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## Role of Acharya Prafulla Chandra Roy in International Education System: An Analytical Study

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### Abstract

Known as “Father of Indian Chemistry”, Prafulla Chandra Ray was a well-known Indian scientist and teacher and one of the first “modern” Indian chemical researchers. He discovered the stable compound mercurous nitrite in 1896 and established Bengal Chemical and Pharmaceutical Works Ltd, India’s first pharmaceutical company in 1901. Also a very passionate and devoted social worker, he did not support the caste system. Acharya Prafulla Chandra Ray was also an icon of selfless service to the nation, humanity and science. His scientific, educationist and social ideologies give us an understanding of the formulation of social and administrative policies for the upliftment of the people and the restoration of India after independence. Like Tagore, Acharya Ray carved science, literature, art, politics, mass movement, educational process and above all social reforms, which meant humanism, his first and ultimate object.

**Keywords:** Mercurous Nitrite, Social Worker, Humanity, Chemical Researchers, Caste system etc.

### Introduction

Certain nineteenth-century intellectuals are still exceptional in their domains. Acharya Prafulla Chandra Roy is one example of a mental scientist. His book 'Atmacharit' has shown Indian science and scientists the way forward-how to promote Indian science. The nitrite compound's master, Prafulla Chandra, who founded the school of chemistry, once again discussed science as well as offering advice on education, business, commerce, the economy, history, and society. His perspective is both Indian and international. He is, once again, a remarkable native of Bengali. No one else has ever pondered day and night about the economic situation of Bengalis, their poverty, or the weakness of Bengali character. He is the only scientist who has demonstrated leadership by joining the side of the common people rather than staying in the lab's tower and taking an active role. This wise and thin guy made a significant sacrifice in his life as a result of his tremendous hypnotic

ability, which begs the question of how much of it he possessed. He conducts himself and lives his life in the manner of ancient Indian sages. The nation gave him the title of 'Acharya' as a token of their respect and appreciation. He is indeed Acharya in every way.

He hoped to free India, his homeland, and restore its former splendor. The nation is now affluent and independent. Our nation currently holds the invited-status seat at the G-8 group conference of the world's biggest financial resources. Although he has made repeated attempts to alleviate poor Narayan's misery, he has not yet succeeded. Approximately 36% of the nation's population continues to live in poverty. There are fewer toilets in the nation than there are mobile phones. Some have called our nation's current state as 'rich country with poor people.'

He now dreams of teaching and learning in his native language, which is 'far away'. Currently, Indian languages are engaged in a battle for their survival. The English

language, as opposed to Hindi, has been actively promoted as the language of communication by a group of academics and media in this nation. In spite of the fact that established nations like Russia, China, Japan, Germany, France, and even Italy and Bangladesh have firmly established their languages in the seat of dignity. Acharya's struggle for national pride and patriotism has not yet come to fruition, despite gaining political independence. In his address to the President of the Faridpur Hindu Mahasabha in 1925, he issued a warning. Partition, humiliation of Hindus, and emigration are the results of a lack of importance. He said on that day that - "If our infatuation does not break our sleep, then the Hindu nation will vanish in 200/250 years." By observing modern India, one may only comprehend the relevance of his advice in the modern world.

### Early life and Education

Prafulla Chandra Ray was born on August 2, 1861, the younger of two brothers, in the village of Raruli-Katipara, now in Bangladesh. His father Harish Chandra Ray was a householder who loved learning and built an extensive library in his home. Prafulla's mother Bhuvan Mohini Devi was well educated and had liberal views.

The family moved to Kolkata when Prafulla was nine years old and attended a rabbit school. Unfortunately, Prafulla fell ill and returned to the village in 1874. It took Prafulla two years to recover and was left permanently debilitated with digestive problems and insomnia. During his recovery, he enjoyed reading in his father's well-stocked library. He returned to Kolkata and studied at the Albert School, and in 1879, after passing the entrance examination, began his studies at the Metropolitan College (now Vidyasagar College). Prafulla also studied Chemistry at Presidency College and it soon became his favorite subject; he built a laboratory at home and began experiments in 1882, Prafulla won a scholarship to the University of Edinburgh in Great Britain and graduated there in 1885. He stayed in Edinburgh to do research and was awarded a D. Sc. in 1887 and the "Hope Prize" for the thesis "The Conjugated Sulphates of the Copper-Magnesium Group: A Study of Isomorphous Mixtures and Molecular Combinations."

### Philosophy of Life

It is so interesting to outline that the philosophy of Acharya Prafulla Chandra Roy is based on two main lines

1. The foundation of the base of philosophical thought.
2. Philosophy of life.

These two functions depend on each other. One can build without the help of the other. So it can be said that the two are completely inseparable. Foundation of Philosophical Ideology Acharya Prafulla Chandra Roy said light in a very ancient and aristocratic family. Ancestors worked under aristocratic zamindari families. The most revered and respected father Harish Chandra Ray Maharaja was well versed in seven languages, English, Bengali, Sanskrit, Hindi, Arabic, Persian and Urdu. Harish Chandra was an expert in Persian and Bengali. Acharya had much intimacy with Migambu Mitra, Sisir Kumar Ghosh, Ishwar Chandra Vidyasagar and Krishnadas Paul. It was Harish Chandra who began to nurture Acharya Prafulla Chandra Roy through a varied nature. Acharya Deb's father gradually

called Prafulla "fulu" during his childhood. When the "fulla" found himself sitting on the doorstep of the village primary school without reading, she said nothing to him. He was fascinated by nature from an early age. When he was a small boy, it was observed that philosophical thought took root in him. The "fulu" boy could distinguish between nature and ordinary people since childhood. So it is quite clear to us that Acharya Prafulla Chandra Roy was a devotee of truth. From early life, he had a great curiosity about nature and humanity. In all times, especially in those ages, when all mankind of the earth was seen turning away from the truth, sinking into the darkness of ignorance. The Supreme Power, so benevolent to mankind, appeared on this earth with the aim of freeing them from the path of impurity.

Similarly, Acharya Prafulla Chandra Roy saw a light on earth with the aim of guiding people to the path of truth. Acharya Prafulla Chandra Roy's father was free from all superstitions. Both Hindus and Muslims were equal in his eyes; After passing the "Dewan", he was able to get rid of all his shame. Acharya Deb hated this quality in his father. Seeing the light in an aristocratic family, Acharya Prafulla Chandra Roy lived his life as usual. Acharya's father could not tolerate any army. He therefore protested against the East India Company for the impartiality with which it conducted its business. He was a member of the British India Society.

### Research Questions

After going through the research topic, it has come across the following research questions as-

- a. What was Acharya Prafulla Chandra Roy's influence on science education?
- b. What was the thought and ideas of Acharya Prafulla Chandra Roy's on building society?
- c. What was the situation of women education in this period?
- d. What is important of education in present life?

### Objectives of the Study

The main objectives of the study are:

- a. To study the impact of Acharya Prafulla Chandra Roy in modern.
- b. To know about the Science Inventory in this time.
- c. To study Acharya Prafulla Chandra Roy's influence on modern education system.
- d. To know about the women education in this time.
- e. To study the society building and role of Acharya Prafulla Chandra Roy.

### Methodology of the Study

- **Method:** This study was purely theoretical based, and the study was also based on historical works. This study will be used "qualitative research method".
- **Source of data:** In this study has been conducted two type collection of the data namely primary source and secondary source-
- **Primary Source:** Primary sources are eyewitness accounts and are the only solid basis for historical research. According to Good, Barr, and Socrates, "primary sources are the first witnesses to a fact." Original documents belong to the category of primary

sources. They are available in written, pictorial and mechanical form. The following primary sources were used in this study.

- a. Autobiography of Acharya Prafulla Chandra Roy.
  - b. various encyclopaedias, dictionaries and reports on educational research;
  - c. Reports of the British Government in India;
  - d. many magazines, journals and reports (except government).
- **Secondary Source:** Secondary sources are descriptions of an event given by a person who did not directly observe the event, object or condition. The person may have been in direct contact and talked with the account or read it, secondary sources may cause errors and misrepresentations. Therefore, however, the researcher relied more on primary sources and used secondary sources to bridge the gap between the various primary sources. The secondary sources of this study are the writings and commentaries of various eminent writers on the life, work and achievements of Acharya Prafulla Chandra Roy. Sometimes the authors or commentators were foreigners. Details of primary and secondary sources are listed in the Bibliography section of this study.

## Discussion

### Role of Science Inventory

#### Science Passion: Dreams, Persistence and Modernity

Like his father, he was more interested in studies since his childhood. So, from 1866 AD till the age of nine he started his education in the village school run by his father. In 1870-71, when his father moved to Calcutta with his family for better education, Prafulla Chandra enrolled in the "Hair School". But when he was in the fourth standard, he stopped school due to physical illness and returned home to Jessore. Later, he saw this two-year period as an ideal form of his life of learning and practicing science. During this time, he went beyond his limited school education and had the opportunity to read the biographies of many scientists and geniuses, science journals, which gave him the motivation and interest to work with science later in life. Also get ample opportunity to study and learn about history, geography, English and Bengali literature, French, Greek, Latin, Sanskrit language.

After recovering, Gini returned to Calcutta in 1876 and enrolled in the "Albert School" founded by Keshav Chandra Sen of the Brahmo Samaj. Passed first division in matriculation examination in 1878 AD. While studying as an FA (First Arts) student at Metropolitan College, he took physics and chemistry classes as an extramural student at Presidency College. It was there that Alexander Pedler's class and lab work inspired Prafulla Chandra Roy to study 'chemistry'. He said about Pedler at one place, "Mr. Pedler was a first-rate hand in experiments, his manipulative skill was of a high order. I almost unconsciously to be attracted to this branch of science" He became so attracted to chemistry. He opened a small lab in a friend's house to observe the chemical reactions that Pedler had demonstrated. 1881 AD- and after passing the FA examination in the second division, he was admitted to the University of Calcutta for higher education in Chemistry

with the degree of BA (there was no science subject in the A course at that time). But before he could complete this BA degree, he boarded a ship at the age of 21 for the University of Edinburgh on a Gilchrist Prize Scholarship.

### Homeland and chemistry

Prafulla Chandra Roy, the new pioneer of chemistry in Bengal, joined the Presidency College in August 1888 AD. Despite his qualifications, his post back in British-ruled India was restricted to Assistant Professor. After gradually establishing a career in his own competence, he 'concentrated' in his own lab, accompanying students. In 1896 AD he started working on 'nitrite chemistry' and in 1896 AD a paper on the preparation of stabilized mercurous nitrite was published in the journal 'Nature' of the Asiatic Society of Bengal.  $3\text{Hg} + 8\text{HNO}_3 \rightarrow 13\text{Hg}(\text{NO}_3)_2 + 2\text{NO} + 4\text{H}_2\text{O}$ . Later, he equally mastered the preparation of pure ammonium nitrite and alkyne ammonium nitrite.  $\text{NH}_4\text{Cl} + \text{AgNO}_2 \rightarrow \text{NH}_4\text{NO}_2 + \text{AgCl}$ ,  $\text{RNH}_3\text{Cl} + \text{AgNO}_2 \rightarrow \text{RNH}_3\text{NO}_2 + \text{AgCl}$  He was congratulated by Nobel laureate scientist William Ramsay for his discovery and these discoveries were published in 'Nature' and 'The Journal of Chemical Society' respectively in 1912 AD. He resigned from Presidency College in 1916 AD and joined Raja bazar Saner College as the first 'Palit Professor of Chemistry'. He also came here with students and worked on various organic sulphides including gold-platinum iridium. He analyzed these elements along with other elements' compatibility-sizes and their different physico-chemical relations. Several papers on this work were published in The Journal of the Indian Chemical Society. He wrote a total of 107 papers on all subjects of chemistry in 1920 AD. After the age of 60 years in 1921 AD, he used to donate the money received from his salary for the development of research in the chemistry department of the University College of Science. 1936 AD - At the age of 75 years, he retired from working life and actively practicing science and accepted the post of 'Professor Emeritus'. In 1920 AD he was elected as the President of the 'Indian Science Congress' and in 1924 he established the 'Indian School of Chemistry'. For his great achievements 'Bengal Chemicals and Pharmaceutical Works Ltd (1900) is unforgettable. Their preparations include naphthalene, phenyl etc. are still used today. He always inspired science in Bengal. Therefore, he has written various stories of chemistry and its discovery in Bengali for various newspapers. He has always extended a helping hand to common people. Being a staunch supporter of the Brahmo Samaj, she pioneered the expansion of girls' education. In memory of P.C. Roy, many educational institutions have been established in his name in Bengal.

### Sadhak for building society

Acharya Pratul Chandra Roy was not only a singular scientist, he is also remembered as an architect of ideal society and people. He is the epitome of a properly educated man. We find considerable similarity between Rabindranath's social thought and Acharya Ray's social thought. He wanted to guide the society on a better path. Samate also became the face of lifelong protest against the discriminatory status of women, anti-rational and anti-human social deprivation, superstition, bigotry and unfair injustice. Superstitions in the society at that time created

obstacles in the progress of the society. So he protested against the inhuman practices and showing the right way to this social system. He adopted special programs to show the way of development and improvement of his society.

### **Role of Brahma Society**

From childhood, Prafulla Chandra was taught by his father to agitate against evil practices and superstitions. Originally due to the orthodoxy of Hindu society, he was later attracted to Brahma society from the period of higher education. The main reason for this was the liberality of their behavior, the thought of a reform-free social life, the abolition of caste system, social discrimination.

He was devoted to the policy of non-stop struggle against and specially for the welfare of women by spreading education among them. The Hindu society of that time was a strong critic of this liberal approach of the Brahma society. Actively against Hindu orthodoxy, Acharya Ray was a devotee in trying to take the message of Brahma Samaj to the common people, especially the women community. In this context, in the article "Obstacles on the path of national liberation", he wrote - "Today, Hindu society is busy giving equal rights to women in municipal and state assemblies. Thousands of women are willingly suffering imprisonment and various tortures alongside men, but for the past half century, Brahma society has not given equal rights to women in the country. talking." There is no doubt that Prafulla Chandra was influenced by the Brahma Samaj movement in the field of women's education.

### **Agitation against Pana Protha**

Acharya Rai was a fierce critic of the sterility of marriage in Hindu society and repeatedly railed against debt-laden fathers with daughter-in-law collecting dowries for daughter's marriage. He personally helped fathers suffering from many daughters. He was especially sarcastic towards the educated youth. He showed a sincere attitude against creating differences in narrow circles without valuing marriage as a union of minds.

### **Protest against caste system**

He was a tireless fighter against the humiliation of women in the name of caste system and against the so-called code of conduct of the socialists and for the values of women. His words are that if the husband dies after marrying the girls at a young age, they will wander the society as widows. This crime and feticide have flooded the country as well as the society. So, he protested against it.

### **Stopping Child Marriage**

He realized that the biggest disease in the society of that time was child marriage. The social system favored pushing girls into married life by getting them married at an age when they were playing with dolls. He protested against this immoral mentality. He advocated special emphasis on marriage of women at the ideal age in the society.

### **Supported widow marriage**

Along with the abolition of child marriage, he supported widow marriage. His father hoped that Prafulla Chandra would set an example by marrying a widow. He was a lifelong supporter of this movement despite not marrying. In

his speech at the Hindu Mahasabha held at Faridpur, organized by the leaders of the Hindu community, he made three valuable propositions (Acharya Vani).

1. Practice of widow marriage.
2. To rescue and place in the bosom of society those brides who are constantly being abducted from our homes and whom we cannot save from the hands of miscreants due to weakness and cowardice,
3. Abolition of untouchability.

It was only possible for an honest, high-minded and uncorrupted personality like him to call for the breaking of that immobility from the social order. He sarcastically once said - "Bengali forgets the business, abuses the office man, shows the injury of the abuse on the innocent housewives". This is an absolutely pure expression. Similarly, in 1925, Bankura said in the Rastriya Sam Milani - "We have no ability to remove the inferiority and ignorance of the motherland. Prafulla Chandra was not in the habit of covering up the neglect of women, deprivation and indifference to education or using language tricks.

### **Opinion on economic rehabilitation of widows**

He used to spread his views and economic programs everywhere in villages and towns for the economic independence and self-reliance of widows. He used to meditate on earning a living and sustaining himself by resorting to spinning wheel in his spare time. Propagation of Charkas in different parts of the country, arrangements for cottage industries and financial assistance for the same were Prafulla Chandra's daily affairs. In 1901 Prafulla Chandra set a unique precedent in his day by inducting his friend Amul Charan Bose's widow into the company's board of directors at Bengal Chemical, which he founded.

### **Educational contribution of acharya Pratul Chandra Roy**

**Aims and Objectives of Education:** Acharya Roy is particularly critical of contemporary traditional education. Because the customs and ideals of our country have not been given any place in it. So, he said about the goal of education –

- Education will be an attempt to improve the present. Because if prejudices cannot be removed from the society, then that society will not progress on the path of progress. So, he talked about building a prejudice free society through ideal education.
- To improve the society and to spread education, science consciousness needs to be awakened. Because if science consciousness cannot be awakened, then that education will not be complete.
- One of the goals of education will be the spread of art in the society. That is, the need for industrial education should be awakened.
- One of the goals of education should be the expansion of women's education. Because in a society where women are bound by superstition and immersed in the darkness of ignorance, that society will never improve. So, women should be educated in higher education.
- The main goal of education will be to become familiar with Western knowledge science. As a result, the health of women can be improved by stopping child marriage from the society.

### Curriculum

According to him, the full form should be presented to the students through the curriculum. Curriculum will be the main means of imparting culture. He advocated inclusion of a holistic and creative subject in the curriculum. The curriculum should have multiple subject options where a science student can study Sanskrit or any other subject of his choice. He also said to include history, literature, algebra, geometry, geography, arithmetic, health theory, elementary science, economics, Bengali language etc. in the curriculum in addition to science subjects.

### Medium of Education

He emphatically gave priority to the mother tongue i.e. Bengali as the medium of education. Advised to keep English as a second language. Not only those who want to become a scholar should acquire mastery of English, German, French etc. He used to say that, "It will never be possible to educate billions of illiterate people in this vast subcontinent like India through English or any other foreign language other than their mother tongue - and it will fail if forced." So he chose mother tongue as medium of education.

### Teaching Method

In Acharya Ray's teaching method, we find a novel idea. Because he was always immersed in learning. He was strongly opposed to the conventional education prevailing today. He talked about ditching the rote learning method and instituting innovative methods. Also talks about teaching through technology instead of lectures in learning. He talks about changing the practical subjects that have been used in teaching. Instead of rote learning, students will learn through observation. The purpose of education will be to impart knowledge of technical education to them.

### Science and Industrial Education

He wanted India to become equal to Western countries in science and industry. His argument was that "Through the pursuit of science, the subjugated India can prove that it has the talent and ability to be equal to Europe-America, and it is through this science that India can relieve its financial poverty by establishing industrial trade". Acharya Prafulla Chandra's practice of knowledge and Swadesh Chinta are inextricably linked and Swadesh Chinta made the link between the two through his love of Swadesh, Swadeshi mentality and above all boundless genuine love for the poor and downtrodden people. So, saying that he was only a first-class chemist or the founder of Bengal Chemical does not give his true identity. His identity as a human lover and compatriot seems to be much more respectable and lovable.

### Health Education

Acharya Roy was very aware of the human society and the health of the people of India. Because health is wealth, he emphasized on health education and Ayurvedic education to maintain good health. He realized that, - At that time the practice of chemistry was mainly divided into two parts namely-

1. Prepare different types of medicine from different trees, vines to keep people healthy and of course to reach immortality.

2. Extraction of various metals to produce useful materials from those metals and use these aggregates of metals and their compounds as medicine.

So, he relied on Ayurveda for the greater purpose of human health. Because medicines made from different plants, vines, flowers, fruits etc. do not have side effects in human life. Which helps to improve human health.

### Technical Education

His thinking was very advanced in terms of technology. The spoke of applying the techniques of Western epistemology. Recently, research by the University of Dresden reports that Nanotechnology has been used in the construction of that steel. They got the proof. That is, technology is used which is not equivalent to what is meant by Nanotechnology today. Prafulla Chandra said that they also had the concept of Anu's kinetics. Chemists of the time could prepare brightly colored copper pottery, strong alkalis, perfumes, perfumes and dyes. They could apply tin plating on the inside of copper vessels, zinc plating on both sides of iron vessels to prevent poisoning or rust respectively. There are mentions of various types of furnaces that were first used in India. Advanced technology was used to manufacture suitable weapons and machinery.

### Women Education

Acharya Prafulla Chandra advised the public and various institutions to take an active role in the need and expansion of women's education. Gave money etc. for the improvement and renovation of "Bhuban Mohini Balika Vidyalaya" (first of undivided Bangladesh 1845) established by her father. "Vidya Sagar Bani bhavan" was established for the welfare of destitute and orphan women. Acharya Roy was its founder and patron. He contributed a lot.

She was vocal in criticizing the education policy of the National Education Council established during the Swadeshi movement because the council did not give any importance to women's education. "Women's education had to be placed on a par with men's education.... He praised the large-hearted donors but regretted that they had forgotten this important item in the program of national reconstruction, no funds were earmarked for women's education. He said in strong protest - "When the National Education Council was established, they completely forgot that there is a woman in the world." So numb and motionless."

His efforts were constant to attract the attention of the society and officials of that time. Referring to the environment and necessity of family education, he said- "It would be idleness to expect the boy to receive full opportunities of education if his parents, in his house, do not know how to read and write.

At that time the British government showed extreme indifference towards female education. Acharya Roy along with his colleagues re-launched the "Zenana Sam Milani" established in Jessohar district with the name - "Jeshohar-Khulna Sam Milani". He was the president of this organization. The program of the conference was-promotion of female education, self-reliance and intensive rural development projects irrespective of Hindu-Muslim. Not dependent on government aid and criticizing only government policy, he was not convinced, but by working

with his pen, he showed that determination and self-sacrifice were much needed to achieve a goal.

Acharya Roy said in the light of comparative experience... "If there is a depressed class in India, it is these women who are depressed. We have forever kept them outside, forever deprived of the light of knowledge. When our sons are breastfed, they are not well educated. Gets..... What he learns sitting on his mother's lap in England he cannot do in our country (Acharya Vani).

Prafulla Chandra, the head of chemistry, raised a group of distinguished scientific students with his own hands, but he believed that girls had potential in science as well. His dearest student Dr. Asima Chatterjee is a brilliant name in the world of scientists. Acharya Roy was very proud of his beloved student. He has expressed it at various times. His purpose was successful.

Prafulla Chandra used to write about his perceptions, experiences and contemporary events in most simple Bengali newspapers and magazines. The purpose was to enlighten the mothers and sisters of Anthapura in a simple way. He used to address his mother and sisters as 'Ma-Lakshmi'. His sense of respect made him a high place in women's society. In the foreword of his book 'Atmcharit' he writes - "There is no mistake in trying to make this book accessible to the public, especially the housewives". In 1909, Acharya Roy in his famous article - "Bengali's mind and its abuse" created a stir in the whole of Bengal and India with various practical statements about Bengali's indolence, work aversion and determination in life struggle.

### Vocational Education

In Acharya Ray's philosophy of life and educational thought we find a novel way of thinking between scholarship and technical education. His motto was "Don't work, do business". He encouraged women as well as men to various handicrafts. He said the main reason for India's poverty is that it still depends on agriculture. The West has industrialized a lot. We should also industrialize our country quickly, and he talked about various small-scale industries in this regard. Mentioned our weaving industry, animal husbandry, salt making etc. He also tried various places to promote spinning wheel, cottage industry, handloom, mat weaving, bamboo and cane work. He pursued Plum's dream of self-sufficiency through scholarship and technical education throughout his life.

He was particularly enthusiastic about "Swadeshi Mela" to eradicate unemployment. He said as the purpose of this fair-

1. The importance of indigenous industry and its role in the economic life of India.
2. Addressing employment and unemployment problems.
3. Making use of leisure time and rescuing ancient traditional industries from destruction.

### The Teacher

Acharya Roy was one of the greatest teachers of all time. His passion for education, tireless efforts to develop basic knowledge, love of country, good attitude towards students will be written in golden letters in the pages of history. In the context of his discussion of educational philosophy, it is understood that he said about the teacher - 'Teaching is the work of teaching. Studying and teaching is accomplished through reading, reading and meditation, teaching does not

mean imparting knowledge. Donation does not diminish, it increases, the more you donate, the more you donate.' The job of an ideal teacher will be to provide education to develop ideal people useful in future life.

### Discipline

To conduct the class in a systematic manner, Acharya Roy discussed the relationship between the guardians of the students and the teaching staff. He also talked about the relationship between teachers and students. Learning activities are of complete value as long as good relations are maintained between staff, guardians, teachers and students. In the field of teaching, Acharya Prafulla Chandra Roy thus actively emphasizes student participation. It is a fact that students participate in learning activities; the same can never be done in a proper manner. Referring to discipline, Acharya Prafulla Chandra Roy advocated internal discipline. Both in and out of the classroom, students must maintain discipline regarding their needs. It is a discipline that helps a person to complete every job correctly and on time.

### Religious Education

Acharya Prafulla Chandra Roy fully favored teaching morality or religion in schools. If the purpose of religiosity is to cultivate virtue in a person, Acharya Prafulla Chandra Roy fulfilled this purpose in his teaching. If we analyze all the religions of the universe properly, we must find that the roof of every religion is the same. If the moral level of the people's social life does not develop, no nation can prosper. So, for the welfare and betterment of Indians, teaching morals or religion in schools is mandatory. Religion is what brings people together and helps sing the song of victory.

### Research and Discovery

During research at Presidency College (1895 AD) Mercurius discovered an inorganic salt called nitrite. Then he discovered some other compounds of mercury nitrogen and their physical and chemical properties. Apart from this, his research on the preparation and religion of metallic and non-metallic nitrite compounds is also particularly noteworthy. That is why he is called 'Master of Nitrites'. He also invented the method of testing the purity of butter, ghee, fat etc.

### Literary pursuits

Prafulla Chandra's autobiography "Life and Experiences of a Bengali Chemist" and many essays written in English and Bengali are indicative of his literary pursuits. One of his most notable books is 'Bengali's Mind and Its Abuse' and 'Bengali's Defeat in the Food Problem and Its Remedies' written in Bengali. While teaching at Presidency College, he collected ancient manuscripts from places like Tibet, Varanasi, Tanjore and wrote 'History of Hindu Chemistry' (1902 and 1909 AD). In this book, he showed that ancient Hindu chemistry science was in no way inferior to contemporary Greek science.

Also, if he is socially conscious, he can write Science Sadhaka - Social Reform Problem (1919), Caste and Polygamy Problem (1920), Food Problem (1920), Caste Formation - Obstacles - Inside and Out (1921), Clothing Problem (1922) Compromise with Lies and Peace Purchase

(1925), Tea-Drinking and the Destruction of the Country (1932), Bengali Defeat in the Food Problem and its Remedy (1936) Obstacles on the Path of National Liberation (1936), Food Science (1938, - with Sri Hargopal Biswas), University Honors and Achievements in Industrial Business (1937) etc. All books.

### Educational Significant

Through the study of research to identify the educational significant as-

1. The education system has changed in post-independence India. In this advanced system of education and research, the contribution and role of Acharya Prafulla Chandra Roy is a research question.
2. Now a days the importance of science is increasing day by day. In this context, the role of Acharya Prafulla Chandra Roy in spreading science education needs to be re-evaluated.
3. The educational philosophy of Acharya Prafulla Chandra Roy must be re-examined because this philosophy includes inspiration for work, inspiration for unity, meditation on science, etc.
4. The collapse of society is very noticeable. Appreciation of Acharya Prafulla Chandra Roy is necessary in this regard.
5. The important of change of society and improve to the education system.

### Recommendation

In this study the science inventories, society building and educational contribution of Acharya Prafulla Chandra Roy has been highlighted. There are many other issues that can be highlighted in future research. According to my opinion the issues that can be taken for further studies are as follow:

- If it can be researched on the educational side, then more of his thinking will benefit the society at present.
- For developing good character among our students, and his role of social reformer, educational contribution should be included in our higher education curriculum.
- In present era when physics and chemistry have become the compulsory subjects in school level, the role the chemist in the field of education can be taken for research.
- Acharya Prafulla Chandra Roy's contribution is not only in the field of chemistry, he also helped spread life science education through his illustrated children's book. So the influence of Acharya Prafulla Chandra Roy in this field of education is also a subject of further investigation.
- Acharya Prafulla Chandra Roy was a man of diverse talent. So, different facets of the man can be highlighted on different researches by future scholars.

### Limitation of The Study

In this study, the researcher is not allowed to enter the following areas;

1. This study did not deal with the contribution of Acharya Prafulla Chandra Roy to the society.
2. Acharya Prafulla Chandra Roy had immense influence; even if it was indirect, into today's politics. This study did not focus on this aspect of Acharya Prafulla Chandra Roy.

3. Acharya Prafulla Chandra Roy also contributed a lot to help the poor of the society. The study did not reveal this problem.
4. This study did not discuss the contribution of Acharya Prafulla Chandra Roy in the field of industry. Acharya Prafulla Chandra Roy's enthusiasm to open a new perspective was not considered in the study.
5. The political connection of Acharya Prafulla Chandra Roy with various leaders of the Swadesh movement was not the focus of the study.

### Conclusion

The purpose of this study on various aspects of Acharya Prafulla Chandra Roy is to focus on Acharya Prafulla Chandra Roy as a true educator and candlelighter spreading the light of scientific education among the people to lift the nation from superstition and darkness. I hope that this study will be a valuable document in the hands of the followers of Acharya Prafulla Chandra Roy. Research inspires future students, future generations and researchers. The research highlights and discusses aspects such as the social background of the time of Acharya Prafulla Chandra Roy, the need for scientific research in those dark times, the economic situation, the role of Acharya Prafulla Chandra Roy in spreading education, the sociological thought by Acharya. Prafulla Chandra Roy, Acharya Prafulla Chandra Roy's contribution to changing thinking in this era and most important role in the commitment of Acharya Prafulla Chandra Roy to bring the world under the banner of scientific education.

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