

ROLE OF BANGABASI COLLEGE

Imparting Higher Science Education

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In the domain of higher education in India, Bangabasi College was the direct outcome of love and respect for the country vis-a-vis the people. The college had its root in the united appeal of a few devoted personalities of those days, which took definite shape in the mind of its founder Acharya G. C. Bose. During the early phase of the fourth quarter of the last century the then Bengal experienced abrupt change over in the socio-cultural perspectives. During this period a number of collegiate institutions came into existence and it was led by Pundit Iswar Chandra Vidyasagar by establishing the Metropolitan Institution in 1879. Inspired by the great Pundit, Acharya Bose started Bangabasi College with profound courage and inartificial zeal. From a very small and unimpressive beginning Bangabasi College, in course of time, became an ideal institution in the soil of Bengal. Bangabasi College established a tradition of its own—it took the heavy responsibility of shaping the sons of the soil in an ideal fashion to facilitate the struggle for freedom—not only a political freedom but also the relief from poverty, ignorance and age-long exploitation.

The history of Bangabasi College reveals the picture of many ups and downs, multifarious hopes and desires,

integrated joys and sorrows. In spite of all the adversities Bangabasi College traversed through a long way with the attainment of full glory of educating the common people of India. Bangabasi College did never hesitate to invite the students of all categories and from all economic levels. It was for that reason this college came very close to the people and naturally it received people's reverence all through the time. Bangabasi College continuously faught for giving its students a solid foundation of knowledge and thinking to stand on it firmly in their future course of life and activities. It did not follow the principle of the then alien rulers to help the students in the hurried acquiring of degrees of the University without exerting any influence on the moral character.

When Bangabasi College came into existence in the later half of the 19th Century, there was a specific risening in the then Bengal in respect of introducing science education amongst the indigenous people. In order to understand the actual perspective of science education and its gradual trends through the ages, there is an urgent need to have a look into the various efforts made by the British educationists as well as the philanthropic people of India for the introduction of scientific education in the day-to-day life of the people of Bengal.

Before that we must look into the condition of India in the sphere of introduction of science education by the foreign rulers. The role of Bangabasi College in this sphere should necessarily be evaluated in the background of Indian scene. The East India Company started its activities in the spread of Western education in this country as back as 1813 in which science education received a conspicuous att-

ention. But before that India was well-acquainted with the variegated scientific procedures. Like some other countries in the Western world India also developed a concrete basis of scientific knowledge. The indigenous scientists, through long-term experiments and observations, which continued for a few generations, could explore various mysteries of nature and processed these in categorical scientific laws. The spheres of Chemistry, Physics, Anatomy, Medicine, Biology were specifically illuminated through indigenous attempts by the ancient Indian scientists. In many recent publications these are evaluated in a detailed way.

But the theories of various scientific investigations that had developed through the ages did not flourish much because of the lack of sponsorship from the then administrative authorities. Various taboos and social legislations that were imposed during in rigid Brahminical administration created a bottle-neck in the flourishing of scientific knowledge as well as its application in the development of commerce and industry in the country. The ancient Indian social legislators put a ban on sea voyage. Manu declared it as a great sin and the sea goers were not to be invited in any socio-religious ceremony. It is an example of many such strictures put forward in those days.

But in spite of the total discouragement in the development in the spheres of theoretical scientific procedures, there was a continuous flow of utilization of practical knowledge of indigenous scientific discoveries. These are exemplified by skillful activities of many indigenous artisan caste groups centred round their castebased occupations. The textile industry, the iron and other metal industry, art and architectural activities were of a very high order and the indigenous

workers in these lines could utilize the scientific knowledge in their day-to-day industrial activities. If we come to the then Bengal, these illustrations would be very much effective.

In the early phase of nineteenth century when the alien rulers imposed their own trends of science and technology on the people of India, the Indianness of Indian science became obliterated. It was the basic intention of the colonial administration for the smooth introduction of the Europe made industrial goods and commodities in the Indian markets. The large-scale utilization of India's multifarious raw materials in various European industrial units was the main issue of the colonial administrators.

Thus the attempts of the East India Company for the establishment and spread of science education in India did not receive a solid ground in India though the methodology was different. As a natural consequence, there was a conspicuous trend of interactions between the indigenous and alien thoughts and ideas on scientific knowledge and procedures. The specific attention of the alien rulers was highly centralised on the land and people of Bengal because of obvious reasons. With the direct intervention of the alien rulers the whole system of education of the country was remodelled and it was very naturally planned to reap the good harvest for the interest of the colonial administration. During the latter half of the nineteenth century a number of universities were established with a view to train up Indian students in conducting the clerical services in the various administrative and commercial organisations run by the alien rulers in India. But, in course of time, there developed a national consciousness, specially at the beginning of the

twentieth century, regarding the thorough change-over of the narrow interest based education. People wanted the exposition of knowledge in different dimensions to explore mysteries of life. This very intention of the people received a definite shape when Sir Asutosh Mukherjee accepted the post of Vice-Chancellor of Calcutta University in the year 1906. He took a definite step in reorganising the curricula of study. During his Vice-Chancellorship special stress was laid on the development of science faculty in Calcutta University. In 1916 Post Graduate Departments in Physics, Chemistry and Applied Mathematics started and two years later Biology Department was accommodated there. He appointed the teachers with versatile genius like M. N. Saha, P. C. Roy, S. N. Bose, J. N. Mukherjee, J. C. Ghose, C. V. Raman who in course of their activities raised the fame of Calcutta University in the world perspective. Professor C. V. Raman by dint of his deep-rooted investigations became a renowned world figure and he was awarded Nobel prize in Physics in the year 1928. All the teachers in the different science subjects became widely known throughout the world because of their nature and extent of investigations in various spheres of study. These features brought a stir in the minds of the people and many of them were attracted towards science education. The earlier phase of the 20th century in Calcutta witnessed the establishment of a solid ground for science education.

During this period Bangabasi College was in rapid progress of placing its firm roots in the soil of Bengal. Right from 1887 this college was running with Arts and Law Departments for a few years and then it received affiliation in science subjects like Physics, Chemistry and Botany.. The founder Principal of the College, Acharya G. C. Bose, did a

a great deal in the starting of science stream at Bangabasi College despite some obstacles put forward from some corners. The college was affiliated to science in full-fledged form in 1908. Principal Bose had been in close academic connection with Sir Asutosh Mukherjee and the former was always alert in implanting the academic thinking of the latter especially relating to the arrangement of science education at Bangabasi College. It was the policy of Acharya Bose to recruit prospective young scholars with deep devotion for study and teaching for the different departments of his college. The selection did not necessarily restricted to the academic qualifications only but it was extended to multifarious dimensions like amicable nature, self-abnegation and above-all respect for the teaching profession of the teacher concerned. Gradually it became the tradition of Bangabasi College and perhaps it played a tremendous role in keeping not only a good academic atmosphere but also a continuous feeling of brotherhood amongst the teachers and the taught.

Bangabasi College's recognition in the public mind during the early twentieth century was in fact centred round its establishment as a famous college of science. It attracted students with the intention of studying, science subjects from different parts of the country. When Presidency College was running in full swing, the private colleges like Metropolitan Institution (1879), City College (1881), Ripon College (1884) established by the Indian educationists started drawing many students and as a result of which Presidency College suffered a decrease in the number of students. In that particular situation the Director of Public Instruction passed a specific order in 1888 to develop Presidency College as a centre for teaching science subjects with Honours course,

and it was, from that view points, regarded as a unique institution in India. When Bangabasi College got recognition in science subjects just at the beginning of the twentieth century, there was an all sided effort to develop this branch of study with special importance. The role of science education in the life of the nation was extensively valued by the people and naturally there was a trend amongst the guardians in seeking admission for their wards in science faculty.

Mention may be made, in this connection, that the story of the development of Bangabasi College as a glorious institution for the growth and development of higher science studies is necessarily centered round the thoughts and ideas of a single person i.e., the founder-Principal Acharya Bose. The life and activities of an institution of repute were planned and processed by that steers-man. As a necessary consequence, the total history of the educational efforts made by this college is the reflection of activities of that very personality. Thus for a long time the history of Bangabasi College becomes individual oriented and is depicted by one man show. As a sincere devotee for science and its teaching Principal Bose left no stone unturned to give to priority for popularising the science education in his college. He was of opinion that knowledge of science would eradicate narrowness in mind and minimize the communication gap amongst the different classes of people. Being trained up in agricultural science at Royal Agricultural College, Cirencester, England, Giris Chandra developed many novel ideas to reorient the agricultural activities in India through the imparting of scientific knowledge in relation to the production of crops and allied activities. He strongly felt that the want of agricultural

education and its scientific principles in India was the root cause of India's backwardness. The only solution to this, according to him, was the broad-based acceptance of basic scientific principles and their practical utilization.

Thus from the very beginning Principal Bose was very serious in putting agricultural science education in a high esteem. He raised a voice through his multifarious activities before the then Government as well as the general public to give requisite importance to the study of agricultural science considering the socio-economic interest of the country. His untiring effort and zeal for giving agricultural science a firm footing in India took a definite shape when he started the first Indian Agricultural Journal in the year 1885. The Journal began to publish in English as well as in Bengali languages under the title *Agricultural Gazettee and Krishi Gazettee* respectively. These twin journal became popular amongst the intelligensia of those days. In the pages of these journals there were critical discussion on the problem relating to agriculture, pisciculture and cattle rearing—the central theme of India's basic economy. Girish Chandra was an ardent believer in the applied aspect of science education. Thus his activities did not restricted only to the pages of the agricultural journals. He wanted to educate the Indian students in agricultural science following the model of Cirencester. He went forward, rather his love for imparting Scientific Knowledge gave him impetus to move on despite critical financial crisis. It was a long history and the total situation created a stir in the then Bengal—the centre for civil awakening. Girish Chandra's continuous struggle for a noble cause at last became successful and he was able to give a particular shape to his thinking. One fine morning people saw through the news-

paper announcement that the first institution in India for getting training in agricultural science was started at a newly established Bangabasi School established by Acharya G. C. Bose. But unfortunately all the endeavours had to meet a total failure because of reasons beyond control.

But this failure rose as a firm pillar of success in later activities of Acharya Bose. The attempt to develop Bangabasi College as an ideal institution of science education was specifically rooted to this failure. The early records reveal that Acharya Bose took a stern attitude in starting Chemistry and Botany as subjects of study in Bangabasi College despite many discouraging attempts and legal obstacles in the system of education of that time. Acharya Bose could fight out all those barriers to design neatly his ambition in the spread of science education in this country through the medium of Bangabasi College.

After a long term struggle Bangabasi College was successful in getting the recognition for the inclusion of science subjects like Chemistry, Physics and Botany. It was just at the beginning of the present century and Principal Bose converged all his attention to develop an ideal science faculty here which would not only be pioneer but also unparallel in the whole of India. The attempt for this was centralised on three specific principles— (1) Picking up of devoted teachers having ardent love and inartificial zeal for teaching the subjects concerned ; (2) well-equipped laboratories for scientific investigation and their proper maintenance ; and (3) close supervisions by the teachers in practical work of the learners.

Let us examine how these three factors worked in an integrated manner within the four walls of the college which

was regarded by the teachers and the taught as the sacred temple where work was thought to be the only means of worship. Bangabasi College was the only educational institution of that time, and perhaps of the present time, which could boast of having not only stalwart scholars in the list of teachers but also the devoted personalities for the cause of science education in the country. The department of Chemistry was glorified in having the dedicated teacher like Professor Ladli Mohan Mitra who could be perfectly called as the architect of the tradition of science education at Bangabasi College. His life-long devotion to the teaching of the subject gave him a specific outlook and a novel power of presentation of the scientific principles which were readily praised by the people in such a way that the students from various colleges began to assemble at the class-room of Professor Mitra. For a long time it became a regular fashion. Ladli Mohan, in course of time, became an indispensable unit of Bangabasi College and his deep love for the students, broad-based sanctified attitude for the subject of teaching and profound devotion for the institution rose him in such a level that he was identified as a legendary figure. The establishment of this institution as a first grade science college was rooted to the specific contributions made by Prof. Mitra who served the college till death despite many allurements for better prospects in other academic institutions,

It will certainly be wrong to say that prof. Mitra was the lone example of dedicated personality in the teaching staff of Bangabasi College. The teachers like Prof. Sukhendra Kr. Ray, Prof. Promode Chandra Sen, Prof. Shyamapada Chakraborty, Prof. Nirendra Nath Roy, Prof. Anutosh Dasgupta are among many others who did a great

deal in developing a rich tradition of science teaching here and exerting considerable influence in the minds of the general public as well as the noted European and Indian academicians. Principal Bose was always serious in maintaining a congenial atmosphere amongst the teachers so that they could think themselves living and working in a large and extended family. It became the asset of Bangabasi College for a long time.

At the very outset the science departments were not in a position to provide requisite facilities for laboratory work. But within a very short span of time the position was thoroughly changed and the students were offered opportunities to strengthen their theoretical understandings through close-set practical work. The college administration was always attentive in improving the conditions of the science laboratories. It can be verified by the following extract from the College Magazine appeared in 1922.

“The Science Departments consist of two lecture-galleries fitted up with the modern requirements of science teaching, a Physics Laboratory, a Chemical Laboratory and a Botanical Laboratory for Intermediate students; and two physics laboratories, one chemical laboratory and two botanical laboratories for B.A. and B.Sc. students, gas, water and electric connexions have been so laid out that the students working in the laboratories may have a plentiful supply of the necessary adjustments of practical work. The laboratory room are lighted up with powerful electric lamps so that practical work when necessary is continued right into the early part of the night.” (1922, pp.23)

In the Calcutta University Calender appeared as a Cen-

tenary special volume there is a reference of well-equipped science laboratories at Bangabasi College.

“There are well-equipped and commodious laboratories with up-to-date apparatus and fairly large stock of apparatus, chemicals, charts and specimens etc., for conducting experiments and practical works of the Intermediate and Degree students. For the Intermediate students there are a Physics laboratory, a Chemical laboratory, a Botanical laboratory, a Biological laboratory and an Anthropological laboratory, and for B.A. and B. Sc. students there are five Physics laboratories, three Chemical laboratories, two Zoological laboratories, two Botanical laboratories and one Anthropological laboratory. There are also a darkroom in connection with Physics department and also two balance rooms and one furnace room.” (1956, pp. 841).

Moreover the Dept. of Physics was conspicuous in having a Research Laboratory maintained by the Govt. of West Bengal and which was under the supervision of Dr. Satis Chandra Ganguly. It was recognised by the Calcutta University for the submission of thesis leading to Ph.D. Degree. Many meritorious students used to work in this Research Laboratory for higher research.

In these laboratories the teachers and the demonstrators used to provide guidelines to the students with individual care. The students could always get free access, of course in times of need, to these laboratories where they worked seriously directly helped by the teachers. The laboratory works, as revealed by the report in the College Magazine, was conducted by the Professors and Demonstrators and scrutinized by the Principal. These were the specific reasons

for achieving total success in the placement of Bangabasi College as a glorified institution for the spread of Science education amongst the common people. In the early phase of the twentieth century people in general were not in favour of science education as the life-situation in British India was completely different from that of the present period. Categorical science education did not promise any effective opening for the maintenance of life during that time. Moreover, there were conspicuous social norms restricting the study of some branches of science especially the biological and medical sciences. Naturally the educational institutions were also not enthusiastic in arranging for science education. In the sphere of colleges run by private management in India it was Acharya Bose who broke through the traditional barriers and introduced categorical science subjects in the course of study at Bangabasi College. All the factors, mentioned above, worked deeply in a well-integrated manner to spread over a broad-based influence in the minds of the public. Acharya Bose's dream became successful because of the joint co-operation and co-ordination of the devoted members of the teaching staff who were no less patriotic and enthusiastic.

The socio-political situation of the country at that period became tense. It was the period of the commencement of the Second World War and owing to which Calcutta experienced continuous bombing and, as a natural consequence, the life in Calcutta became stand-still and the people became panicky. Compelled by circumstances, in consequence of the Second World War, the authorities of Bangabasi College, like all other big colleges in Calcutta, started branch institutions at mufasil areas in Bengal. Bangabasi College started a branch institution at

Kusthia and, mention may be made, it was dedicated mainly to science education in mufasil areas. But with the revival of the normal condition the branch college at Kusthia was closed down. It was followed by the development of Bangabasi College at Calcutta in a rapid pace. The College was expanded—B.Sc. course was introduced in the evening shift under the initiative of Professor Ladli Mohan Mitra in the year 1945.

After the attainment of independence the Science faculty of Bangabasi College took a lead in opening the opportunity of studying Biological Science for the young learners. It was a remarkable event in the history of science education in India. The teaching work of Bio-Science at Bangabasi College started with a very high order and it could mobilize numerous students from different parts of the country. In course of time facilities for studying Honours standard in Chemistry, Physics and Zoology were arranged for Bangabasi College was always glorified for taking adventurous steps in opening new horizons of study to fit with the situation of the country. It is true that all the ventures did not see the light of success, but these give the future workers a concrete guideline to proceed forward in an effective way. The pioneering attitude and straight forwardness of Bangabasi College were specifically marked by the introduction of Anthropology as a subject of study in the I.Sc. course as early as 1936. This particular event was pinpointed in the College Magazine with utter pleasure.

“We are glad to announce that the University has been pleased to grant our college affiliation in Philosophy (Pass and Hons.) and in Anthropology (Arts and Science) upto the Intermediate standard. Anthropology is again bound

to be a very popular subject in the I.A. and I.Sc. classes." (1936, pp. 4).

Thus, after the getting of recognition from University for the inclusion of a subject in the course of study in the College, the authorities were always attentive in evaluating the actual stand of the subject. It was not a routined affair but a depth-oriented observation.

The post-graduate teaching in anthropology was started at Calcutta University in the year 1920 by Sir Asutosh Mukherjee inspired by the first academic lecture in anthropology delivered by the Father of Indian Anthropology, Sarat Chandra Roy, under the auspices of Patna University. But there was no facility for studying the subject in question in the undergraduate level. Acharya Bose spontaneously came forward and he made all the arrangements to bring it to Bangabasi College. By doing this Acharya Bose made Bangabasi College as a pioneer institute in the whole of India so far as the teaching of anthropology in the undergraduate level is concerned. Mention may be made that still now Bangabasi Group of Colleges are the only institutions in Calcutta where anthropology is taught as a specific subject to study in the undergraduate pass and honours levels. The honours course in anthropology was started in 1978. To facilitate the research activities of the teachers for improving their academic standards a research centre in the name of G.C. Bose Biological Research Unit was started in the year 1955-56. In so doing a comprehensive and well-equipped Research Laboratory was provided for the interested teachers which ran under the supervision of Prof. Sudev Bhusan Ghosh. It earned national and international

reference and a handful of teachers did their Ph.D. Degrees through their works done in this Research Laboratory.

It is presently seen that science has added new dimension to education and it has a conspicuous role in the life of the nation. But everything depends on quality of teaching. If science is poorly taught and it is not properly learnt by the students, the total endeavour would end in a miserable perspective. Science teaching should be conducted with current information in the light of recent researches, otherwise dead information would spoil the whole effort. The effective science education requires perfect teaching standard, governmental support and public alertness. The history of Bangabasi College centering round the spread of science education in its domain is pulsated with all the above noted activities, and this is why Bangabasi College has been able to open new avenues in the line of science education despite many disparities.

The glittering light of science education, which was lit with sincerity and seriousness in the very early stage of life of Bangabasi College, passed through a long way with amazing glory and perfect splendour. The brilliant lustre of light of knowledge relating to science education is still to be discernible in this historic building, besides many untoward circumstances arising out of variegated socio-politico-economic hazards and anxieties of the country, amongst the present generation of teachers, students and allied personalities in this sphere. They are no doubt the sacred carriers of the age-old tradition and there is no denying of the fact that, of late, there is an urgent need for broad-based integrity, extreme perseverance and whole-hearted dedication in them to shoulder the heavy responsi-

bility in this present period characterised by rapid changes in the value-orientation pattern of the people.

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