

Socio-economic Impact of Science and Technology on Society: An Analytical Study

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Abstract

As we all know that society needs to see science not as a luxury of funding but as a fundamental activity that drives enlightenment, economics and society. It is hard to imagine our life now without science and technology. The discovery of new plants and the establishment of satellites in space is because of the very same science and technology. Similarly, science and technology have also made an impact on the medical and agricultural fields. Moreover, technology has enhanced the production of different crops and technological advancement of our country have enhanced the Indian economy.

Key Words: Astrophysics, Pollutants, Antifouling Composition, Industrial Revolution, Light-emitting diode (LED).

Introduction

We all see in the 21st century, science and technology are important parts of our day to day life. We get up in the morning from the ringing of our alarm clocks and go to the bed at night after switching our lights off. All these luxuries that we are able to afford are a result of science and technology. Most importantly, how we can do all in a short time are because of the advancement of science and technology. It is hard to imagine our life without it. Indeed our existence itself depends on it now. Every day new technologies are coming up which are making human life easier and more comfortable. Thus, we live in an era of science and technology. If we think about it, there are numerous benefits of science and technology. They range from little things to big one. For instance, the morning paper which we read that delivers us reliable information is a result of scientific progress. In addition, the electrical devices without which life is hard to imagine like a refrigerator, A.C., microwave and more are a result of technological advancement.

Furthermore, if we look at the transport scenario, we notice how science and technology play a major role here as well. The discovery of new plants and the establishment of satellites in space is because of the very same Science and technology. Similarly Science and technology have also made an impact on the medical and Agriculture fields. The various cures being discovered for diseases have saved millions of lives through science. Moreover, technology has enhanced the production of different crops benefitting the farmers largely.

Eversince British rule, India has been in talks all over the world. After gaining independence, it is science and technology which helped India advance through times. Now it has become an essential source of creative and foundational scientific development all over the world. In other words, all the incredible scientific and technological advancement of our country have enhanced the Indian economy. Looking at the most recent achievement, India successfully launched CHANDRAYAN

2. This lunar exploration of India has earned critical acclaim from all over the world. Subsequently, science and technology have assisted in advancing various fields including mathematics, astrophysics, space technology, nuclear energy and more. Some fine examples of these developments are the railway system, Smart phones, the metro system and many more.

Scientific discoveries which affects our society

Archimedes Principle

Archimedes gave the principal which led the discovery of ships, which had a great impact on society. Ships were built by ancient Egyptians, beginning about the 4th century BCE. Discovery of ships has introduced a new type of water transport among us, which is the cheapest mode of transport as well. Discovery of ship played a vital role in development. As people have been using ships for transportation, exploration and war since ancient times. With the invention of ships Vasco-Da-Gama has discovered sea route from Europe to Cape of Good Hope. Columbus reached the America. It connect the continents, countries, states and villages due to which sharing of culture, tradition, food material, raw material and many more things move from one country to another country. As silk Road also called Silk route ancient trade route linking China with the West, that carried goods and ideas between the two great civilization of Rome and China. Silk from China graced Roman aristocrats, Roman coins mingled in Indian treasuries and Persian jewels sparkled in Mauryan setting. From the ancient times spices, fabrics, dyes, handicraft, gems, pearl, utensils, etc. were transported from one market to another, due to which understanding of different types of culture and knowledge develop among the peoples. With the intermixing of different cultures, new knowledge and new values developed. As another major export item along the classical Indian Ocean trade routes were religious thoughts. Buddhism, Hinduism and Jainism spread from India to Southeast Asia, brought by merchants rather than by missionaries. Islam would later spread the same way from the 700s CE on.

During the medieval era, trade flourished in the Indian Ocean basin. The rise of Umayyad and Abbasid Caliphates on the Arabian Peninsula provided a powerful western node for the trade routes.

Dynasties in China also emphasized trade and industry developing strong trade ties along the land-based silk roads and encouraging maritime trade. The discoveries of Ships and Submarines have made it possible to protect the boundary of one country from aggression of enemies and terrorists. Discovery of ship helps the people in the time of natural calamity like flood for rescue in saving the life of peoples. Maritime transport is the backbone of international trade and the global economy. Around 80% of global trade by volume and over 70% of the Global trade by value are carried by sea and are handled by ports worldwide. Global seaborne trade is doing well supported by 2017 upswing in the world economy. Estimates suggest a container ship emits roughly 40 times less CO₂ than large freight aircraft, and three times less than a large truck. Container ships are 2.5 times more energy efficient than train transport and 7 times more than road. However, there are some bad impact of this technology as shipping include air pollution, water pollution, acoustic and oil pollution. Ships are responsible for more than 18% of some air pollutants. It also generates negative impacts on the marine environment including air pollution, greenhouse gas emission, releases of ballast water containing aquatic

invasive species, historical use of antifouling composition, oil and chemical spills, dry bulk cargo releases, garbage, underwater noise but transporting good by ship is less environmentally damaging than the equivalent journey by road or air.

Electricity

The discovery of electricity is one of the most important blessings that science has given to mankind. It has also become an important part of modern life and we cannot think of a world without it. Its discovery has given a rise of new era in the economy as Steam Engines and Industrial Revolution. The first Industrial Revolution was centered on mechanization and the steam engine. In the 19th and 20th century second Industrial Revolution has started and Electricity was the driving force; and we had seen the invention of among other things, the assembly line and mass industrial production. The industrial revolution began around 1750, when technology and economic progress became the focus and improvement around the world.

Invention of steam engine has major impact on industries as powerful engines were made and these steam engines help in running factories and it also used to build the stronger and faster engines. Invention of electricity helped factories to increase their output by using electronic machines stretching working hours to night shift. Modern means of transportation and communication have been revolutionized by it. Electric trains and battery are quick means of travel. Current exploration of electric power is focused on developing source of power that produces cleaner, less polluting energy than that produced by the burning of coal and mining of natural resources. Electricity is the greatest invention in history because it opens people up to a whole new world. With the invention of electricity students can study at late night, in factories workers can stay on the job late into the night and now we can glow every corner of the earth by light.

In 2009, the total amount of electricity generated in the world was 20,100 TWh, enough for every person on earth to keep a pot of water boiling for one third of each day throughout the year. Use of electric power by industry grows exponentially between 1999 and 2022; World Electricity Production grew by 35%. It has been found that electricity is the most versatile and easily controlled form of energy. Besides, its advantages it has some bad impact on environment as; emission of greenhouse gases and other air pollutants especially when fuel is burned. For providing free electricity to all people of our country our Honorable Prime Minister has started Pradhanmantri Sahaj Bijli Har Ghar Yojana – saubhagya. It had been launched by our P.M. at Deendayal Urja Bhavan in New Delhi on September 25, 2017. The total outlay of the project is Rs.16,320 crore, while the gross Budgetary (GBS) support is Rs. 12320 crore. The Government of India will provide largely funds for the scheme to all states and union territories. The States and Union territories are required to complete the works of household electrification by the 31st of December 2018.

Light Emitting Diode (L.E.D.)

The light emitting diode is today's most energy efficient and rapidly developing lighting technology. It has potential to fundamentally change the future of lighting in India. LED lighting is very different from other lighting type such as incandescent and CFL. The rapid development of L.E.D. Technology has resulted in increased production, availability, improved manufacturing efficiency and lower

prices. L.E.D. are much cooler than incandescent light, reducing the risk of combustion. They are sturdier, long lasting and easier to install, upto 25 strings of L.E.D. can be connected end to end without overloading a wall socket. The large or excessive uses of L.E.D's have also some bad impact as temperature dependence, high initial price and voltage sensitivity etc. However, with the rapid increasing energy uses, the production of energy decreases in our country, for saving the energy Indian government has launched "Ujala" Scheme. This scheme has been launched in 2016 to promote efficient lightening, enhance awareness on using efficient equipment that will reduce electricity bill and preserve the environment. "Ujala L.E.D. bulb" scheme has saved rupees 20,000 crore in power bills of middle class and poor households. Free distribution of 37 crore L.E.D. bulbs under this scheme has saved 48,000 million kilowatt hour. This scheme has reduced annual carbon emission by 4 crore ton. Use of L.E.D. bulbs in street lights is saving civic bodies rupees 6 crore annually. L.E.D. bulbs helps in reducing greenhouse gases by 38 million ton every year. Today "Ujala" is the largest domestic lightning project in the world.

Conclusion

So, in conclusion, we must admit that Science and Technology have led human civilization to achieve better in living. However, we must utilize everything in right perspective and to limited extents. Misuse of science and technology can produce harmful consequences. Therefore, we must monitor the use and be wise in our actions. Science and technology cannot give an answer everything, but they lead to civic and economic evolution improving the quality of our lives.

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