories, but they were not enough to meet the needs of the free country. Two of the research institutions which had been established by private philanthropy before 1947 deserve special mention.

Indian Association for the Cultivation of Science, Calcutta, was started by Dr. Mahendra Lal Sircar in 1876 and is still flourishing as a research center for physics and chemistry.

The Indian Institute of Science, Bangalore, was started in 1908 by Jamshedji Tata, a leading industrialist of Bombay. It has become one of the most important Indian centers today for training and research in science and technology.

These few institutions were not adequate to meet the growing needs of the country and, consequently, scientific research was promptly recognized by the government. Moreover, India, like other underdeveloped countries, also recognized that science and technology were the only means to reach the level of material well-being of the advanced nations of the world. W. E. F. Ward summarizes this feeling:

> But in poor countries, technical education has experienced an even more dizzy swing into popularity. Until the other day, all ambition was concentrated on becoming a clerk, a civil servant, an effendi; any occupation which involved getting sweaty and oily was

> despised as utterly as it was despised by Aristotle. Today, technical education is regarded as the key to wealth and power: let us drill our own oil-wells, dam our own rivers, manufacture our own materials, pilot our own air-craft; thus shall we increase national wealth and catch up with the material comfort of the West. . . .[17]

Fortunately India is big both in size and population and so it has an advantage over the other smaller underdeveloped nations of the world. Some of the economic advantages of a country of substantial size and population in the words of Raymond Frost are:

> . . . the relatively large area--offers a variety of soils and climatic conditions for growing a wide range of agricultural products. It may offer a choice of rivers, harbors, and other transportation facilities, permitting the exploitation of wide areas. Finally, it may include one or other valuable deposits of minerals. A fairly large population also offers economic advantages that are not present in smaller groups. The creation of wealth requires the division of labor among different skills, trades, crafts, and other functions. The more people there are, the wider and finer are the possibilities of such specialization. These specialized functions have then to be organized together in the form of plantations, factories, public services; and the more people there are, the broader the possibilities of achieving effective organization. A large population also provides the possibility of a large market. The more consumers there are, the greater the potential demand for products; and the greater this demand, the more stimulus there may be for productive enterprise. Finally, a large population may yield greater resources of capital than a small one could.[18]

To exploit the advantages afforded by her natural resources, India gave high priority to science and

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[17]W. E. F. Ward, Educating Young Nations (London: George Allen and Unwin, Ltd., 1959), pp. 114-15.

[18]Raymond Frost, The Backward Society (New York: St. Martin's Press, 1961), pp. 44-45.

technology in higher education. First the existing institutions were expanded and then came the establishment of higher institutions based on the model of the Massachusetts Institute of Technology. For all these purposes the Government of India works on the recommendations of the advisory bodies mentioned previously. Among these the University Grants Commission has played a significant role and needs to be discussed in detail to delineate the increasing role of the government in higher education.

University Grants Commission (U.G.C.)

The main function of the University Grants Commission is to reorganize the universities for better teaching and research. The Central Government has no control over the universities because education is a provincial subject. The universities are established by an act of a state legislature and get capital and maintenance grants from the state governments. The U.G.C. therefore experiences difficulties in its dealings with them. Universities hinder the collection of statistical information deemed necessary by the U.G.C. Sometimes grants given by the U.G.C. are not utilized as they should be.[19] Despite these limitations it has developed steadily in its influence over university education. It is influential because it provides funds for the

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[19] C. D. Deshmukh, "Problems of University Administration," Indian Journal of Public Administration, III, No. 4 (October-December, 1957), 323.

developmental needs of the universities. During the second five year plan (1956-61) it paid RS.395.2 lakhs to all the universities for their developmental schemes in humanities and paid RS.378.7 lakhs non-recurring and RS.22.7 lakhs recurring to the universities for development of higher scientific education and research.[20]

Since the universities depend for their finances on the states and the U.G.C., the increasing interference of the government is inevitable in their internal affairs. The questioning attitude of the U.G.C. does not arise from its desire to control the universities but from concern over the wise use of the limited finances allotted by the government.

Since India is poorly industrialized, there is no other possibility of getting money for the increasing expenditure of the universities. Some of the universities such as Benares Hindu University previously received considerable donations from the princely states which have been liquidated now, following independence. The main increases in expenditure of the universities during the past decade have been in the salary and the equipment. The main sources of income are the state governments, the University Grants Commission, fees, and endowments. The state

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[20]Government of India, University Grants Commission, Report of the University Grants Commission: April 1960 to March 1961 (New Delhi: Manager of Publications, 1962), pp. 42 and 46.

governments are not in a position to allot extra money for developmental purposes. Any increase in tuition would be a great burden on the parents of the students and would arouse the students who are already notorious for their indiscipline. As regards endowments, abolition of the princely states has significantly reduced them.

Grants by the University Grants Commission in the present circumstances are the only hope for the universities to meet their needs for increased expenditures. These grants are given on the condition that the state government will bear one-third of the non-recurring and half of the recurring expenditure. The state governments hesitate to give such assurance. As an example, the universities in the State of Bombay could not raise the salary scales of their teachers previously because the state government did not want to involve itself in such a big financial liability, even though the U.G.C. was going to bear 80 per cent of the increased expenditure during the second five year plan.[21]

This strait-jacketed situation of the universities in financial matters accounts for radical actions by the Central Government in university affairs. For example, to ensure greater administrative orderliness in the internal affairs of the Benares Hindu University, some of the

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[21]Government of India, Ministry of Education, Indian University Administration (Delhi: Manager of Publications, 1958), p. 44.

actions taken by the Central Government as described by Pran Nath are given here in detail:

> . . . the President of India promulgated an ordinance on June 14th, 1958, by virtue of which all powers within the university were concentrated in an executive council of nine members, nominated by the Central Government. The pre-existing bodies . . . were dismissed. Further, a screening committee consisting of the Vice-Chancellor and two other members was constituted, with the task of recommending the removal, by the executive council, of teachers whose continued employment was believed to be detrimental to the interests of the university. Later, by an amendment, Parliament converted the screening committee into the reviewing committee. . . . In pursuance of this procedure, the exclusively nominated Executive Council first made allegations against the ten dismissed teachers, but when these allegations could not be substantiated, their services were terminated without any reason. . . . Later, the law court upheld the action of the Executive Council, considering this body as the master and the teachers as the servants. Thus the teacher community realised for the first time the master-servant or employer-employee relationship existing within the corporate body of scholars. . . .
>
> What has happened to the Benares Hindu University is gradually overtaking all the universities in the country. The process has indeed been catalysed by the University Grants Commission . . . which gives grants to the universities, which have to justify their existence to this body in terms of various imposed standards. Evidently the university governments are also standardised. The present chairman of the U.G.C. is an ex-Indian civil service man. . . . The Vice-Chancellor, who instead of being elected is now nominated, is the so-called educationist of the country who has had little contact with a university except as an undergraduate. . . . Recently the Central and State Governments have been appointing retired judges as Vice-Chancellors, presumably because they can measure the sins of university men better than their counterparts from other professions.[22]

The University Grants Commission has been giving assurance from the beginning that its existence is to keep

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[22]Pran Nath, "Letter from India," Science and Freedom, No. 18 (March, 1961), p. 29.

the autonomy of the universities intact. But at the same time it feels that the universities have a responsibility toward the society which they serve and, therefore, they have to examine themselves and put their house in order.[23] The disparity of these goals creates tension. Because the universities in India are based on the pattern of the British universities and their constitutions are similar to them, they are operated in the same spirit also.

As regards the British universities, Oxford and Cambridge started out as religious institutions. Later on King James II attempted to build up Roman Catholicism at Oxford, but the university struggled and with the flight of the King the attack on the universities collapsed. About a century and a half after the defeat and flight of James II, Oxford and Cambridge were still the only universities in England.

In the 1830's another era started in the British university world with the creation of the universities of Durham and London in 1832 and 1836, respectively. But by this time the tradition of academic freedom established by Oxford and Cambridge had become strong. Hence the two new universities, even though they did not follow the institutional arrangements developed at Oxford and Cambridge, adhered to their view that a university must be an independent and self-governing institution. As a result, all the

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[23]Shrimali, op. cit., p. 111.

universities in England, in their constitutions, charters, statutes, or acts of Parliament, have provision for autonomy as self-governing institutions.[24]

Before the Second World War, Indian universities were able to maintain themselves with financial assistance from the state, fees, and endowments. But since the war prices have gone up considerably and, partly in consequence, by 1955 such universities as Allahabad and Lucknow were in debt to the extent of 18 and 21 lakhs of rupees.[25]

It is evident from the above description that the Indian universities now face an acute financial problem. Though Dr. A. L. Mudaliar, the Vice-Chancellor of the Madras University, has expressed his resentment at the interference of the states in the affairs of the universities, many would like the situation better if the government completely took over university education. The following quotations illustrate the feelings of some of the Vice-Chancellors on this topic.

Dr. A. L. Mudaliar, Madras University:

> . . . I am speaking in general on behalf of universities. . . . It is a matter of regret to me that it should be possible for a Minister of a State to summon a meeting of the Principals to discuss various questions, academic and administrative. That is . . . to make the position of the Vice-Chancellor untenable and

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[24]H. W. Baade and R. D. Everett (eds.), Academic Freedom: the Scholar's Place in Modern Society (New York: Oceana Publications, 1964), pp. 221-22.

[25]Government of India, Ministry of Education, op. cit., p. 49.

no one with any sense of academic duty . . . can possibly continue under such circumstances.[26]

R. P. Paranjpye, Poona University:

. . . university education instead of being regarded as a joint responsibility of both the State and Central Governments should be wholly taken over by the Central. . . .[27]

B. D. Patel, Sardar Vallabhabhai Vidyapeeth:

. . . the Act of my university was passed in September, 1955 . . . since then, I have not received from the Bombay government a single naya paisa [worth about 1/5 of one cent, smallest coin in Indian currency] toward the recurring or the non-recurring grants . . . it is best that all the universities should be taken over by the Centre.[28]

H. V. Divatia, Gujarat University:

I am myself of the opinion that in view of the prevailing circumstances and our past experiences, university education should be made a Central subject. . . .[29]

P. K. Parija, Utkal University:

. . . I, therefore, agree with Mr. Divatia that the post-graduate and research departments should be the concern of the Centre, whilst the responsibility of the under-graduate departments should devolve on the State governments. . . .[30]

T. M. Advani, Bombay University:

. . . I do not share . . . that university education should be the responsibility of the Centre and the University Grants Commission only. I think the State must bear its part. . . .[31]

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[26]A. L. Mudaliar, Education in India (Bombay: Asia Publishing House, 1960), p. 69.

[27]Government of India, Ministry of Education, op. cit., p. 5.

[28]Ibid., p. 50.

[29]Ibid.

[30]Ibid., p. 51.

[31]Ibid., p. 50.

It is clear from the above statements that expansion of higher education has created financial problems which are of constant worry to the Vice-Chancellors. Under these circumstances it is small wonder that the instructions issued by the University Grants Commission have the nature of directives which interfere with the autonomy of the universities.

Conclusion

India is trying to change her pattern of higher education from the colonial emphasis on the literary to the modern emphasis on the technical. The previous view that the aim of higher education should be to develop the best qualities of man through the humanities is becoming obsolete in free India. But enlargement or improvement of any type of education, whether it is humanistic or technical, needs substantial financial support. And like many other underdeveloped countries, funds for education are hardly available in India. Major investment is in the big projects, which makes any educationist think like Raymond Frost:

> . . . Backward countries have a liking for the sort of photogenic investment projects that symbolize in a dramatic way the process of development. Perhaps the symbols are attractive because the reality is so intransigent. It may take a long time to improve and modernize the whole country, but it is some consolation to possess amidst the surrounding backwardness a few items of capital, such as dams, highways, power

> stations, that are indisputably big, modern and expensive. . . .[32]

As capital is not so easily available from any other source in a poor country like India, higher education has had to depend upon the mercy of the Central Government. The University Grants Commission, no doubt, acts very prudently in dealing with the universities. Even so, the attitude of the Central Minister for Education has sometimes baffled the educationists. In one of his speeches K. L. Shrimali, the Central Minister for Education, said:

> . . . the Government does have a certain duty to perform in that it has to put these houses of learning in order. . . .[33]

Besides financial allocation to higher education, the Central Government has laid great emphasis on science and technology. The total allotment made to the scientific and technological education during the five year plans bears no comparison to what was done in this direction prior to 1947.

As India is in a hurry to improve her economy through the five year plans by making use of modern scientific technology, it needs to be discussed in detail in the next chapter.

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[32]Frost, op. cit., p. 159.

[33]Quoted in B. D. Shrivastava, The Development of Modern Indian Education (Bombay: Orient Longmans, 1963), p. 350.

CHAPTER VI

MODERNIZATION OF HIGHER EDUCATION THROUGH FIVE YEAR PLANS

India achieved independence on August 15, 1947. In the first three years of independence, the government had to settle a number of political problems, such as rehabilitation of millions of refugees due to the partition of the country, integration of the 555 princely states with the Indian Union, reorganization of the administrative and technical services, and the formation of a constitution for the country. The plight of the country was such that the appointment of the Planning Commission was considered essential.

Planning Commission

In March, 1950, the Planning Commission was set up by a resolution of the Government of India, and its functions were defined as follows:

1. To make an assessment of the material, capital, and human resources of the country, including technical personnel, and to investigate the possibilities of augmenting such of these resources as are found to be deficient in relation to the nation's requirements.

2. To formulate a plan for the most effective and balanced utilisation of the country's resources.

3. To define the stages in which the Plan should be carried out and to propose the allocation of resources for the due completion of each stage on a determination of priorities. . . .[1]

The setting up of the Planning Commission was the first and most important step taken by the government after independence in the direction of economic planning. The Planning Commission laid down the five year plans, keeping in view the political and social objectives of the government.

First Five Year Plan

The commission produced the first five year plan in January, 1953, which covered the period from 1951-52 to 1955-56. The first five year plan gave special attention to the training of technical personnel because they were in great demand in all the spheres of life. Table 20 indicates the increase in the number of engineering and technological institutions as well as their output.

The year 1950 has been included to give an idea of the rapid progress of technical education during the plan period. Increase in admissions is reflected in increases in output, and there is a great amount of wastage due to failures. One reason for many failures is perhaps the fact

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[1]P. P. Agarwal, "The Planning Commission," The Indian Journal of Public Administration, III, No. 4 (October-December, 1957), 335.

TABLE 20

INCREASE IN NUMBER AND OUTPUT OF ENGINEERING AND TECHNOLOGICAL INSTITUTIONS DURING THE FIRST FIVE YEAR PLAN

Year	Engineering No. of Degree Level Institutions	Intake	Output
1950	35	3,337	1,700
1951	39	3,893	2,163
1952	41	4,209	2,426
1953	41	4,436	2,286
1954	43	4,457	2,602
1955	47	4,875	3,395
Year	**Engineering No. of Diploma Level Institutions**	**Intake**	**Output**
1950	61	5,350	2,146
1951	64	5,485	2,257
1952	65	5,786	2,332
1953	66	6,550	2,505
1954	70	7,619	2,982
1955	88	9,418	3,511
Year	**Technology No. of Degree Level Institutions**	**Intake**	**Output**
1950	25	782	498
1951	24	895	530
1952	27	975	525
1953	27	1,014	594
1954	27	1,011	605
1955	28	879	613
Year	**Technology No. of Diploma Level Institutions**	**Intake**	**Output**
1950	31	553	332
1951	29	731	369
1952	30	713	323
1953	32	663	242
1954	34	694	415
1955	39	1,198	561

Source: Government of India, Planning Commission, Review of the First Five Year Plan (Delhi: Manager of Publications, 1957), p. 257.

that admission to these institutions is not always based on merit. As a degree from these institutions is considered synonymous with an upward movement in the social scale, parents use all kinds of influences to see their children get admitted to these institutions. Mr. C. D. Deshmukh, the Chairman of the University Grants Commission, deplored this tendency:

> Mr. Deshmukh . . . said it was alarming to find students of obviously inferior calibre being admitted into engineering colleges under political pressure or as a result of undue influence and an exaggerated desire to give everyone a chance. He was aware of cases where Vice-Chancellors and Principals of engineering colleges in some States had been unceremoniously hustled or browbeaten by some State Governments into accepting inferior material, that was to say . . . students who would take ten years or more before they could be molded into qualified engineers.[2]

The Planning Commission agreed to a total provision of RS.14.8 crores on technological education. This included an expenditure of about RS.4.2 crores on the Institute of Technology at Kharagpur, RS.78 lakhs on the development of the Indian Institute of Science, Bangalore, RS.1.9 crores for the development and expansion of fourteen selected institutions, about RS.4 crores for the development of scientific and technical education and research, and over RS.50 lakhs for scholarship schemes.[3]

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[2]Quoted in Justus M. Van Der Kroef, "The Educated Unemployed in Southeast Asia," The Journal of Higher Education, XXXI, No. 4 (April, 1960), 181.

[3]Government of India, Planning Commission, Review of the First Five Year Plan (Delhi: Manager of Publications, 1957), p. 257.

Second Five Year Plan

The Planning Commission approves the plans prepared by the All-India Council for Technical Education in the field of technical education. On October 30, 1954, the All-India Council for Technical Education appointed a special committee to formulate schemes for the second five year plan. The committee submitted a plan of RS.80 crores for technical education during the period of the second plan. The amount allocated to technical education was RS.49.3 crores.

In the first five year plan, great emphasis was laid upon the setting up of national laboratories and research institutions, but in the second plan attention was devoted to developing the existing facilities and to coordinating the work of scientists in the national laboratories and of research workers in universities and other research centers for national progress.

On account of this planning the achievements under the second five year plan have been summarized as follows:

> . . . The number of (engineering) colleges has gone up from 65 to 100, the annual admissions increasing from 5,890 to 13,860. The number of polytechnics which offer diploma courses has risen from 114 to 196 and their annual admissions have increased from 10,480 to 25,570. Over the Second Plan the annual outturn of graduates has risen from 4,020 to about 5,700 and of diploma holders from 4,500 to over 8,000. . . .[4]

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[4]Government of India, Planning Commission, Third Five Year Plan (New Delhi: Government of India, 1960), p. 608.

This increase was considered inadequate by the Engineering Personnel Committee set up by the Planning Commission. The committee recommended the expansion of training facilities for 1,690 additional engineering graduates and 5,750 diploma holders. The committee further recommended that the capacity of existing institutions should be increased by 20 per cent in graduate training and by 25 per cent for the training of diploma holders. The government was considering these suggestions to meet the needs of the third plan.

Third Five Year Plan

The total outlay on education, including engineering and technological education, was RS.153 crores in the first plan and RS.256 crores in the second plan. In the third plan education has been allocated RS.560 crores wherein RS.142 crores are earmarked for technical education. In the first and second plans technical education shared 13 and 19 per cent, respectively, of the total outlay on education, but in the third plan technical education represents about 25 per cent of the total provision for education.

Considerable expansion of facilities for technical education took place during the second plan. To meet the demands of the fourth plan, facilities for technical education have been created as follows:

> . . . In 1966 the annual intake in engineering colleges is expected to be 19,140 (13,860 in 1961), diploma courses 37,390 (25,570 in 1961), agricultural and veterinary colleges 7,660 (5,900 in 1961), and medical colleges 8,000 (5,800 in 1961). . . .[5]

The achievements of the Planning Commission since its birth in 1950 have been outstanding. The progress made in the direction of technical education is summarized in Table 21.

TABLE 21

NUMBER OF ENGINEERING COLLEGES AND POLYTECHNICS, THEIR ADMISSION CAPACITY AND OUTTURN IN THE THREE PLAN PERIODS

Year	No. of Institutions	Admission Capacity	Outturn
	Degree Courses		
1950-51	49	4,120	2,200
1955-56	65	5,890	4,020
1960-61	100	13,860	5,700
1965-66 (Estimated)	117	19,140	12,000
	Diploma Courses		
1950-51	86	5,900	2,480
1955-56	114	10,480	4,500
1960-61	196	25,570	8,000
1965-66 (Estimated)	263	37,390	19,000

Source: Government of India, Planning Commission, Third Five Year Plan (Delhi: Manager of Publications, 1961), p. 608.

[5] V. T. Krishnamachari, Fundamentals of Planning in India (Calcutta: Orient Longmans, 1962), p. 135.

Thus, it is obvious that the five year plans have required large numbers of engineers and technicians to achieve a more rapid rate of economic growth and improvement of the standard of living.

Gandhian View

In the Gandhian view of society, educational institutions were supposed to be self-supporting. He despised all types of government controls. In his opinion a democratic state was not obliged to find money for establishing universities and colleges. People should voluntarily contribute the funds for them. Being an ardent worshipper of freedom, he said regarding grants from the government:

> . . . I hold it to be unmanly for us to continue to receive grants for our education from a government which we heartily dislike. . . .
>
> Is it not better that our children should receive their education in a free atmosphere, even though it may be given in humble cottages or in the shade of trees. . . .
>
> . . . Surely they do not need government university degrees. And if we could but get rid of the love of government degrees for our boys, the question of finding money for their education is in reality simple. For, a week's self-denial by the nation will provide for the education of its school-going children for one year. . . .[6]

He distrusted the machinery, too. His rural society did not need much engineering and technological skill. Very few would doubt the soundness of Gandhi's vision of a

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[6]D. G. Tenduklar, Mahatma--Life of Mohandas Karamchand Gandhi, Vol. Two, 1920-1929 (Delhi: Ministry of Information and Broadcasting, 1961), p. 23.

happy life, but he was battling against the times.

Brembeck briefly remarks:

> . . . His emphasis upon the integrity of the village, cottage industries and basic education was designed to redirect the modernizing river away from the cities. . . . But even Gandhi may have underestimated the size of the great force with which he was battling. . . . Still, I think Gandhi's social burden was correct. He was concerned about the wholeness of people's lives and the wholeness of the communities in which they lived. He saw that the sweep of modern industrialization takes a heavy human toll. And he valued people above machines.[7]

Conclusion

But, as has been reviewed in this chapter, the years of independence almost changed the whole scene. Considering the way these five year plans demand the technologists, it seems that all castes would adopt the new caste, the technologist, by leaving their ancient professions. The magnitude of the need for technical personnel envisioned in the plans is evident from Tables 22 and 23.

The progressive increase of technical education has led India to the technological age. India is now sufficiently equipped with scientific and technical personnel to introduce new processes of production in all fields. But the writer, in the next chapter, intends to concentrate on the problems which have come up. For it seems to him that somehow the pace of progress has been set rather too fast

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[7]C. S. Brembeck, "Education for Whole Nations," Education and the Development of Nations, ed. J. W. Hanson and C. S. Brembeck (New York: Holt, Rinehart and Winston, 1966), Part IV, Chap. IX, p. 228.

TABLE 22

ESTIMATED ADDITIONAL REQUIREMENTS FOR GRADUATES IN ENGINEERING AND TECHNOLOGY

	Second Plan	Third Plan	Fourth Plan
Civil Engineering	12,400	13,000	20,000
Mechanical Engineering	5,300	15,300	24,000
Electrical Engineering	5,600	10,500	17,000
Telecommunication Engineering	1,600	2,500	4,000
Chemical Engineering	2,300	3,500	7,000
Metallurgy	700	1,100	1,600
Mining	500	1,600	2,400
Others*	1,000	3,500	4,000
Totals	29,400	51,000	80,000

*Includes sugar technologists, jute technologists, leather technologists, architects and town planners, automobile, aeronautical, marine, public health and sanitary, and agricultural engineering personnel.

Source: Government of India, Planning Commission, Third Five Year Plan (Delhi: Manager of Publications, 1961), p. 171.

in the plans without taking into consideration the limited resources of the country. Indian administration has not yet achieved that refinement which is necessary for the projects to proceed harmoniously. When one adds to this the foreign exchange crisis, one is inclined to give up all hope about India's ability to step up beyond her existing capacity to make good the investments made in technical education.

TABLE 23

ESTIMATED ADDITIONAL REQUIREMENTS OF DIPLOMA HOLDERS IN ENGINEERING AND TECHNOLOGY

	Second Plan	Third Plan	Fourth Plan
Civil Engineering	29,000	39,000	48,000
Mechanical Engineering	12,200	26,000	33,500
Electrical Engineering	10,400	18,000	22,500
Telecommunication Engineering	600	600	800
Chemical Engineering	800	3,500	5,000
Metallurgy	200	1,100	1,300
Mining	600	4,000	5,000
Others*	2,000	7,800	8,900
Totals	55,800	100,000	125,000

*Includes sugar technologists, jute technologists, leather technologists, architects and town planners, automobile, aeronautical, marine, public health and sanitary, and agricultural engineering personnel.

Source: Government of India, Planning Commission, Third Five Year Plan (Delhi: Manager of Publications, 1961), p. 171.

CHAPTER VII

EVALUATIONS AND IMPLICATIONS OF TECHNOLOGICAL AND SCIENTIFIC EXPANSION OF HIGHER EDUCATION

In colonial days the reason for the neglect of technical education in India was the enthusiasm of the rulers for liberal education. What the government needed was a small group of graduates cut off from the mass of the people to work as civil servants and clerks. The dilemma of the colonial education was that it was for the elite who gradually assimilated the standards of the rulers. Thus higher education, instead of developing the country, created hierarchies, snobbism and erected barriers between men. But there was no open conflict between the philosophies of ancient Indian higher education and traditional Western education. Both systems deprecated practical subjects and isolated themselves from mundane affairs. J. M. Van Der Kroef describes:

> . . . In the traditional native culture, learning had an essentially magico-religious character, demanding memorization and rote application of sacred texts; its non-utilitarian function was safeguarded by the ascetic cleric, personified by the Indian Brahman. . . . Later, the gradual spread of a colonial educational system did not present a dramatic break with this tradition . . . the authoritarian, title-conscious atmosphere of traditional European learning fitted

> remarkably well into the other worldly and elite-focused atmosphere of traditional native knowledge.[1]

The dilemma of Indian post-independence higher education is that it has expanded too rapidly, which militates against the long-established position of higher education in the country. After independence the demands of national development by means of educating and utilizing the energies and abilities of great numbers of citizens have created serious problems. In this chapter the writer will first discuss the major obstacles to India's economic achievement and then will analyze the expansion of technological and scientific higher education on which all hopes for rapid development are pinned.

Obstacles to Development

The first problem is that of economic growth in India, because economic stagnation has existed for centuries in the past. The government is confronted with many problems to move forward as Henderson describes:

> . . . having inherited haphazard and inadequate tax systems based upon impoverished economies, being desirous of avoiding the ruthless measures used by the Communist countries to secure rapid industrialization, and being plagued with incompetent and often corrupt administrative staffs, have been unable to supply money or foreign-made equipment in the amounts needed. . . .[2]

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[1]Justus M. Van Der Kroef, "The Educated Unemployed in Southeast Asia," The Journal of Higher Education, XXXI, No. 4 (April, 1960), 178.

[2]Algo D. Henderson, "Asian Universities in Transition," The Educational Record, XXXVIII, No. 4 (October, 1957), 366.

The process of economic growth is slow because India cannot develop the modern technology for lack of capital and thus achieve a rapid rate of economic development. As regards adopting the new technology of the developed nations, Indian circumstances are so different from the West that it cannot be implemented successfully without making some changes in it. The Union Education Minister, Mr. M. C. Chagla, emphasized the role of the engineers in the following words:

> The future of India, he said, was tied with the future of engineers, and it was their sacred and patriotic duty to design all imported machines and fabricate them in India. . . .[3]

In search of prosperity, many developing nations are relying on their human resources. Both China and India have enormous human capital, but China is in a different position to form new capital by pushing its entire population to work long hours and imposing on them her iron discipline of forced saving. Indian democracy cannot use dictatorial methods to expedite development at the cost of human beings. Therefore, India's population has become a drag on the capital and a serious problem for the country. A sketch of India's population will help the reader gain perspective.

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[3]"Chagla on Role of Engineers," The Weekly India News, IV, No. 17 (August 13, 1965), 2.

India's Population Problem

In 1901 India's population was 284 million. The total population in 1961 was 439 million. Thus, in the last sixty years India's population has increased 155 million.[4]

But the real problem in India is not the rate of increase but the net addition to the existing population. Every year India adds nine million mouths to gobble up the margin of savings. According to economists some of the effects of this tremendous pressure of population on the limited resources of the country are, as follows:

1. Land per capita is decreasing steadily from Census to Census. The land per capita is less than three-fourths of an acre, whereas two-and-one-half acres per capita is considered by expert opinion to be the bare minimum for a decent life.

2. Owing to consequent sub-division and fragmentation more than two-thirds of the agricultural holdings have become uneconomic.

3. Manpower is surplus on the land estimated from 20 to 50 per cent of the total agricultural population.

4. All the industrial and economic development that has so far taken place has not relieved the pressure on the land, but has, by replacing hand power by mechanical power, intensified this pressure.

5. Underemployment in rural areas and unemployment among the educated classes are increasing, notwithstanding the great increase in expenditure both in the public and private sectors since independence, 1947.

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[4]A. Nevett, Population: Explosion or Control?--A Study with Special Reference to India (London: Geoffrey Chapman, 1964), p. 32.

6. India's per capita income being the lowest in the world, there is a great deal of malnutrition and under-nutrition in the country.

7. Food production has not kept pace with the growth of the population.[5]

India's other major problem is what Rostow calls the stage of self-sustaining growth.

"Take Off" Problem

India gets the largest aid from the United States. It also receives large amounts from the Soviet Union and Western Europe. Unable to industrialize herself from her own resources, India depends upon the support of the countries which have industrialized successfully. But population pressure is so great in India that rapid industrial progress cannot be sustained. Robbins concludes:

> . . . When countries such as these do invest their slim supplies of capital in heavy industry, they merely establish uneconomic monuments to nationalism.[6]

As regards the portion of the national income devoted to investment, it was under 5 per cent in 1951. It has risen to 11 per cent through the first two plans and is expected to reach 17 per cent in the 1970's.[7] This increase has hardly enabled the economy to provide for its

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[5]P. K. Wattal, Population Problem in India--A Census Study (New Delhi: Minerva Book Shop, 1958), p. 34.

[6]John Robbins, Too Many Asians (New York: Doubleday and Co., Inc., 1959), p. 171.

[7]Barbara Ward, India and the West (New York: W. W. Norton and Company, Inc., 1961), p. 146.

2 per cent annual increase in population. The economists suggest that in countries where population increases by 1-1/2 per cent per annum or more, an annual investment of 5 per cent of national income is not enough to raise the standard of living. Only an annual net investment of 15 per cent of national income or more is associated with economic growth.[8]

Thus the real problem is that India should find capital for capital formation. The only way to accumulate capital is to cut down consumption and contribute the surplus as savings toward capital formation. But it is hard to cut down consumption and provide more capital for investment when people have low incomes and live at the subsistence level. Frost remarks:

> In backward countries, capital is the most scarce of productive resources, precisely because savings are small. And their savings are small because these countries are poor. Saving means abstinence from consumption. And it is very difficult for people to abstain from consumption when they are consuming very little. . . .[9]

Another obstacle to development is India's bureaucracy.

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[8]Eugene Staley, The Future of Underdeveloped Countries (New York: Harper and Brothers, 1954), p. 260.

[9]Raymond Frost, The Backward Society (New York: St. Martin's Press, 1961), p. 161.

Administration

India's bureaucratic administration suffers from delay, corruption, and inefficiency. This administrative system was developed by the British and has continued for more than two centuries. Though India stopped sending her administrators to England for training after 1947, yet the administrative structure or attitude remains unchanged. The structure devised by the British to suit their needs does not help the free Republic of India. The old procedures based on excessive and concurrent checks and counter-checks need to be simplified to enable quick decisions to utilize the available manpower and materials.

The writer of this thesis faces serious limitations to present a rigorous analysis of the inner machinery of the government due to lack of published material. This is because the writers in India are mostly the employees of the government and are not free to write and publish as they do in the United States. The Indian writers have:

> to seek approval of an administrative officer before publication is possible. Dispassionate, objective analysis which may be sharply critical of established government policy is still not common in India.[10]

Therefore, the writer will limit his comments to a

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[10]Ralph Braibanti, "Reflections on Bureaucratic Reform in India," Administration and Economic Development in India, ed. Ralph Braibanti and J. J. Spengler (Durham: Duke University Press, 1963), p. 14.

discussion of some of the phases of administration which, in his opinion, need immediate reforms.

Red Tape.--Emphasis on rules and regulations has increased the number of files. As a result, in India today one finds in the administrators an enormous lack of personal initiative. This is one of the most frightening things for a developing country. Even the greatest leader, Nehru, failed when he wanted to minimize certain outdated regulations to break the forces of stagnation. In a recent popular article Hazard reports on the nature of the problem:

> . . . at one time Nehru had thought the hundred regulations in the field, we were discussing, were too many and appointed a commission. When the commission finished its work, the hundred regulations had become three hundred. . . .[11]

Another such story which amuses Westerners is told by Jha:

> . . . in a certain Government office, there was a large accumulation of old documents and files, dating back to decades . . . the Head of that office had a bright revolutionary idea. If the old documents were burnt, so much space would become free. So he wrote to the Head of his Department in the far off State Capital. . . . After three years and nineteen reminders . . . the sanction came. Yes, the documents could be destroyed, but three copies of each of them should first be made for future reference. . . .[12]

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[11]Leland Hazard, "Strong Medicine for India," The Atlantic (December, 1965), p. 47.

[12]L. K. Jha, "Mr. Red Tape," The Indian Journal of Public Administration, XI, No. 4 (October-December, 1965), 680.

India's administrative inefficiency has puzzled many foreign visitors and scholars. They have found that it is almost impossible to get anything done in India. It tends to cause one to conclude, incorrectly, that the colonial administrators were much better than the present native administrators. Curle analyzes the situation as follows:

> . . . Those who have taken over from a colonial power are especially handicapped by the fact that as a general principle expatriate administrators exercised initiative in making decisions while the subordinate natives were expected to adhere strictly to foolproof rules. But now that the former subordinates sit in the seats of the mighty they still keep to the book, with the result that intelligent effort is more likely to be strangled by red tape in the ministries of an underdeveloped country than anywhere else in the world. . . .[13]

Another great problem which confronts the present administration is nepotism.

Nepotism.--No amount of education or training can make the typical Indian individual adhere to honesty and loyalty unless he detaches himself from favoring his own caste and province. This seems tragic, but personal relationships, both friendly and hostile, play a significant role in making decisions. This is the reason why many students do not want to go back to India after they have finished their education in the Western countries. They feel that their merit will not be recognized either for recruitment or promotion:

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[13]Adam Curle, Educational Strategy for Developing Societies (London: Tavistock Publications, 1963), p. 64.

> Questions unasked but not out of mind of the selectors are: Who is your uncle? Are you a Brahmin? Are you a Madrasi? . . .[14]

Next I shall discuss another great cancer of Indian society, that is, corruption.

Corruption.--In India corruption is a crucial problem. The pre-independence slogans for the reform of the country have been brushed aside by the new administration, and the country suffers from a woeful lack of leadership and the whole atmosphere reeks with demoralization. Appleby blames the government ministers for setting such a tone:

> . . . each minister sets a tone, good or bad, that has a penetrating effect on his subordinates. A decision by a minister, overruling subordinate recommendations and seeming simply to favour some particular citizen at the expense of the general public, does demoralize staff and invite other acts of favoritism. . . .[15]

The areas of administration most needing attention are those where money is involved. And the deep-rooted corruption in the public life can be understood from a simple example of a railway platform. Appleby illustrates:

> . . . A purchaser of a platform ticket was given an undated ticket. He was passed through the gate without his ticket being torn in two as is required, and when

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[14]"The Sad Case of Dr. Joseph," The Spectator, CCIV, No. 6882 (May 20, 1960), 722.

[15]Paul A. Appleby, Public Administration in India--Report of a Survey (New Delhi: Government of India, 1953), p. 51.

> he left the platform his whole ticket was taken up, ready to be returned to the ticket booth and resold. . . .[16]

Another important reason why India is showing little or no economic progress is her administrative inefficiency.

Administrative Inefficiency.--At present India does not have well-trained administrators to do the kind of job required for dynamic growth. The Indian Administrative Service, the successor to the Indian Civil Service, mostly tests the intellectual attainment and needs overhauling, because, to a great extent, administrative duties today require practical intelligence and social aptitudes. By "practical intelligence" the writer means that an administrator should be able to apply his intelligence in solving concrete rather than abstract problems. Social aptitude produces the most striking effects in public relations. A city magistrate or a district collector has to come in contact with a large variety of people. His social life has to be covered by personal characteristics to make him acceptable to the public.[17]

Indian administration must be efficient and creative to save the plans from failure. The idea that their job is to administer and not to serve demoralizes the entire

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[16] Ibid., p. 52.

[17] W. T. V. Adiseshiah, "Psychological Criteria for Administrative Services," The Indian Journal of Public Administration, VII, No. 2 (April-June, 1961), 169.

staff. Even the most publicized steel mills of India reflect great mismanagement and produce less than their capacity due to lack of cooperation and efficiency. A press correspondent who visited the government-owned steel mill at Rourkela, costing more than 500 million dollars, reports his major findings:

> . . . the plant has a rated capacity of 1 million tons a year, it is producing only 55,000 tons a month.
>
> Conditions at this plant are an industrial nightmare. There are about 28,000 employees . . . it would take only 5,000 workers in West Germany or the U.S. to run the plant. . . .
>
> Workers cannot be fired, because they are government employees. . . .
>
> . . . Workers come and go from their jobs without permission. And during the night shift, they just sleep. . . .[18]

That a government employee cannot be dismissed easily has contributed greatly to stagnation. In Indian bureaucracy, a select few do all the decision making. They dislike to decentralize their power down the line and, as a result, it retards development, reduces efficiency, creates delay, and increases expense. Some shrewd politician once compared Jawaharlal Nehru to a banyan tree under whose shade no lesser foliage could grow. This tendency in administration--of exerting one's influence all around--has checked the growth of many able younger men of the nation.

The greed for power is the greatest roadblock to India's progress. There is young talent in India, but the

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[18]"Big Country Adrift--How Long Can Aid Save India," U.S. News and World Report, LVI, Part 3 (June 1, 1964), 66.

old bureaucrats would prefer to see India's plans fail rather than permit the younger generation of modern thinking Indians to make some of the decisions and to help the institutions work. Hazard describes India's failures and recommends that foreign aid should be stopped unless India breaks out of her "happy" bureaucratic prison:

> . . . a country which has neither enough guns nor enough butter and two of whose Five Year Plans failed by large margins (as well as the Third Plan, now in process of failing) must look for stronger medicine.
> . . .
> . . . . . .
> The next condition, if India is to have aid from the West, would follow naturally from decontrol. Indian administration must be simplified and modernized and made more expert at all levels. This sounds easy enough but involves the rolling of some high heads. In the early years of Russian industrialization, Five Year Plans failed just as they have failed in India; and heads rolled, literally. If India were a multi-party democracy, . . . the Congress Party would have been voted out of office long since for failure to make progress in agriculture and industrialization. But today in India's Cabinet and in her top civil service bureaucracy there is scarcely a name which has not been prominent in Indian politics and public administration, state or union, for the past twenty years . . . new names are infrequent.19

All the above factors, and others, greatly restrict India's ability to bring about change through a scientific and technological revolution. India's situation is completely different from that of many of the new emergent countries, as regards the trained personnel.

The writer of this dissertation maintains that a great expansion of university education is not going to

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[19]Hazard, op. cit., p. 46.

initiate a change on a substantial scale unless the above factors have been taken care of. India is full of devastating commission reports that she is suffering from an acute shortage of trained personnel at almost all levels. These reports have been written without taking into consideration the job opportunities for the graduates. According to this author, two poignant factors which would add to India's poverty and misery are overeducation and unemployment of the educated. The main purpose of the remainder of this chapter is to discuss briefly these two factors. There is not enough space here for a full exposition of all the features of India's serious difficulties responsible for checking her economic growth through failure to make good use of her educated personnel.

Is India Short of Skilled Manpower?

India has one million graduates and 220,000 post-graduates, according to a recent survey published in the "Yojana." Between 1950 and 1963, the output in the arts and humanities increased 4.2 times, while in science and technology it went up 3.8 times.[20]

India's tradition of higher education is centuries old. Even the modern universities have existed for more than a hundred years. Therefore India, unlike most other

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[20]"A Million Graduates in India," The Hindu Weekly Review, XV, No. 22 (May 30, 1966), 15.

developing nations of Asia and Africa, can produce a fairly large number of educated personnel.

India has more than sixty universities and about two thousand colleges with more than a million students. But this expansion of education for modern industrialization and responsible democracy requires a large capital investment. Advanced Western technology does not suit Indian conditions. The technology developed in the West uses little labor but a great deal of capital. An underdeveloped country, like India, where personnel is abundant and capital is scarce, should employ a different technology; otherwise it will face the problem of idle surpluses in unemployed workers.[21]

No one questions India's need for speed and technical personnel, but scholars have seriously doubted India's ability to use her thin resources efficiently without having trained and skillful administrators. Hazard writes:

> It takes more than resources and energy to make an industrial economy. Management is a prime requirement. And, like the professions of law, medicine, engineering, and others, management ensues from decades of experience, training, technical writings, and scholarly attention to the scope and confines of the managerial discipline. Such decades were missing from India's history when in 1948 Nehru's Congress Party decided that India should industrialize. . . . There were no schools of management education worth mentioning. . . .
> Curiously enough, one of the roadblocks to industrialization in India is its internationally respected

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[21]Richard T. Gill, Economic Development: Past and Present (New Jersey: Prentice-Hall, Inc., 1963), p. 86.

> Civil Service. This elite cadre . . . is imbued with the conviction that administration is an end in itself. . . .[22]

The most frequent and misleading suggestion given by recent writers is that India should industrialize rapidly by enlarging her facilities for technical education. The author of this dissertation has traced the development of higher education in the previous chapters to show that India has made large investments in technical education from both internal and international sources and thus has created an unbalance. The need for trained people in India is limited, because economic development has not accelerated at the rate the university education has expanded in the last two decades. Myint's comments may be quoted in support of the position taken by the writer:

> . . . after the first phase of filling up the vacancies left by the expatriates, many of these countries are in fact finding that, with their existing slow rates of economic growth, they can create employment only for a dwindling number of new university graduates and that there may even be a considerable amount of graduate unemployment or underemployment. Thus, while all Southeast Asian countries "need" trained people, only a few of them . . . have a really effective and expanding demand for them at the moment. One of the major issues is how to translate the need for trained people into effective demand.[23]

The Government of India has made large investments in industrial plants as can be seen in Table 24.

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[22]Leland Hazard, "Mahatma Gandhi Was Wrong," The Atlantic, CCXIV (July, 1964), 46.

[23]Hla Myint, "The Universities of Southeast Asia and Economic Development," Pacific Affairs, XXXV, No. 2 (Summer, 1962), 119.

TABLE 24

INVESTMENT IN SELECTED INDUSTRIAL PROJECTS DURING THE THIRD FIVE YEAR PLAN (1961-66)

Name of Industry	RS. in Crores
Metallurgical industries (iron and steel, aluminum and ferromanganese)	770.0
Engineering industries (heavy and light)	175.0
Chemical industries	140.0
Cement, electric porcelin, and refractories	60.0
Petroleum refining	30.0
Paper, newsprint, security paper	40.0
Sugar	56.0
Cotton, jute, woolen, and silk yarn and cloth	50.0
Rayon and staple fiber	34.0
Others	115.0
Replacement and modernization	150.0
Total	1,620.0

Source: Government of India, Planning Commission, Third Five Year Plan (New Delhi: Government of India, 1960), p. 456.

The unfortunate thing is that though in the long run the industrial plants of the government may become successful, at the present time they are retarding growth for lack of efficient administrative and managerial staff, as was pointed out above. Despite a steel shortage, Hindustan Steel lost 45 million dollars in 1963, according to its annual report.[24] Steel is not an isolated example.

[24]"Big Country Adrift--How Long Can Aid Save India," op. cit., p. 66.

The private entrepreneurs do not want to start up their industries in India, because transportation and communication facilities are meager and backward. For instance, a fertilizer factory's production is meaningless if the fertilizer cannot be moved rapidly from the factory to the demand centers.[25]

The private entrepreneurs have to compete in marketing their products with the producers in the highly developed areas. Knowing the obstacles in their way, they leave the industrial enterprises in an underdeveloped country like India to be undertaken by the government, since it alone can sustain large losses for a long time. Letwin says:

> . . . How can a new steel mill in Iran compete with Pittsburgh or a watch factory in Nigeria compete with Geneva? As they could not, any private entrepreneur foolhardy enough to set up factories in a backward area would only succeed in going bankrupt. . . .[26]

All these factors have contributed to the unemployment of the educated in India.

Unemployment of the Educated

In the West, jobs are looking for people, while in India the greatest task for the government is to abolish unemployment.

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[25]S. Chandrasekhar, American Aid and India's Economic Development (New York: Frederick A. Praeger, 1965), p. 148.

[26]William Letwin, "What's Wrong with Planning: The Case of India," Fortune, LXVII (June, 1963), 121.

> The bane of the university system in the East is the failure of the graduate to get a job. It is estimated in Japan that 25 per cent are without jobs, and in India the rate must be as high.[27]

It is hard for Westerners to understand how a country needing trained personnel in almost every field can have thousands of graduates unemployed. The Scientific Man-Power Committee in 1947 calculated that India would need 202,740 science teachers and unclassified scientific and technical personnel. And yet thousands of science graduates cannot find a job.[28]

The Ministry of Labor and Employment made a survey of the unemployed graduates in 1958 and found that the number of unemployed graduates in 1953 was 20,543. It rose to 32,287 in 1957 and was expected to rise to 50,670 in June, 1961. Other factual findings reported by the survey were:

1. Eighty-four per cent of the unemployed graduates held a bachelor's degree in arts, science or commerce.
2. A large number of unemployed graduates in science had specialized in physics, chemistry and mathematics.
3. Among unemployed graduates, 2.3 per cent had secured first class degrees, 24.8 per cent second class degrees, and the remaining 72.9 per cent third class degrees.[29]

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[27]Algo D. Henderson, "Asian Universities in Transition," Educational Record, XXXVIII, No. 4 (October, 1957), 362.

[28]Bhagwan Dayal Shrivastava, The Development of Modern Indian Education (Bombay: Orient Longmans, 1963), p. 476.

[29]Ibid., pp. 475-76.

The problem of employment is acute for the graduates of Indian universities. It also looms large before the foreign educated Indians.

Employment of Foreign Educated Indians

An Indian intellectual who has been trained in the Western countries wants to see India completely different from what she is. His displeasure, according to Amar Kumar Singh, is directed against nepotism and corruption in public organizations and government, red tape and bureaucratic delays, the discouraging and destructive attitudes of senior persons in positions of authority, the general inefficiency, and the absence of social justice and individual dignity.[30]

The Useems in The Western-Educated Man in India give striking examples of the above complaints:

> . . . I like to work hard and get things done. Here they ask you, "Why are you knocking your head against a wall, . . . why not sit down and get used to things. . . . I don't feel happy with inertia.
>
> There a Cambridge man is esteemed, and here I am nothing. . . . If I had not persevered on my own, I would have been lost. It is intellectual suicide, an uncreative life.
>
> My foreign training has no use here and is not appreciated. . . . I want to do the things in the way we were taught to do them, but here it is hard to get people to see the light.
>
> Decisions are slow and constantly cross-checked. . . . . Individual initiative is stifled and we do not have teamwork. . . .

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[30]Quoted in Mehdi Kizilbash, "The Employment of Returning U.S. Educated Indians," Comparative Education Review, VIII, No. 3 (December, 1964), 321.

> The calibre of the man and the quality of the work is not recognized here as is the case in England. Here it is politics and seniority. . . .[31]

Similar are the findings of Karve who quoted the feelings of his former student returned from abroad with a Ph.D. degree in the Times of India, December 17, 1963:

> . . . people are judged even in the academic or intellectual world not by the quality of research work they have published, but by the official position they occupy or by the number of universities in which they serve as examiners. . . .[32]

Expressions of the preceding types underline a major problem of wastage of human resources in the field of higher education.

The arguments I have put forward emphasize that it is not the human resources alone that will advance the underdeveloped nation but the capacity of the nation's economy to absorb them properly. India has overexpanded technical education in a vague hope of showing impressive achievements. She has not paid attention to the publications of researchers who warned the most highly industrialized country, the U.S.A., not to flood the market in the professional fields. In 1949 Harris presented his findings in these words:

> Despite the large deficiency of scientists, including engineers, . . . the country will soon catch up with the excess demand. The President's Commission

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[31]John Useem and Ruth H. Useem, The Western-Educated Man in India (New York: Dryden Press, Inc., 1955), pp. 93-102.

[32]Quoted in Kizilbash, op. cit., p. 321.

> itself admits an imminent surplus of engineers. Even in peace times, under the most favorable economic conditions, this country would not be able to employ 700,000 to 950,000 scientists and engineers despite their significant service in the modern world. Should economic conditions be unsatisfactory the demand for scientists will suffer greatly. . . . During the thirties, engineers suffered substantial reductions in pay and widespread unemployment.[33]

Harris' forebodings, though not of great seriousness at present, do not mean that surpluses will not appear in the future as conditions change. This also does not mean that everyone with a bachelor's degree in science has a job as a scientist:

> . . . The number of science graduates in the U.S.A. who go into non-scientific careers . . . is estimated to be as high as 70 per cent. In the case of engineering graduates, the figure is about 15 per cent. . . .[34]

Concluding Observations

It has been pointed out in the pages of this dissertation that the ancient Indian education and the imported British education had some common characteristics. They were isolated from mundane affairs, admitted students only in limited numbers, emphasized classical and theoretical knowledge, and paid no respect to professional or scientific fields. This pattern of higher education with minor changes in the policy of the Federal Government prevailed

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[33]Seymour E. Harris, The Market for College Graduates (Cambridge, Mass.: Harvard University Press, 1949), pp. 29 and 31.

[34]Government of India, University Grants Commission, Vice-Chancellors' Conference 1962 (New Delhi: University Grants Commission, 1963), p. 17.

till India's independence, August 15, 1947. After this began the age of science and technology. University degrees in scientific fields from pharmacy to engineering have become more common since then. This has created serious problems, and there are loud outcries against expansion or opening of new institutions:

> The Indian Medical Council has suggested that the mushroom growth of new medical colleges and the unrestrained opening of post-graduate medical courses should be stopped. . . .[35]

> . . . a provision of 370 seats has been made at the two technical institutions in Bombay--the Victoria Jubilee Technical Institute and the Sardar Patel College of Engineering. . . . Fourteen hundred applications had been received until Tuesday evening and more are pouring in. . . .[36]

The administration of some of the professional colleges has started taking undue advantage of people's exaggerated expectations of improving their lot through technical education. A press correspondent complains:

> The government is understood to have permitted the management of the Tirumala Devaswam Medical College at Alleppey to realize a minimum of RS.7,500 from each student as "admission fee." . . .[37]

This indicates that educational progress has been faster than economic development. Advances in education beyond industrial progress are destructive. The increasing

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[35]"Stop Mushroom Growth of Medical Colleges," The Times of India (June 21, 1965), p. 3.

[36]"Heavy Rush for Admission to Technical Colleges," The Times of India (June 17, 1965), p. 1.

[37]"Pay RS.7,500 and Get Admitted to College," The Statesman (July 17, 1965), p. 7.

numbers of college graduates with technical and vocational training do not by themselves induce a revolution in a society's technology. They expect the government to provide jobs for them. The masses want technical and scientific education not to use it in their own occupations but to find white-collar government jobs and thus create additional problems for the nation's bureaucracy which is already bursting at the seams.

My basic proposition is that India should not attempt to copy the West. India needs to create a new society, but the model does not need to be borrowed from the West. The West had some of the essential elements required for industrialization, such as the innovating entrepreneur, the capital, the natural resources, and above all it knew how:

> to bring and hold together an able staff, to delegate authority, to inspire loyalty, to handle successfully relations with labor and the public, and a host of other managerial talents.[38]

In the absence of all these essential components, if India frames ambitious plans for rapid economic growth, she is simply living in a dreamland. The nature of this dreamland has been suggested by some Western writers. Despite the numerous problems that have plagued her after independence, Hazard suggests:

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[38]Albert O. Hirschman, The Strategy of Economic Development (New Haven: Yale University Press, 1960), p. 17.

> Without industrialization India will sit in her changeless villages awaiting the next conqueror . . . improved agriculture and village life are not in themselves enough to save India. On the contrary, when industrialists drive the snakes out of the paddies and put up a steel, fertilizer, machine tool, or heavy electrical plant, a whole new community of twenty, fifty, a hundred thousand people is created in two or three years. The housing is all new; there is a spigot, a shower, and a flush in each dwelling. . . . There is a clinic, hospital, school, shopping center, and community center. Teachers, doctors, and social workers are recruited. The plant executives organize a club. After a while, a swimming pool is built. The wives organize plays, dancing, and the arts. . . .[39]

For those who think, like Mr. Hazard, that India can be industrialized like the U.S.A. or Western Europe, a brief description of some of India's other obstacles will be a revealing exercise. The foremost among these is the problem of foreign exchange.

Foreign Exchange

The foreign exchange crisis arises from the increased need to import food, raw materials, components, and machinery for the general needs of the economy. India has utilized foreign credits totalling RS.1,597.01 crores as of September 1, 1964, according to a statement on foreign loans presented to Parliament in February, 1965. Total foreign credit authorizations to India for the first and second plans amounted to RS.2,921.75 crores. A total assistance of RS.2,043.90 crores has been earmarked for the third plan. Actual drawings amount to less than two-thirds

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[39]Hazard, op. cit., p. 49.

of the sum committed by all sources. The gap between aid commitment and its conversion to capital goods is most pronounced in the case of the Communist bloc countries, Japan, Canada, and the International Development Association.[40]

The total receipts from exports during the third plan period (1961-66) are about RS.3,700 crores. Imports are about a thousand crores of rupees, $2 billion out of the $30 billion total national income. This means that 40 per cent of the imports are now being paid for by outside assistance. It also suggests that if the outside assistance stops, India's economic development would halt in its tracks.[41]

Foreign capital plays a significant part in India's development and is the only means to make the Indian plans succeed. Assistance by the Western nations, though significant, has not been enough to assure sustained economic growth in India. Barbara Ward suggests that the minimum aid to India should be about $5,400 million for the five years of the plan period. The optimum figure should be fixed at $10,000 million. She condemns the high interest rates of 6 to 8 per cent charged by the West on loans to

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[40]S. Kesava Iyengar, Fifteen Years of Democratic Planning--Volume Two (Bombay: Asia Publishing House, 1965), p. 1058.

[41]Max F. Millikan, "The Economic Future of India--Hazards and Promises," Asia, No. 2 (Autumn, 1964), p. 59.

India while the Russians provided over $250 million in rouble credits at 2.5 per cent for twelve years to finance the steel works at Bhilai. The Russian interest rates on loans to finance other heavy industrial ventures likewise are exceptionally low, some of them being repayable in rupees. To check Communist infiltration she advises the West:

> . . . If the Soviets can lend for 12 years at 2.5 per cent, why should not the West lend for 40 years at two per cent? Four decades will give India the boost of growth. . . .[42]

Various Other Problems

Thus, it can be seen from the above analysis that due to lack of adequate foreign assistance, India's economic development could not proceed at a fast enough rate to enable capital formation. To add to India's other problems, China attacked India in October, 1962, which caused the finance minister to present a bill costing $1,820 million for defense in 1963. Before the attack (1961-62), defense budgets were around $700 million. New taxes of $630 million were imposed on the public.[43] As a result there was a rapid increase in prices. Inflation is inevitable in a backward country when she plans expenditures beyond her resources. The Pakistani aggression in 1965

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[42]Ward, op. cit., p. 219.

[43]Henry C. Hart, "India after the Chinese Attack," The Annals of the American Academy of Political and Social Science, CCCLI (January, 1964), 52.

followed by a drought aggravated India's economic problems considerably, and today she finds herself in the grip of an economic crisis of great magnitude.

As has been pointed out earlier, the population growth of nine million a year wipes out per capita progress. Voluntary savings and tax proceeds are insufficient to prevent a rise in the price level. As India depends for her economic growth on imports of machinery and other capital goods, economic frustration is inherent in all her plans.

The government conceived the plans for rapid industrialization on too large a scale which led to inflation in the absence of adequate resources. The foreign exchange debt in March, 1964, was RS.9,364 crores whereas it was RS.2,773 crores in 1950-51 and RS.7,996 crores in 1962-63. The total debt obligation of the government at the end of the third plan will be RS.13,600 crores.[44]

All this caused the value of the rupee to decline tremendously, and ultimately on June 5, 1966, India had to devalue the rupee from a rate of RS.4.76 to RS.7.5 as equal to a U.S. dollar. The government has been cautioned by many economists after the devaluation not to plan extravagantly. On June 19, 1966, Iengar, former Governor of the Reserve Bank, warned the government in these words:

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[44]Sunil Banik, "The Third Plan and the Small Man," The Modern Review, CXVII, No. 2 (August, 1965), 101.

> . . . a further dose of devaluation would become necessary in two years, if extravagant plans, leading to total illegitimate use of deficit finance were not checked.
>
> . . . . . .
>
> . . . Any further devaluation will not only be ruinous to this country, but will erase it like many other countries in the world.[45]

Another eminent economist of India, Dr. V. K. R. V. Rao, said in Bombay on July 4, 1966:

> . . . devaluation was an unmistakable warning that the country could not afford any more to live beyond its means. . . .[46]

The government is aware now that if the plans are not curtailed, and the internal production does not go up, the country will be in trouble.

Most of these difficulties lie in the failure of agriculture which needs a complete reform. As the lack of space does not permit inclusion of details, the writer will discuss only briefly that major obstacle to growth, traditional agriculture.

Backward Agriculture

In an underdeveloped economy, land is still the basic productive resource of the country. Raymond Frost analyzes a backward society by giving an illustration:

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[45]"Iengar Cautions Against Risks of Devaluation," The Overseas Hindustan Times, XVII, No. 26 (June 30, 1966), 8.

[46]"Rao Feels Fresh Look at Plan Size Unavoidable," The Overseas Hindustan Times, XVII, No. 28 (July 14, 1966), 3.

> When the late President Somoza of Nicaragua was asked by a visitor, "General, where is your farm?" he replied, "Nicaragua is my farm." These words were intended to reflect the President's pride in the fertile lands of his country; but they also happen to define with some accuracy the nature of a backward economy. . . .[47]

Prime Minister Nehru expressed the same feeling when he said about the dams in a public speech, "These are my temples." India, like Nicaragua, is still an agrarian country. The 1951 census asserts the country by statistical definition to be 82.7 per cent rural, a decrease of only 6 per cent in the 30 years after 1921.[48]

Agriculture engages 70 per cent of all male and female workers--130 million out of a total labor force of 188 million.[49] The main problem before the government is the transformation of agriculture. Without proper irrigation and manure, production per acre in India is far less than in the West. India is a hot country; therefore water tops the list of agricultural needs. Irrigated land can produce more, and more crops per year, than land which is not irrigated. India has given high priority to the building of dams for irrigation since the beginning of her first

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[47]Frost, op. cit., p. 121.

[48]Anthony Leeds, "Cultural Factors in Education: India, Brazil, the United States, the Soviet Union--Some Problems of Applied Anthropology," Contemporary India, ed. Baidya Nath Varma (Bombay: Asia Publishing House, 1964), p. 306.

[49]Pitambar Pant, "The Development of India," Scientific American, CCIX, No. 3 (September, 1963), 191.

five year plan in 1951. Before that the peasants looked toward the Himalayas and said:

> . . . There . . . is one of nature's great ironies. Up there, where nobody needs it, the rain falls in torrents. The plain here . . . has the lowest mean average rainfall of any place in the country. Once a year the great Sutlej river hustles all the rainfall to the sea where nobody needs it. In between, everybody needs it. And nobody gets it. . . .[50]

A vast amount of material is available on the irrigation schemes of Indian planning in statistical terms, and the writer does not want to include it here exhaustively. But from Table 25 an idea can be had of the country's irrigation potential based on some of the major projects which cost more than RS.4,000 lakhs each.

Taken as a whole, the accomplishments in building dams have been considerable. But India is still short of food, because during the first decade of planning agriculture was not given the top priority. Moreover, the vast irrigation schemes are of no use unless their water is brought, at the right time and in adequate amounts, to the thirsty land where the crops are to be grown. For this the economists have suggested that at least 40,000 miles of new channels must be dug each year, and the existing ones must be maintained.[51]

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[50]Quoted in I. W. Moomaw, The Challenge of Hunger--A Program for More Effective Foreign Aid (New York: Frederick A. Praeger, 1966), p. 62.

[51]Henry Maddick, "India's Battle for Food," Current History, XLIV, No. 259 (March, 1963), 165.

TABLE 25

MAJOR IRRIGATION SCHEMES AND THE EXPECTED AREA OF IRRIGATION BY THE END OF THE THIRD PLAN IN INDIA

Name of Scheme and State (Costing More Than RS.4,000 Lakhs)	Total Cost in Lakhs (Irrigation Portion Only)	Expected Area of Irrigation to End of Third Plan in 1,000 Acres
1. Bhakra Nangal (Punjab and Rajasthan)	10,189	3,604
2. Chambal (Rajasthan and Madhya Pradesh)	5,485	800
3. Gandak (Bihar and Uttar Pradesh)	4,945	300
4. Hirakud (Orissa)	9,334	1,337
5. Mahi (Gujarat and Rajasthan)	4,178	214
6. Nagarjunasagar (Andhra Pradesh)	9,112	900
7. Narmada, Broach (Gujarat)	4,309	. .
8. Rajasthan Canal (Rajasthan)	6,647	284
9. Tungabhadra (Andhra Pradesh and Mysore)	4,453	815

Source: S. Kesava Iyengar, Fifteen Years of Democratic Planning--Volume Two (Bombay: Asia Publishing House, 1965), pp. 472-73.

When India is short of foreign exchange, agricultural development must occupy the top position. And there is hardly any chance to be more optimistic about the food-grain output unless India discards her red tape, cumbersome bureaucracy, and administrative inefficiency. Estimating agricultural problems, Spencer writes:

> . . . In irrigation, huge investments were made in projects with very long "gestation periods," vital food benefits thereby being postponed. . . . Budgets for canals have sometimes been placed in later periods, still further postponing benefits, and claims have been made that farmers frequently do not use the water. . . .[52]

To produce more food, India does not need to use the heavy machinery of the West which would displace farm labor and would be more expensive to operate. As India is short of oil and the repairing workshops, the improvement of facilities--providing better seeds, fertilizers, and irrigation--is itself able to create an agrarian revolution.

Lastly, farmers will produce more if their products can be brought to the market. In the absence of roads, villages can never join the cities and help India to industrialize rapidly. Barbara Ward is very convincing when she writes:

> . . . Anyone who has watched the stream of bicyclists with tins of milk strapped on their handlebars heading for Delhi market in the smoky dawn has seen at first hand what the combination of road and market can do for even the smallest entrepreneur. . . .[53]

India's current emphasis on heavy industries is still premature. The importing of food products has contributed to inflation and reduced the foreign exchange reserves. The history of the industrialized nations

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[52]Daniel L. Spencer, "India's Planning and Foreign Aid," Pacific Affairs, XXXIV, No. 1 (Spring, 1961), 36.

[53]Ward, op. cit., p. 188.

indicates that agricultural surpluses have created a solid base for industrial revolution. Mansoor Ali writes:

> . . . In England and other European countries industrial revolution took place between 1750 to 1850 only due to the existence of "Agricultural Surpluses." Japan's high rate of development in the last decade of 19th century and in the first decade of 20th century was also mainly due to "Agricultural Surpluses" and so was the case with Russia after the Great Revolution of 1917.[54]

To recapitulate, from the preceding brief analysis it is apparent that there is no reason to be more optimistic now about the production capabilities of the country. Most writers use the national income figures to reject any pessimistic statement. The total national income has no doubt increased during the plan periods, but the inflation and the population increases have been even more pronounced. At the same time that a rise in costs of consumer goods has increased the total national income, the general condition of the people has become even worse than it was two decades ago. The situation is summed up by B. R. Shenoy, Director of the School of Social Sciences at Gujarat University:

> Per capita consumption of food grains averaged 15.8 ounces per day in 1958. . . . Since then the average has fluctuated downward. Between 1956 and 1960 the annual per capita use of cloth fell from 14.7 metres to 13.9 metres.
>
> Further evidence of the plight of the bulk of the population shows up in the wage rates of industrial and agricultural workers. Although the output of each

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[54]Mansoor Ali, "Deficit Financing and the Rise in the Price-Level in India," The Indian Journal of Economics, XLV, No. 180 (July, 1965), 61.

> industrial worker has risen by two and a half times in the past decade, wage rates on the average have gone up by only 10 per cent. Agricultural wages have actually declined. In the context of steadily rising prices, both groups of workers in real terms, have done even less well. Moreover, unemployment has increased.[55]

A letter from a common man sometimes tells a lot more about the general conditions of the people than all the commission reports of the government. S. K. Mukherjea's letter echoes the feelings of the masses:

> Sir, human suffering is mounting daily in our mother-land even after 18 years of independence. I wonder if ever again we will see people with small means getting the bare necessities of life. . . . The Government is planning to forge ahead with gigantic and expensive projects, while the man in the street though slogging from dawn to dusk is still unable to secure two square meals . . . not to speak of any luxury.
>
> May I, therefore, appeal to our popular Prime Minister to consider sympathetically these difficulties of millions of his country-men and direct his government to invest . . . the maximum possible energy and resources on food . . . rather than embark on oil-drilling and other big experimental activities?[56]

Suggestions

The writer has discussed briefly the implications of the government's policy for rapid development through investments in heavy industries and technology. The purpose of the remaining chapter is to offer some suggestions for improving the situation on the basis of the information presented in the previous chapters.

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[55]Quoted in Robert Theobald, "Needed: A New Development Philosophy," International Development Review, VI, No. 1 (March, 1964), 22.

[56]S. K. Mukherjea, "People's Hardships," The Statesman, No. 20171 (August 14, 1965), p. 2.

Dedicated Administrators

As has been said in Chapter II, ancient Indian education functioned to create a very small number of highly educated persons. The existence of the educational institutions to a great extent depended upon the capacities of the teachers who had renounced the world. The graduates of these institutions were so trained in theology that the spirit of renunciation pervaded their whole lives. They felt that they owed no real responsibility to the community. Their interests were unaffected by any political, local, or family interest. The life of the spirit was to them nobler than the life of external power and enjoyment. The ancient Indian education considered the thinker greater than the man of action, the spiritual man greater than the thinker. To them the soul that lived in God was more perfect than the soul that lived for earthly joys.

It is apparent that no country can build an industrial economy with this type of educated personnel.

The dilemma of the ancient Indian education was that it did not train people to be materialistic enough to create economic growth in the society. The dilemma of modern education is that it creates people too materialistic to pay high regard to their duties and obligations to society. For personal betterment they hinder the economic welfare of the nation.

Today India has to revise her whole educational system to start an economic and social revolution. The ancient Indian system stands condemned today as does the Western. India must produce more food and raise the material standards of the people without falling victim to materialism. Thus the task before Indian education today is to conserve the best of the ancient education by turning out honest, strong, humble, God-fearing individuals. India must also adopt the technical efficiency of the West without taking over its ever-expanding greed for material things. There is nothing wrong with adopting Gandhi as a model who lived a simple, honest life. No doubt, his emphasis on basic education and home industries was shortsighted, as it could not solve the food problem of the nation. But his appeal for simplicity remains very attractive. Indians do not need to feel ashamed before anyone in the world just because they do not have tables, chairs, sofas, crockery, cutlery, cars, and television sets. India can take warning from the industrialized countries of the West that the cars, refrigerators, television sets, whiskies, and cigarettes do not promote spiritual and emotional development.[57]

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[57]Michael Young, "Fifty Million Unemployed," Studies in Education and Culture: in Honour of Shri D. C. Pavate, ed. G. S. Halappa (Bangalore: Diamond Jubilee Celebration, 1959), p. 330.

Thus the first suggestion is that the Indian administrators do not need to live like the great imperial administrators of England. Today they must live with the masses like the missionaries with their great qualities of head and heart to introduce changes in the society. If they retain their enthusiasm for tiger-hunting like the colonial administrators, the rich men of the community will cluster around them. The masses will desert them because they do not represent their desperate poverty. A sense of equality between the fortunate few and the innumerable poor must emerge to make the great efforts of the government successful. Without exceptional leadership characterized by great administrative capacity, India is not going to break her vicious circle of poverty.

I.A.S. Officers and Community Development

It has been pointed out in Chapter III how, after a long controversy, the British decided to start three universities in India in 1857 on the model of the London University. This education was extraneous to Indian conditions, and the great leaders of India, Tagore and Gandhi, raised their voices against it. Unfortunately, education could not get the undivided attention of the leaders because they were chiefly fighting for freedom. World War II, India's independence, and partition are some of the

other great events of history which kept India's enthusiasm for education at a minimum during all this period.

Chapters IV, V, and VI indicate the massive efforts of the government after independence toward education for rapid industrialization. But the task of changing the whole society from agriculture to manufacturing is not an easy one. Expansion of education is justified in those countries where the increase of population is restricted and where capital resources are almost unlimited. How can India absorb her ever-expanding population with very thin resources? Today the grim dilemma before the government has appeared that there are no jobs either for the educated or the uneducated.

In the absence of proper records and employment exchanges, it is impossible to give exact figures. But it is estimated that about 20 million people work for one hour or less per day, 27 million for two hours or less, and 45 million work for four hours or less per day.[58] These are the figures collected by the National Sample Survey in 1959. The total labor force was 160 million persons at that time. How can a country develop when these people who can produce are condemned to idleness? And another question related to this arises: why must a country remain underdeveloped if it can use all these people?

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[58]Quoted in T. R. Sundaram, "Utilisation of Idle Manpower in India's Economic Development," Pacific Affairs, XXXIV, No. 2 (Summer, 1961), 132.

The staggering increase of population must be restricted if the country wants to achieve economic independence. Much has been written on India's population; therefore the author does not need to suggest means to check population growth in these pages. But he wants to suggest means to utilize the unemployed to add to the nation's prosperity.

The Deputy Chairman of the Planning Commission reported that enough water to cultivate 3.5 million acres was available from the dams, but it could not be used for lack of outlets from canals to villages.[59] Here lies the challenge for the administrators. If they have established rapport with the communities, they can get the channels made. Students and farmers will be glad to help them, especially when they are free. A one-mile-long channel can irrigate 100 acres. The village-level worker is paid RS.80 to RS.100 a month. His low salary, training, and heavy responsibility check his effectiveness with the villagers. The writer suggests that the I.A.S. (Indian Administrative Services) officers should visit the villages frequently and help the local authorities succeed in such projects as irrigation and flood control, land reclamation, afforestation and soil conservation, road construction, construction

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[59]Om P. Tangri, "India's Community Development Program," International Development Review, III, No. 3 (October, 1961), 32.

and maintenance of field channels for irrigation, construction and repair of wells, tanks, and school buildings.

But these officers can come out of their offices when the red tape that keeps them busy is cut short, and when they have been trained differently. Today they think that going to villages reduces their prestige. The administrators should be selected on the basis of their aptitude to render services rather than their ability to deal with the files. No doubt these suggestions will make them resist because they have formed their attitudes under the old regime, but new methods of selection and training must be developed in order gradually to solve this problem. How they should be selected and trained is a subject by itself and too vast to deal with in this dissertation.

Charismatic Leadership

Much has been said by writers about the need for democratic public participation to introduce change in an underdeveloped country. However, it is the observation and experience of the writer that it does not work successfully in India. The majority of the people in India do not have any opinion on many aspects of life. Therefore it again comes back to the leader to make decisions for the people. Murphy's attempt to modify intergroup attitudes through group discussion among college students at Poona University nullified his hypothesis that there would be more modification of intergroup attitudes as a result of group

discussion. The students complied with the instructor, and the greater the emotional force of his appeal the more they felt the need to conform to his presentation.[60] The writer discussed the ancient culture, the education, and the traditions of India in the second chapter to help the reader understand the basic foundation of the society. It is the tradition of India that people learn the way of life from someone who is already treading it. In the past they learned renunciation and how to search for the Eternal from their teachers; today they need to learn to build and prosper from their leaders. The leaders of today need to have saintly qualities to inspire the whole country to create a new era. In other words, charismatic leadership has more appeal in India than Lewin's democratic leadership. It can now easily be understood from the above analysis why Gandhi and Nehru were so popular in India.

The root cause of all problems of corruption, inefficiency, wastage of resources, economic stagnation, and increasing violence is that people think the present administration is full of dishonest, corrupt men who plan everything to enhance their wealth, power, and position. Appleby, as has been described in the preceding pages of this chapter, was right in his diagnosis that a government minister can set the tone for a whole department.

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[60]Gardner Murphy, In the Minds of Men--The Study of Human Behavior and Social Tensions in India (New York: Basic Books, Inc., 1953), pp. 114-15.

Balance between Professional and General Education

Another problem which has been discussed in this dissertation is that of putting emphasis on science and technology. It is true that in the age of science and technology an emphasis on a scientific education is inevitable. But scientific education loses its meaning when ever-expanding numbers of students want science education only to secure attractive employment with the Indian bureaucracy. It is a dangerous trend. The young generation has been so misguided by the prestige of pure science that thousands of graduates in physics, chemistry, biology, and mathematics cannot find a job. Today science needs to have a broader meaning. The researches in the developed nations in education, sociology, psychology, literature, and economics indicate that findings in these branches of studies are as novel and significant as in any field of pure science. Researches in any field of knowledge are now based on scientific principles and deserve attention. For this reason the writer suggests that the government should do all it can to maintain balance between general and professional education.

Excellence in Education

Another major issue in the field of education in India is the quality of education. Education has developed so rapidly that universities are affected by the lower

standards of applicants for admission. The result, as has been stated earlier, is that there are too many people for too few jobs. The problem becomes intense when they do not have abilities even for the jobs which are available.

University education cannot be improved without improving primary and secondary education. Teacher training, accordingly, is the only solution to improve the poor quality of teachers and pre-university education. Greater emphasis must be laid on high salary, impartial recruitment, teacher training, inservice training, and refresher courses.

In India teaching has yet to be built up as a profession. And a dignified profession cannot be built when recruitment in colleges and universities is based on nepotism. Indian colleges and universities stand condemned as regards the recruitment of faculty. Most of the teachers in a college or university today are the graduates of the same institution and belong to the same caste and province which the institution represents. To substantiate the preceding statement the writer submits a list of the teaching staff of the Economics Departments of two universities in Table 26. These are not exceptional.

The writer suggests that the government should appoint a commission to recruit teachers at all levels or review all the applications and challenge the appointment

TABLE 26

STAFF OF THE ECONOMICS DEPARTMENTS OF JADAVPUR UNIVERSITY, CALCUTTA, AND ALIGARH MUSLIM UNIVERSITY, ALIGARH

Jadavpur University, Calcutta		Aligarh Muslim University, Aligarh	
Chakraborty, P., MA Calc.	Prof., Hd. of Dept.	Khan, M. S., AM Mich., MA	Prof.
Banerjee, H., DSc (Econ) E. H. Rotterdam	Reader	Salim, A., MSc (Econ) Lond., MA	Reader
Sarvadhikary, P., MSc MA Calc.	Reader	Banerji, P. C., MA DPhil Alld.	Reader
Ghosh, A., MA DPhil Calc. (on leave)	Reader	Siddiqi, E. R., PhD Bonn, MA	Reader
Banerjee, Mrs. Anita, BA Calc. and Camb.	Lectr.	Raz, M. A., MA Saug. and Stan.	Reader
Das Gupta, A. K., BA Calc. and Camb. (on leave)	Lectr.	Qayum, A., DESc E. H. Rotterdam, Dip Econ Planning and Nat Acctg Inst. for Soc. Studies (The Hague), MA LLB PhD	Lectr.
Majumdar, K. K., MA Calc.	Lectr.	Siddiqi, A. A., MA Luck., PhD	Lectr.
Dasgupta, Mrs. Sipra, MA Calc. (on leave)	Lectr.	Qureishi, I. A., AM Mich., MA	Lectr.
Majumdar, A. K., MA	Lectr.	Thomas, Miss A., MA Agra	Lectr.
Dutta, K. K., MA Calc.	Lectr.	Siddiqi, M. M., MA	Lectr.
Datta, P. C., MA Calc.	Lectr.	Ahmad, M., MA	Lectr.
Chatterjee, B., MA Calc.	Lectr.	Khan, W. A., MA Osm., DrRerPol Kiel	Lectr.
Bose, Mrs. Manjula, MA Calc.	Lectr.	Khan, Mrs. K. S., MA Osm.	Lectr.
Chakraborty, K., MA Calc.	Lectr.	1 Sr. Res. Fellow	
5 Res. Assts.			

Source: The Association of Universities of the British Commonwealth, Commonwealth Universities Yearbook 1964 (London: The Association of Universities of the British Commonwealth, 1964), pp. 511 and 616.

or cancel the annual government grant if the best candidate was not selected.

This will not solve the problem completely, but favoritism will come to an end if the appointing authorities know that there is some screening committee above them.

The suggestion might seem bordering on the freedom of higher institutions, but drastic measures have to be taken if freedom is abused. There is no other way to maintain excellence in education.

Work and Study Program

A nation which is short of everything does not need to keep her students ten months in the classrooms. The writer suggests that there should be a one-month holiday, four months of field work, and seven months of classroom study. They should be sent to the places where their capacities can be best utilized. Thus, the most underdeveloped areas of the country can experience rapid development.

Planned Enrollment

Figures on unemployment among the educated mounted from 490,000 in 1961 to 780,000 in 1963.[61] This suggests that India must decide the number of students to be admitted to various higher educational institutions and for

[61]Banik, op. cit., p. 99.

what branches of study. In view of the present chaotic situation, it is necessary for the institutions of higher learning to enforce strict rules for admission. Tests of various types should be made in India to evaluate the performance of each aspirant for higher education. And those who do not succeed in these tests should be sent to trade schools to prepare themselves for immediate employment.

The nation must feel an obligation to provide employment opportunities to her intellectuals. There is no use in sending students abroad if on return their talents are doomed to remain unused in the bureaucratic structure.

Development in Small Doses

India should attempt to develop gradually to avoid failures of great magnitude. The expansion of university education without a corresponding ability to absorb the graduates in the underdeveloped economy of the country is a matter of very serious concern.

In the previous chapters it has been pointed out that the colonial rule did very little to raise the economic level of the people. Its policies favored the European and destroyed the native businessman.

Economic independence is a product of decades of planning and achievement. In this respect it is very different from political independence, which can be had sometimes within a very short time.

No doubt, big national plans have succeeded and added glory to the nation in the West. But India is a poor country and has massive domestic and international problems. Prematurely big plans in India may actually paralyze the whole economy.

The writer suggests that India should focus on small productive schemes after carefully analyzing the total situation. They must be productive to build capital which is so scarce and whose lack restricts all developmental activities in India.

Conclusion

India today finds herself in a dangerous position created by the plans which have been too grand for the country's capacities to absorb. Her developmental policies in education have created a kind of rivalry between the colleges to increase their size. In the annual reports, heads of the colleges express the remarkable progress made by their institutions in the last decade. A large number of enrollments enhances their prestige. What happens to the graduates when they go out in the market to seek employment, no one seems to be much concerned about.

In this chapter several suggestions have been put forward by the writer to develop the country's economy to utilize the productive capacities of the educated. The writer fully understands that a backward country has to

take many hazardous steps if it is to make its economic organizations productive and efficient.

The writer has stressed leadership and capital more than any other factors responsible for rapid development. The values and attitudes of the leader have been considered preconditions for development. And if the country does not have enough to invest, it would soon find all its plans frustrated. Therefore India must depend upon foreign aid and her increased exports.

The writer has also indicated in this chapter that though disproportionately large population increase is a great hazard to capital formation, this liability may be converted into an asset if the labor of the people can be used to construct dams, canals, roads, schools, and hospitals which would increase more production in the future and raise the national income.

As India has imported food grains amounting to 6,313,000 tons in 1963-64,[62] the writer has suggested that agriculture--being the main occupation--should be given the top priority in all future plans. The emphasis on heavy industries which has been the major cause of inflation and devaluation was premature. In the future, India needs to make its plans a little more practicable in all fields to check growing misery, frustration, and unemployment in the country.

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[62] Ibid., p. 97.

If well-integrated short-range plans are prepared and efficiently administered to stimulate growth, the writer has full faith in India's capacities to break the vicious circle of ignorance and poverty. But she cannot make costly mistakes in planning or in implementation without heading to her doom.

CHAPTER VIII

CONCLUSIONS

The preceding review of the expansion of higher education in India reveals that the government after independence has been very enthusiastic about attempting to modernize this field in order to develop the economy of the country. It also points out that the British government only partially modernized India and that the present administration was compelled to begin its operations with a nineteenth century economy. The rapid educational expansion has not been able to contribute much to the acceleration of Indian economic development because there have been many roadblocks in its way, such as the population explosion, the lack of capital, and the outdated public administration.

A realistic assessment of the country's need for trained personnel needs to be made in view of the country's economy. If the economy of the country is not developing at the desired level, then a further expansion of the present pattern of higher education means more and more unemployed graduates. The country cannot benefit from higher

education if the country's economy is unable to absorb the trained personnel.

The main finding of this dissertation is that India's higher educational developments are not coordinated with the economic growth of the country. Earlier chapters reveal that never before, in the whole history of the country, was there such a rush for college education which would have created a serious imbalance between education and economy.

The purposes of higher education in the ancient days were other worldly. The graduates, mostly trained in theology, did not look toward the society or the government for employment. During the British period institutions of higher learning were limited, selective, and costly; therefore the rich alone could avail themselves of the educational opportunities. And in case they could not be absorbed into the ruling bureaucracy, they went back to their estates and thus the problem of unemployment never baffled the government. But today, now that the masses have awakened and the government has provided facilities for their education, India has a surplus of trained college graduates without jobs in almost all fields. The government finds itself unable to accommodate them because the country's economy is relatively stagnant. And thus unemployment of the graduates is one of the most urgent problems confronting the government.

It is clear, then, that effective efforts to remove economic stagnation should now receive the highest priority. Attempts to increase the educational output alone are unrealistic and premature.

Summary of Findings

The preceding discussion of higher education can be summarized as follows:

1. The ancient system of higher education was very rigorous and selective. It put great emphasis upon philosophy and the understanding of God. Therefore it could never become popular and remained mostly confined to the Brahmans.
2. There was no serious break between the Upanishadic and the Buddhist educational philosophies. Both emphasized salvation and spiritual life. The remarkable change made by Buddhism was that it admitted the Sudras to its educational institutions.
3. Muslim education did not flourish in India because it laid great emphasis on the observation of certain religious practices and worldly affairs.
4. The present university system was initiated by Wood's Despatch of 1854.
5. The British introduced scientific and technical education, but emphasized it to only a minor degree.

6. After independence the Federal Government has expanded higher education enormously by giving huge grants to universities and colleges.
7. The state governments have failed to finance higher education adequately due to their limited resources; therefore it has become necessary for the Federal Government to increase its contribution.
8. Since the Federal Government has put a preimum on technical education, higher education in India is changing from a literary to a technical pattern.
9. In absence of adequate facilities, the increasing number of students in Indian universities and colleges is responsible for lowering the standards of education. The number of unemployed graduates is also climbing up.

Major Conclusions

1. In a poor country, like India, where the resources are limited, the major problems before the government are to maintain standards in higher education and to provide jobs for the increasing numbers of university graduates.
2. As the provinces cannot meet the growing costs of higher education, the federal financing of education will need to be on the increase.

3. For better utilization of its educated manpower, the Government of India needs more realistically planned development in the sphere of higher education.

Suggestions for Improvement of Indian Higher Education

Though it is difficult, due to many cultural, social, historical, and economic barriers, to formulate foolproof suggestions, yet the writer of this study with all due humility feels obligated to make the following suggestions:

1. The progress of the country will require the imagination and energies of her researchers; therefore the Government of India should aim at providing more nearly adequate research facilities in the country.
2. India does not need to open new colleges and universities if they function merely to increase the number of unemployed graduates. She should concentrate on raising the quality and increasing the functional utility of existing institutions and utilizing the services of the educated manpower more effectively.
3. The Federal Government should increase substantially its contributions to higher education to maintain and enhance its quality.
4. Finally, the traditional values of the culture, such as honesty, simplicity, and austerity, should be

properly understood, appreciated, inculcated, and exemplified by leaders of higher education. If these vital qualities are lacking in those who receive the benefits of higher education, India's vision of becoming a great nation will never be translated into reality.

GLOSSARY

Apara Vidya--lower knowledge.

Asrama or Ashrama--a hermitage, any of the four stages of the Brahmanical scheme of life.

Atman--soul, self, or individual essence.

Bhikshu--a Brahmanical or Buddhist mendicant ascetic.

Brahman--a person of the highest caste among the Hindus whose chief duty is the study and teaching of the Vedas and the performance of religious ceremonies.

Brahmacharya--celibacy.

Crore--ten million.

Dharmashastra--a metrical law book.

Guru--a religious teacher.

Gurukula--family of the teacher, religious institution.

Kshattriya--one belonging to the governing and military caste, second of the four great Hindu castes.

Lakh--one hundred thousand.

Madrissa or Madrasah--a Mohammedan college.

Maghavan--the great national god of the Hindus who brings down the rain, wields the thunderbolt, overcomes enemies, and rewards his worshippers.

Maya--illusion, magic.

Mofussil--the provincial or rural districts.

Nyagrodha--fig tree.

Naya Paisa--equal to 1/5 cent, smallest coin in Indian currency.

Para Vidya--higher knowledge.

Prajapati--lord of creation.

Rupee--the principal coin of India equivalent to .21 U.S. dollar till June 5, 1966.

Samkara--expositor of the Vedic philosophy.

Sanyasi--a wandering, homeless, religious mendicant.

Shishya--disciple.

Sudra--the lowest of the four great Hindu castes.

Tripitaka--the three divisions of Buddhist scriptures.

Upanishads--Hindu treatises concerned with the nature of man and the universe, forming a late part of the Vedic literature.

Veda--the most ancient sacred literature of the Hindus.

Yama--the lord of the infernal regions.

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