

## THE POET'S SCHOOL: UNDERLYING SCIENTIFIC VISION AND VALUES OF RABINDRANATH TAGORE

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The Poet's School, founded by Rabindranath Tagore way back in 1901 in Santiniketan was not merely a fanciful idea. It was a rebellion against mechanical Colonial system of Education having an essence of indigenous Indian Culture. It was constructed upon a solid foundation of scientific principles of education for a joyful and fulfilling life in the abundance of nature. The school, over the years, has proved to be a laboratory for many kinds of experiments in natural settings to arrive at the ultimate truth. Breaking away from the rigid, stereotypical conventional mode of teaching and learning, the poet's school has been a place for self-exploration through multifarious activities like Art, Craft, Music, Dance, Drama, Observation of Nature, Self-discipline and Social engagements apart from regular studies.

The poet's School, called Ashram Vidyalaya, is really a school with difference. For more than a century it is carrying forward the scientific vision and values of Tagore. Some of the salient features of the schools are as under:

### **Open AIR Classes: Scientific Reasons**

Tagore, the great creative mind always had a desire to create something that will be a proper combination of the glorious past and upcoming future of this country. He argues that educational system which has been relevant to India's history and society is the 'gurukul system' with its limited range of subjects, organic relation to its surroundings, and harmonious relation with the ideas and opinions of society. While not advocating a return to

the ancient Indian system which would be a “useless revival of forms which will become a burden in the end,” Rabindranath advocates a system which derives its inspiration from the old model. Such a system would provide :

- a. an atmosphere where no disunity or discord disrupts the mind;
- b. lively and varied courses which nourish the heart as well as intellect;
- c. curriculum which does not “become something unreal, heavy and abstract with which students are concerned only for those few hours when they are at school”
- d. the environment which best fulfils these needs.

Rabindranath develops his ideas concerning the importance of nature in education. Close communication with nature has always been part of the Indian heritage, Rabindranath argues that mountains, animals and trees, river, blue skies and beautiful views are as essential to education as blackboards, books and examination: “Practical people will dismiss an idea of this kind as mysticism or mystification. But they will not be able to deny that blue sky and air, trees and flowers are indispensable for the proper growth of the body and mind of a boy. We cannot be in close contact with nature when we have grown up into busy men of affairs working in a crowded office in a crowded town. So it is more necessary for us to be under nature’s influence when we are young, our minds fresh and eager to learn, and our senses vigorous.... Freedom is essential to the mind in the period of growth, and it is richly provided by nature.... Children are born ignorant that they may have the joy of growing into knowledge by degrees. We may be too incompetent to make education a thing of joy, but we need not be so cruel as to turn school in to prisons. God intended children to be educated in the freedom of nature and we defeat ourselves by defeating his intention. “He always intended to bring newer significance to the traditionally operated institutions of our country to appropriate them for the future. He had an effective plan to arrange the classes under open sky and in the lap of nature. Open air class was one of the major teaching-learning strategies of the poet in his ashram school. Open air class brings the learners in close contact with nature. Tagore believed that education is a kind of purification of the mind and this purification is never possible if the learner gets confined within the four walls of a classroom. That is why the poet gave emphasis on the concept of open-air class. At the very beginning of the ‘ashram Vidyalaya’, the seats for the teachers were under shaal, mango and bakul trees. This type of system contained the seeds of scientific education within it. To make the

observation power stronger is the primary condition to build scientific attitude. Along with it what is required is the habit of practically unveiling the curtain from truth. From this point of view, the concept of open-air class is very significant as the classes held under the trees are the laboratory for practical observation and study of nature. Open air class was like laboratory keen observation and effective teaching. The poet thought that the horizon of the learners' mind will be expanded from within the spell of nature.

In his boyhood, when he went to visit Dalhousie Hills in an evening with his father, he became fascinated to see the astronomical bodies in the sky- the stars, the moon. And this grew in him an interest in Astronomy. Similarly, the poet hoped, the learners would be able to learn lot more about nature, would explore newer realms of nature with their own observation power. That is why he moulded the atmosphere of his school like that of the 'Tapavana' of ancient times. In the beginning there was no textbook, rather the students started to study the nature very keenly and enriched their five senses. Though this concept followed the naturalist ideologies of the nineteenth century Europe, it was unique here in its rich innovative methods. The concept of an open air class consists of two other ideas. Firstly, the child here gets the opportunity to choose between two different experiences, from inside the classroom or outside the classroom. Secondly, the child can integrally combine both of these experiences to formulate a new one. That climatology had a very important place in Tagore's educational principles which are evident from the book 'Weather Record Book'. Here, in the midst of nature the children observed many natural phenomena like season cycle, the rotation of the sun and the moon, the direction of the wind, the condition of the sky, the type and amount of rainfall etc. The rules of such observation were provided at the very beginning of 'Weather Record Book'. The students used to observe the thermometer and the barometer thrice in a day to keep the record of temperature and air-pressure. At the end of the month they had to note down many things- monthly average temperature, highest and lowest temperature, total amount of rainfall etc. Thus, the learners used to get direct scientific knowledge of natural happenings and it would be very easy for them to remember their logical explanations.

The children used to learn parts of climatology in this process. Adding to this, they regularly got the opportunity to observe the life-cycle of many creatures, the life of the plants and trees surrounding the school, botanical and zoological incidents like circadian rhythm and

circannual rhythm etc. The atmosphere of the class helped him learn the life cycles of bees, ants and wasps. They got to know how the ants and the bees formed their colonies.

Such classroom was the largest laboratory of entomology. Another very important thing is the sense training. The children very easily got to assume the proper external features like size of each natural object through the enrichment of their senses. The poet wanted the children to be within the unique presence of nature from their very childhood. And the classes held under the trees paved the way for the children to get more access with their surroundings. In order to be a true admirer of science, one needs to have his senses stronger. Otherwise true science education is not possible. From this view, the concept of Tagore's open air class is an eternally modern effort stepping towards science education. Being cost-efficient Open Air classes and the ashram system suited the economic reality of India since it dispensed with whatever was unnecessary. In Tagore's model, the only real necessity was a dedicated teacher and natural surroundings. This aspect of education involves the realization of the individual self in relation to the universe and the essential kinship of all existence –not through the intellect alone, which science make possible, but through the spirit, through the soul, through the deeper intuition of feeling.

### **Science Education in the Curriculum**

Apart from Bengali, English, Mathematics, Sanskrit and Geography, Physics and Chemistry of basic level were also included in the curriculum of Tagore's Ashram Vidyalaya. The study of nature was also a part of that curriculum to enhance the subtle observation power and curiosity within the learners. So the study of systematic science had a very important place. Scientific thinking was reflected in the teaching learning process of the science subjects. The poet himself used to guide the students regarding science teaching. He had a vast knowledge of outside world and he often used to meet many scientists and mathematician to enrich himself. This genuine effort of the poet himself got reflected in the education system of his school. The identification of many plants and trees as well as the observation of the circannual rhythm of the trees was part of the scientific activities. The students had to record the daily ups and downs of temperature, the life cycles of many creatures and insects. Tagore not only laid emphasis on science but also had a keen eye to the progress of science teaching. He himself had written many books on this and he would encourage other teachers of the school to do so. 'Sahaj Path' (Easy Reader-part one and two) is one of his most remarkable

works. This book is excellent in the sense that it contained a whole lot of scientific allusions and references that would grow interest in a child to read science. This is not only a great work of children's literature but also an interesting endeavour of science.

A bird's eye view on it will clarify how interesting and scientific 'Sahaj Path' was. From the very childhood Tagore had a fascination for astronomy. And astronomy was also a part of the curriculum of Brahma Vidyalaya. To observe the stars and planets in the night sky through telescope was almost compulsory for the students. By the inspiration of the poet himself, the students became fond of the subject. Another important part of the curriculum of Brahma Vidyalaya was 'sense training'. Rabindranath himself was quite interested in this subject. He stated that "*We have to help the children to make their sense perception superior. It is the first step towards self-reliance. To have the sense of proper quantity and quality of things is a very basic necessity in life. If someone's senses are not properly trained, it may be understood that his education is still not complete. Sense training must have an essential place in every educational curriculum...It must be remembered that this subject should not be enlisted as an optional subject. Rather, it should be kept as a must.*"

Another important subject that was included in the syllabi of Brahma Vidyalaya is 'nature study' which is "the curious practice of the interest about the various aspects of this world, including its animals, birds, nature". This nature study is the forerunner of what is called environmental science nowadays. The inclusion of science in the curriculum of Tagore's school somehow helped developing a love for nature in the minds of the students. The scientific thoughts of the poet are always reflected in his efforts to develop his school scientifically. The curriculum followed in the school obviously helped in bridging the science and the aesthetics, the brains and the hearts of the children.

### **Pedagogy in Ashram Vidyalaya: Scientific Bases**

Deep scientific ideal is what characterises the teaching methodology of Gurudev's Ashram Vidyalaya. The poet himself was very conscious about the teaching of science in his school. The combination of open-air class and a scientifically composed curriculum helped the learners to gain adequate knowledge. They got the opportunity to observe nature directly to realise many scientific truths. Yet the task of teaching was not so easy for the teachers here. The field of a child's science education broadened due to the mixed influence of imagination and educational dynamism. Such a vast dynamic field of science study was not easy for the

teachers to operate perfectly. Tagore was very careful about all these. In a letter to J.C. Bose, he wrote, "It has been very difficult for me to find fully dedicated ideal science teacher." Tagore gave emphasis on two things regarding science education- observation and integrity. Nature study and sense training are also two important factors. Tagore believed in scientific methods of teaching. There were specific seats ('vedi' or altar) for every single teacher. The teachers of different subjects kept sitting on the 'vedi's specified for each of them. And the students would go to them enthusiastically to do their particular classes. Unlike other schools, one may find a gap of 5/10 minutes between two classes too. While transiting to the next class the students obviously and naturally get fresh and ready in mind and body which conforms to the psychological 'Law of Readiness'.

The full development of a child's brain gets restricted under immense academic pressure. Therefore, the poet realised that any kind of pressure must be released from them in order to build a healthy learning atmosphere. According to the brain development theory of modern neuroscientists, Tagore's teaching methodology was very scientific. He truly realised that education attains perfection only when it becomes able to build some good habits within the students. That is why he tried to develop the scientific temper of students by fusing some necessary habits like observation, discovery, research and evaluation in his Ashram Vidyalaya. So, the teaching methodology of the poet was based on the concept of synapse development.

On 10<sup>th</sup> Ashwin, 1319 the poet wrote to Jagadananda Roy, "Our students have achieved one big thing- the joy of this world, the connection with nature. Though it is not an academic achievement in the true sense of the term, it will help them gain success in life in the broader sense." The liberty of the students had an important place in the poet's teaching methodology. And the seeds of perfection were hidden with this unrestricted movement of a student's mind. Hence he has said, "Our students play in the midst of nature, they run in rain, enjoy the beauty of a full moon night, don't fear the sun, they read climbing up on the trees. I don't consider these as trivial things. Rather these are a lot to me."

The students used to be given the scope to use many scientific tools. The used instruments like thermometer, rain-gauge, barometer etc. Besides in the laboratory of the school, the students would get theoretical knowledge about the uses of many instruments like telescope, microscope, spectroscope etc.

The poet always wanted the teachers to read numerous books on science. But they must employ their full liberty in using any scientific truth. The students and the teachers must sit together to discuss about new concepts. The teaching methodology of Ashram Vidyalaya emphasised upon the realisation of any scientific truth by oneself without the bookish kind of knowledge. The scientific minded poet always wanted the teachers to take responsibility as a researcher, to explore new horizons of scientific truth. And his teaching methodology was so effective for brain development that it grows the ability within every student to be a researcher in his later life.

It is repeatedly noticed that among all of his other works, Tagore always used to think about his school and its proceedings. Especially he was more concerned about the teaching of science in his school.

Many teaching materials are required to make teaching methodology scientific. In spite of various monetary problems Tagore always tried utmost to gather the necessary equipments. He was well aware of the importance of audio-visual aids in teaching. On 6<sup>th</sup> May 1913 he wrote to Nepal Chandra Roy, "They wanted a magic lantern. There was a very good magic lantern which Rathi took to Shilaidaha for rural works. I have asked Rathi to give it back to the school after their work was over.

Astronomy had a very significant place in the curriculum of Ashram Vidyalaya. This was studied completely scientifically here with proper equipment. This activity based scientific teaching methodology was very progressive and it can be followed even today. So, it can be seen that the curriculum was more activity based which helped a lot in the science education of Brahma School.

The poet was always in favour of demonstration, project and problem-solving method while taking classes of physics, chemistry etc. The poet had a lifelong regret as he could not get the proper opportunity for vast study of physics and chemistry. But to see it from a more neutral level, in the then Santiniketan the instruments that were used to operate the department of science were not at all insufficient. Tagore always wanted to impart practical and activity-based knowledge to the students of Ashram Vidyalaya. Therefore, the teaching methodology applied here played a very vital role in enhancing the scientific zeal of the students.

**Conclusion:**

Thus, we find Tagore was a visionary par excellence with a strong scientific temper.

Alongside his poetic genius, he was always keen in developing a scientific attitude in both teachers and students. His scientific vision and values were reflected in all through his educational experiments in his Ashram Vidyalaya, be it the arrangement of class, curriculum, pedagogy and evaluation system. He has been successful in demonstrating a wonderful balance of science and art / spirituality through various activities of the school round the year, not merely confined to the rigid time frame of routine . Education in his school is absolutely based on students' needs.

In view of modern time, when education, instead of becoming a joyful experience for children for unfoldment of their talents has become mechanical, stressful, unnecessarily competitive , market driven , materialistic and more of a fulfillment parental aspirations, Tagore's vision and values of education could act as panacea for all ills. The best practices of his school may be taken as inputs for building a better education system for the children of future India and rest of the world.

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