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Technical Education in Lucknow (1854-1947)

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The system of education introduced under the East India Company encouraged literary and philosophical studies rather than those of a more practical character. The company needed some Indian clerks and officials for its various departments. As a result, while pupils in high schools and arts colleges increased at a remarkable and rapid rate, the growth of technical education became very slow.

There were no industrial or technical schools for training of workers for modern organized industries. The Despatch of 1854 for the first time realized the need of giving the people an education of "such a character as may be useful for the people of India in their spheres of daily life". The recommendations of the Wood's Despatch were neglected by the Government and it continued the defective system of education and produced only clerks on small salaries for them.Since 1880, Indians had been clamouring for more government expenditure and facilities for technical schools in Lucknow. Though the Indian Education Commission had to recommend the need of technical and industrial school education, the view of the Lieutenant Governors of these provinces was very different. The Government of India instructed the local government to adopt the recommendations of the commission but the local government made some sporadic attempts to spread technical education in these provinces. These schools were situated at Gorakhpur and Banaras. The Talqudars of these provinces were demandingthe establishment of industries in Lucknow during the last decade of the 19th century. The process of a long-awaited Lucknow scheme of the school also made some progress. The British Indian Association announced its contribution of Rs. 600 and donated the Wingfield Manzil building for it. On 5th of November, 1887 Sir Alfred Royal applauded the interest taken by the British Indian Association and its great financial contribution towardsThe Industrial School, Lucknow. Persuaded by the demand of the Taluqdars, The Industrial School of Lucknow was established on 15th of November, 1892. In the beginning, the admissions were restricted to the sons of railway employees and other artisans. They were not charged with any fees and were also supported with books and stationery. But in 1893, when it was found that there was a demand from other classes for this kind of education, all the restrictions were removed from the institutions and the admissions were thrown open to the general public on the payment of low fees. At the same time, new subjects were included in the curriculum of the school. The curriculum was divided into two parts, one was theoretical or literary and the other was practical. In the literary curriculum, the main subjects were English, Vernacular, Arithmetic, Euclid, Menstruation and Elementary Mechanic. In partial curriculum, the main subjects were all the subordinate grades of mechanical engineering that were necessary to a foreman, such as, mechanic, railway engine, the railways workshop, road engine, and the iron factory and the process of cotton spinning as employed in the mills established in these provinces. In the year 1895-96, the new classes of mechanical apparatus had been started and other subjects like printing, trade, photomechanical works, carving, ferrotype, photography, manual drawing, free hand geometrical model, scale drawing, carpentry, smithy work and glass blooming were introduced in the curriculum. The school was placed under the control of a committee consisting of the Director of Public Instruction, the Inspector of School and the Superintendent of Awadh and Rohilkhand Railways. Later, under the orders of the

Government, this committee had been strengthened by the appointment of a Principal of the Engineering College, Roorkee. The committee appointed by Auckland Colvin, notified the Governor that a Principal for the school had been obtained through the Secretary of State and a subordinate staff had been recruited in India.

The policy of the Indian Government regarding the recruitment of superior and responsible officers was to prefer Europeans both in industries and engineering schools. Indians mainly occupied the subordinate and clerical seats. Besides the Principal, a teaching-staff for the industrial school was appointed which included two teacherseach for English, vernacular, drawing and carpentry. In 1893, the staff was increased with the appointment of a second blacksmith instructor and a third vernacular teacher. The Industrial School of Lucknow made a useful scientific apparatus. When this institute started its functioning, the apparatus and chemicals were supplied from the Bombay factories through the school. However, this was a very difficult and expensive system. So, a cheaper and more satisfactory plan was then set up. It was found that almost all the instruments required for school use, could be manufactured by local workmen. A set of instruments for school purposes had been manufactured at Lucknow under the supervision of the Headmaster of The Industrial School. A model was borrowed from the Jubilee High School and this experiment was successful. After this experiment, many complete sets of scientific apparatus had been made and supplied to the schools of Moradabad, Jhansi, Aligarh, Saharanpur and Lucknow. The school proved its efficiency in manufacturing cheap and suitable apparatus for elementary science teaching. This school got some popularity soon after the establishment. The number on the tools increased from 107 in 1896 to 179 in 1897 and the average daily attendance increased from 66 to 150 or 27%. The institution's expenditure rose to Rs. 7,240 as against Rs. 4,891 three years back. But it was noted that the boys started taking less interest in staying in the school rather than seeking jobs because of their poverty. So, from July 1895, it was decided to grant scholarships to deserving candidates. The scheme of scholarship was successful. This increased the number of scholars tremendously within six months and in response, the figure rose from 107 to 140. The demand for technical training increased in this school in comparison to artisans. The number of artisans had steadily fallen from year to year because there was more opportunity for employmentin the technical field. Railway workshop took youths as apprentices. In the year 1896-97, the attendance of TheIndustrial School was 16. The attendance was not satisfactory. In the year 1897, the number of students fell to a hundred and six. The Government realized that the school had not been a success, so it was brought into direct connection with The Thomason College Roorkee. In1887, the enrolment rose to 126. Since its establishment, the school was imparting literary education side by side with manual instructions, but it had not been established for any such purpose. The committee was determined to abolish the literary classes at the Lucknow Industrial School which had caused the number of students to slump from 155 to 59 in the year 1901-02. Some more changes had been made by the Director of the school during the year 1901-02. In this school, a 'Bazar' workshop was to be established on the line of the Casanova School at Naples. As a trial, the workshop started functioning in a rented house which was situated in one of the busiest places of the city.

According to the suggestion of the committee, a night school was also introduced in the building at The Industrial School. Another suggestion of the committee was introducing special classes to train boys for admission at The Thomason College, Roorkee. But all these experiments resulted in failure and the management committee recommended their discontinuance which the Government accepted. The experimental work in the 'Bazaar'

workshop, the night school and the Roorkee Preparatory Classes were all abolished. The Government introduced a revised scheme providing for technical education supplemented by a general education. The reintroduction of elementary general education caused a rapid increase in the number of boys at The Industrial School, Lucknow which rose from 94 to 161. With a new scheme and increased expenditure, The Industrial School, Lucknow regained its popularity but technical education was in its infancy. The Government increased the total expenditure on technical education to Rs. 10, 387 out of which Rs. 893 was met from fees and income from the Manufacturing Department. The net expenditure therefore was Rs. 9,494 against Rs. 1,245 in the year 1902-03. The total expenditure on a student amounted to Rs. 144 per year. In the year 1907, the Lieutenant Governor of the United Provinces John Hewett, summoned an industrial conference at Nainital which formulated a scheme for industrial development in the provinces. This conference made certain recommendations. The conference emphasized that The Industrial School at Lucknow should extend and better be equipped. Amongst the recommendations of the conference for the advancement of industries, the most modest proposal was that, exhibitions should be encouraged. The Despatch of the Secretary of State on general scheme for the development of industrial and technical education in the United Provinces was received in July 1909. In1914 on the recommendation of the committee its name had been changed from Government Industrial School to Government Technical School. According to the Despatch, a post of the Director of Industrial Inquiries and a post of Inspector of Industrial Schools had been created and a scheme for The School of Arts and Crafts was finalized. According to the recommendations of the conference in 1907, The Industrial School, Lucknow setup a new workshop and received equipment. The school became well-equipped to give a sound practical training in the subject required. To maintain the standard of this institution, preparatory classes had been closed and boys below 12 years of age were removed from the school. As a result of the Industrial Conference held in 1907, The School of Arts and Crafts was founded at Lucknow which could be completed only in 1911. The School of Arts and Crafts provided instructions on the principles of arts and design, on various crafts and industries such as metal work, wood carving, stone carving, calico printing, lithography, framework, drawing, painting, modelling, design, carpet weaving and house decoration. In1925, Sri A.K. Haldar, a famous artist of the Indian style of painting and design was appointed as the Principal of the school. He laid emphasis on designing of articles and also on carrying out the work of paintings in Indian style. Thus, the school made great contribution in preserving and propagating the cultural tradition of the country in arts and sculpture, shape making, jewellery and repose. The School of Arts made some success. In its praise, a newspaper editorial mentioned that a similar school should be set up in large towns. In spite of the best endeavours of the government, The Technical School of Arts College, Lucknow could not make a satisfactory success. The United Provinces on the advice of the Upper India Chamber of Commerce, considered that the technical schools were 'unnecessary' and were of the opinion that industrial schools for local handicrafts would serve no useful purpose. The Government did not pay enough attention on these provinces regarding the technical education and by negligence, it discouraged technical education. Sir James La Touch, the Lieutenant Governor of the United Provinces, thought that there was hardly any need for the development of higher branches of engineering. Though it was true that in some cases the trained pupils were unable to find any occupation in the industries, they also showed their unwillingness to further teach the newcomers. But for this unfortunate situation, the government was totally responsible. The Technical School at

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Lucknow was established with the object of improving local methods and to train children to earn their livelihood. But the lack of co-ordination between the courses of instruction and the demand of special local industries increased unemployment among the trained technical youth and made the technical institution unpopular.

The Government's policy of discrimination towards Indians in the matter of appointment also increased the problem of unemployment among the trained youths because the British Government always preferred an Englishman on the post of responsibility. Even for The Technical School of Lucknow, the Secretary of State appointed a British Principal and the English mill owner also adopted the same policy of discrimination. La Touch, the Lieutenant Governor of the United Provinces wrote that while the European mill owners of Kanpur wanted Indian labourers, they preferred a European supervision. This was a serious obstacle in the growth of technical education. The problem of unemployment of technicallytrained students was not only the particular problem of these provincesbut it was an all-India problem. So, the Government of Indiaappointed Lieutenant Colonel Atkinson and Mr. Dawson's Committee to make an enquiry as now the employers were to be in touch with labourers. The Atkinson Dawson Committee concluded that there was practically no scope for high grade mechanical and electrical engineers in India. There was obviously no point of encouragement for the growth of higher technical institutions, when there were no industries to absorb and train them. The Government decided to encourage industrial and technical schools. The financial condition was also the most serious obstacle in the development of technical education in India. Due to lack of finances, the scheme of The Technical School, Lucknow was delayed for more than ten years. The Act of 1858 vested the Secretary of State in Council with controlling powers over the Government of India. The Secretary of State's Council controlled the expenditure which meant that no additional expenditure could be incurred without its sanction. The above policy of finance also restricted the development of The Technical School, Lucknow. Due to the financial stringency, The Technical School, Lucknow and School of Arts and Crafts could not make their standard as required. Industrial backwardness in India and particularly in these provinces discouraged technical education. It could not make adequate progress in these provinces because the industrialization was slow. The total capital invested in Indian industry in 1901 was Rs. 35.5 crores, equal to the amount raised per week in England and Ireland. Due to the industrial backwardness, the demand of trained technical personnel was limited. But the government was still unsure in encouraging industrial activities and these doubts continued till the outbreak of the Second World War.

The Second World War produced a number of salutary effects. The British Government had to provide technical training required for war purposes. In fact, every technical institution in the country became a centre for military training. After the war ended, the Government realized that education could not be the concern of the provincial governments only and the Government of India prepared one of the most comprehensive plans for the organization of technical education on anall-India basis. In 1940, a Board of Scientific Research was created with the object of promoting industrial research. There were wide gaps between the requirements for scientific and technical manpower and the existing resources. The Government of India with the plan to bridge the gap in 1945, appointed an ad hoc committee known as Sarkar Committee to inquire and advise on the provision of facilities 'for advanced technical education in India'. The committee recommended that not less than four higher technical institutions were required. By a resolution of the Government of India in November 1945, the 'All India Council for Technical Education' was established. It was the most important body, advising the central and state governments on matters relating to the

organization and development of technical education in India. It made a survey on the whole field of technical education in consultation with state units. Recommendations of the committees appointed by the Government of India naturally benefited the provincial government also. The World War 2 crippled the economy of the country. After the end of the war, a reconstruction started and the needs of the technically trained personnel expanded during this period. It became impossible for the British Government to recruit all technical personnel from abroad. Thus, higher engineering colleges had to be started. The Government created higher posts for the Indians. This policy increased the opportunities for employment in this field. Technical institutions attracted more and more students. The middle classes were compelled by the shattered economy of the country and moved towards technical and vocational education. Both the Government of India and the provincial government made efforts to improve technical institutions and got partial success. The Government's policy of discrimination against the Indians in the matter of appointment also increased the problem of unemployment among the trained youth. Even for The Technical School, Lucknow, the Secretary of State appointed a British Principal. Due to the industrial backwardness, the demand for trained technicians was limited. But the technical institutes could not reach its standards because of the lack of funds and defective government policies. The problem of finance remained unsolved till 1947.

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