Volume 3

Impact of COVID-19 on Economy, Business, Education and Social Life

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1. Evaluating 'Right to Education' In the Corona-Times: An Indian Perspective

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Abstract:

Bhanu Pratap in his article deliberates, the term 'we are all living in a same society' is fallacious.[1]He makes a notion that the concept of "living in a society" or "membership of a society" entails different expression. The children from all of the age groups, although living in a territory of the country, may not necessarily be a part of the community. In special reference to the under-privileged section of the society, we are endorsing, the view "the right to education made available only for the privileged section of the society".[2]In India, we often fail to dispense justice when their rights and interests are not reconciled effectively. It is in this background that I argue for promotion and development of education for underprivileged section of the society, where they in special reference to education under the Constitution of India. I intend to argue the fact that, Right to Education is available only for the privileged section of the society, and especially in the Covid pandemic, the under privileged section of the society, were not able to get their Right to education. Hence, the evaluation of Right to education in reference to Covid pandemic, becomes important for us to unpack.

Keywords: Right to Education, Coronavirus, Right to Life.

1.1 Introduction:

In Janjgir-Champa district of Chhattisgarh, 5% of the ITM children drop out of the school owing to language barrier.[3] The rates of drop-out in schools have been extremely rampant. Dropout rate among the children in Chhattisgarh is in general high. In 2011, it was projected that approximately 1, 78,500 children were out of school.[4]The Nunavut Report argues that children inability to access education has far reaching consequences on their body and brains. It causes "physical harm" through tuberculosis, suicides, dying when trying to escape, stunted physical development because of insufficient nutrition, sexual abuse, harsh physical punishment, hard labour, etc. and even "mental harm" including deprivation of the development of high-level cognitive and linguistic capabilities and grave difficulties in intergenerational cultural and linguistic transfer of knowledge.[5] Despite the call from international covenants like, The Convention on the Rights of the Child (CRC) and several aspirational documents urging the State to make provisions for education along with a provision for accessing the language of the access to socio-educational-economic mobility, there is still less improvement for a downtrodden child in India. Many schools in India neglect the education of an ITM child triggering educational failure and illiteracy, contributing to loss of freedom, capability deprivation and poverty.[6] These covenants advocate for a possibility of a bilingual education along the lines of the four founding principles of the Child Rights Convention,[7] which operates on four guiding principles for a child.

a. The Principle of Non-Discrimination (Article 2),
b. The Principle of Right to Life, Survival and Development (Article 6).
c. Respect for the Views of the child (Article 12).
d. Best Interest of the Child (Article 18).

Exclusion of children from schools cause students to become "passive spectators" in the classroom[8] thereby denying them the component of equal educational opportunity and participation in the classrooms[9]. The component of "equality" of education is in the best interest of a child. If an ITM child is unable to study in his language, it may cause mental and physical harm and would discriminate in accessing education. As a result of which, there is a need to assess the various competing rationales, in relation to education of an ITM child. In seeking to remedy the situation, factors needs to be evaluated in the search of a new and progressive model for removing the eclipse of discrimination and accessing education for a child.

Educational research highlights the Matthew Effect[10] to be pronounced in primary and middle level schools where the research showed that when there is an interaction between three basic factors; educational background, learning practices and motivation, the ethnic and socioeconomic groups score higher than others in early grades also scored higher in later grades as well.[11]

The drop-out rate in the country in 2012 was 5.6% at the primary level and of 2.7% at the upper primary level.[12] In the state of Chhattisgarh, the dropout rate at the primary level was reported to be 3.1 percent and that at the upper primary level was reported to be 3.7%.[13] This just reiterates the divide in the Educational opportunity and contributes in Matthew's effect and causing harm to a child.

Port Loius in his article[14] submits the phenomenon of suppression of education, called "Harm Principle"; causes harm not only to the children but also the society and aggravates poverty.[15] An education based on the assimilation of the language of an ITM child has caused "long-lasting mental harm, including deprivation of the development of high-level cognitive and linguistic capabilities and grave difficulties in intergenerational cultural and linguistic transfer of knowledge[16]" and even physical harm.

When a child is discriminated on the basis of education, it gives rise to difference aware equality[17], where an educational provision is made which favours the children who are able to afford the education. This just reiterates the divide in the Educational opportunity and contributes in Matthew's effect and causing harm to a child.

1.2 The 'Lost Year': The Case of Education in Reference to India:

India, accounted for 10 million cases of Coronavirus. The New York Times Reports that there were around 1, 46,444 deaths related to Covid in India[18]. After 13 months of its discovery, the fight against coronavirus is not yet over.

There are problems strumming with reference to labour laws, employment, education, healthcare etc. The WHO has rightly pointed out that the outbreak of Covid is nothing more than a pandemic[19].

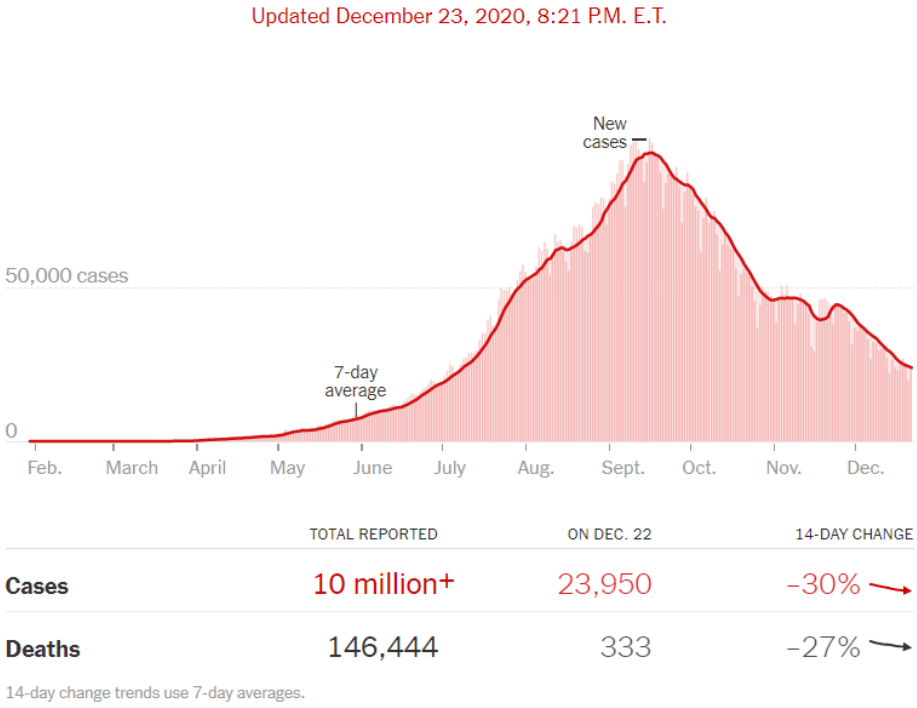


Image 1.1: Data and Figures Relating to Coronavirus Outbreak in India

India, being one of the most affected countries relating to Covid, is at a standstill. The reasons for this is there was a huge impact of the virus on the education sector as well.

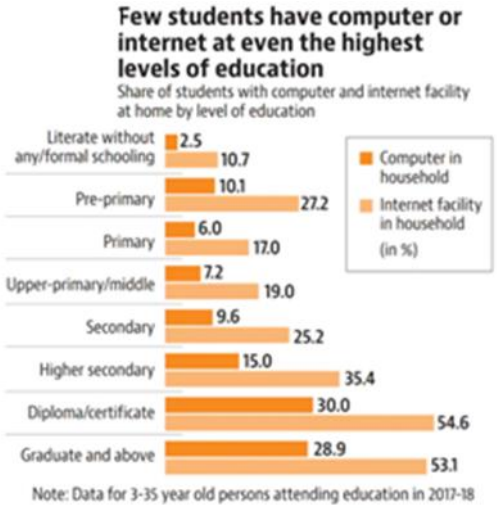
This paper is an attempt to glance at the problems associated with the outbreak of virus on the education sector. It will attempt to clarify few things with reference to International conventions and case laws.

More than 100 million individuals could have reached absolute poverty, according to an assessment by Brookings. India's GDP is expected to fall by over 10 percent in the current year (the latest estimate is 7-8 percent).[20]

This has contributed to job reductions and growing joblessness. Most firms have agreed to cut salaries for their workers. It has been estimated that approximately six million students are all out of school in India.[21]

1.3 Problem with Online Learning in India:

Also, at the best of circumstances, our learning environment has never been very successful. The pandemic of COVID-19 has made it highly distorted and defective. Online education is the primary point in offering educational process when schools are closed. In this entire online education effort, there are three relevant issues and frameworks that require serious consideration. One, an exacerbation of inequality; two, the educational problems that contribute to low quality education; and three, an unjustified fixation on digital education, post-COVID-19.[22]



A disparity in information technologies also has produced a shortage of connection to the Web and smartphones. In the 5-35 age category, as many as 76% of Indian students were unaware of using a computer. The proportion of those who didn't know how to use the internet was 74.5%.[23] (Image 2: Shows the number of students who have computer and internet facility in household) [24]

Focusing on the shortcomings in the process, the present situation has centered mostly on shortage of educational attainment for everyone, the lack of inclusive education, the shortage of trained teachers and a poor emphasis on basic life skills.

Professional courses are perfectly suited to a change to online approaches, considering the interplay between social history and selection of programs. 54% of participants in the humanities (graduate level or higher, including diplomas) did not really have internet connectivity and 81percent did not really have internet access.[25]

1.4 Legal Framework:

The Convention on the Rights of the child is an important piece of international document which in its preamble recognizes the inherent dignity and of the equal and inalienable rights of all members. It also recognizes the rights of the children “for his/her full and harmonious development of his or her personality”.[26] The child according to the Convention should “be fully prepared to live an individual life in society, and brought up in the spirit of the ideals proclaimed in the Charter of the United Nations, and in particular in the spirit of peace, dignity, tolerance, freedom, equality and solidarity”.[27] The Convention also recognizes that the children with physical and mental immaturity should be given special needs and safeguards, including proper legal protection by the State.

The definition of child as mentioned in the Convention on the Rights of the Child, is a person below the age of 18 years of age [28] or the age of majority as defined in the legislation of a country. The Indian legislation with this regard has different meaning adjudicated to definition of child and hence different legislations have prescribed different age for the meaning and definition of child. In spite of various definitions defined in various legislations, there is no uniformity in defining the age of a child in any of the legislations.

For the purpose of understanding and definition age with regard to Education, the age of the child protected under Article 21A is between the ages of 6 to 14 years of age. The Right to free and compulsory education act protects the rights of the children between the ages of 6 to 14 years of age.

The Indian Majority Act, 1875[29] was enacted basically to bring about uniformity in the applicability of laws to person of different religions. It provides, unless a particular personal law specifies otherwise, every person domiciled in India is deemed to have attained majority upon completion of eighteen years of age. But in case of a minor for whose person or property or for both, a guardian has been appointed or declared by any Court of Justice the majority may be attained before the age of eighteen years. It is also submitted that 'minor' and a 'child' are to be interpreted differently as according to the facts of the case.

The convention under Article 2 states a duty on the States regarding the protection of the rights of the child without any discrimination with irrespective of "the child's or his or her parent's or legal guardian's race, colour, sex, language, religion, political or other opinion, national, ethnic or social origin, property, disability, birth or other status".[30]

The convention brings in its ambit how the protection for the children with regard to the Right of freedom of expression should be undertaken. Under Article 13, "the right shall include freedom to seek, receive and impart information and ideas of all kinds, regardless of frontiers, either orally, in writing or in print, in the form of art, or through any other media of the child's choice".[31] The right is not absolute and has negative covenants attached to it when it is for the protection of the rights and reputation of others or in the interest of national security, public order, or public health or public morals.

Article 23 enshrines a duty on the State parties to recognize that a child, mentally or physically disabled should enjoy a full and decent life which ensures his or her dignity, promote self-reliance and which would facilitate the child's active participation in the community.

The states parties recognize that the right of the disabled child is to ensure special care and encourage and ensure the protection, available to the resources and to provide for assistance for the child's condition. The article also strives to provide such an education, free of charge, whenever possible while looking at the financial aspect of the child's parents or others who is taking care of the child and shall ensure that the disabled child has the effective access to and "receives education, training, health care services, rehabilitation services, preparation for employment and recreation opportunities in a manner conducive to the child's achieving the fullest possible social integration and individual development, including his or her cultural and spiritual development."[32] The state parties shall also ensure that they shall promote, the exchange of appropriate information concerning among others, education and vocational services with the "aim of enabling state parties to improve their capabilities and skills and to widen their experience in these areas". In this regard, particular account shall be taken of the needs of developing countries.

The International Covenant on Political and Civil Rights has for the first time mentioned in an international document, the varied components required in education. These components, also called in as "**4 A**'s" are, availability of educational institutions, accessibility which has three dimensions: non-discrimination, physical accessibility and economic accessibility; acceptability and adaptability.[33]

1.5 Evaluating the 4a's In Reference to Educational Setup in India:

Availability embodies two distinct community needs: the right to education as a civil and political privilege allows the government to allow non-state entities to set up schools, whereas the obligation to knowledge as a social and economic right needs the state to set them up, or finance them, or to use a mixture of that and other ways to guarantee that education is an economic and social right.

The academic necessity is always there, but just not the educational provision capable of fulfilling certain criteria or conditions. To meet the basic educational needs of people living in that certain city or country, there really is no child care center, no public or private school, little community hall, no bookstore, etc. Most services are limited, serve only some individuals or ages, or run for a certain length of time, and do not access locations or groups that are hard to reach, living in rural and remote areas.

Sometimes, the quality of education is still limited to infants and training, leaving aside the interests of both young children as well as the adult population. It is significant to mention how every individual - infants, kids and adults - and in life has the right to education.

With various levels of schooling, access is described differently. Throughout the universal education age group, the government is required to provide access to education for all students, not for secondary and higher education. In comparison, compulsory schooling should be available for free, while post-compulsory learning can involve payment of tuition as well as other fees and could therefore be absorbed by 'affordability.'

Accessibility has various dimensions: (a) economic accessibility: The right to education means the right to free tuition: no taxes, free access to instructional resources, grants to offset any expenses involved with learning or training. (E.g. transportation, food, etc.); (b) Physical accessibility requires the various requirements required to be able to easily meet the position where the practice takes place (distance from home or work, sufficient highways, basic necessity, visually disabled people's standards, etc.) or the resources required if distance learning (radio, television, internet, etc.) is at stake, and also sufficient plans to be able to join or to visit.; (c) Availability to instruction and pedagogy means the need for students to deal with the primary language) used for correspondence and educational reasons, content, techniques, testing methods, technology, etc., with the required and sufficient assistance whenever appropriate. Since their entry requirements are limited, certain schooling possibilities will not be recognized. Sometimes, completing an educational program or reaping the benefits of a teaching moment means expenses that cannot be afforded by learners or their families, thereby restricting enrolment or encouraging rapid drop - outs; centers are far enough apart or their arrangements are inconsistent with family or earnings operations; lack of sufficient lighting or other safety regulations often limits the involvement of people, especially the girl child. Owing to their position and scheduling, their nuanced practices and routines, and the lack of suitable reading resources, many libraries are unavailable to teenagers, young people and adults.[34] In the context of modern technology, contemporary examples of viable teaching opportunities that are not traditionally usable are to be identified. It is possible to buy and sell computers and other devices, but it will stay under-used because no one knows how to use or restore them, there are no qualified teachers or even basic specifications such as electricity and an internet access.[35]

Therefore, before assuming their utility or efficacy, it is important to ensure that technical advances are genuinely such - that is, developments that are part of an efficient and continuing educational mechanism.

Since the 1990s, the introduction of 'efficiency' before schooling in policy statements has highlighted one crucial facet of school education suitability, prompting legislators to guarantee that accessible and functional education is of good quality. Consequently, the state shall set and enforce mandatory safety requirements or professional requirements for teachers. With both the advancement of international suitability, the scope of social acceptance has been significantly expanded.[36]

School textbook censorship is no unique from every other censorship, except it is rarely revealed as a breach of human rights. The vocabulary of learning was given priority by the emphasis on aboriginal and gender equality, which also makes schooling undesirable if the culture is unfamiliar to young children (and also often to the teacher). In several nations, the abolition of corporal punishment has changed school education, further expanding the adequacy requirements.

The advent of children themselves as performers validating their access to learn and educational freedom promises to give their view of how their rights can be viewed and introduced to the notion of appropriateness.

Over the several legal decisions concerned with the access to education of children with disabilities, adaptability was best conceptualized. National courts have unanimously ruled that schools should conform to infants, relying on the Convention on the Freedom of the Child's idea of the best interests of and child.[37]

The legacy of pressuring children to conform to whatever schooling may have been made open to them was subtly faulted by this reimagining; the college essentially had a right to expel a pupil that did not suit or could not adapt. In comparison, in efforts to offer schooling to incarcerated or working children, a mental disconnection has actually occurred between 'college' and 'schooling'. They will hardly be taken to school, but schooling needs to be taken everywhere it is.

1.6 Why is the Disparity in Education Still Being Created?

Legal funding for schooling from these models is regularly lacking. There is neither a civil right to help nor a legal responsibility to have it. Since one aim of the legislation is to guarantee protection and consistency, it determines who is eligible to what, who is obligated to do what, and what occurs if any actor (including the government) departs from the necessary actions in order to correct the intended behavior.[38]

Domestic education legislation routinely describes schooling as mandatory for children between the ages 6-14 years and points out the administration's corollary duty to make resources available and free of charge. Otherwise, only in principle can schooling be compulsory. As schooling is defined as a public good, children have a responsibility to attend school. It is forced on children to encourage them in becoming financially personality, to help to understand the culture, history and future of the country.

Domestic law on education routinely defines education as compulsory for children aged 6–14, and lays down the corollary obligation of the government to make education available and free of charge. Otherwise, education would be compulsory only in theory. Children have a duty to attend school because education is defined as a public good.

It is imposed upon children so as to enable them to become economically self-sustaining, to enable them to understand the country's language, past and future, to gain an appreciation of the domestic philosophy, faith or political theory that has been picked. It can teach equal rights to children as well, but this is scarcely put into reality. As a result of this, it is pertinent that the State Governments take a ready action for education in reference to the underprivileged section of the society, where right to education is extended to each and every one without any discrimination in accessing the education.

1.7 Evaluating the 'Right' In Right to Education: A Supreme Court Evaluation:

Unni Krishnan[39] was one of the foremost cases in the educational realm, where the court mentioned this point that Right to life also includes within its aspect, the Right to education.

1.8 The Relevant Portion of the Judgment Reads as Under:

"The citizens of this country have a fundamental right to education. The said right flows from Article 21. This right is, however, not an absolute right. Its content and parameters have to be determined in the light of Articles 45 and 41. In other words, every child/citizen of this country has a right to free education until he completes the age of 14 years. Thereafter his right to education is subject to the limits of economic capacity and development of the State."

It is pertinent to note that under the Right to Free and compulsory education Act, 2009; we find the reference that children between the ages of 6-14 have a right to free and compulsory education. This has also now been enshrined as a Fundamental right under Article 21A. [40] The aspect of education has largely been missed by the State actors in making sure that children get access to education in the coronavirus times. It is in this reference again, the author would want to submit another relevant paragraph from the Unni Krishnan judgment,

"Right to education is not stated expressly as a Fundamental Right in Part III of the Constitution of India. However, having regard to the fundamental significance of education to the life of an individual and the nation, right to education is implicit in and flows from the right to life guaranteed by Article 21. That the right to education has been treated as one of transcendental importance in the life of an individual has been all over the world. Without education being provided to the citizen of this country, the objectives set forth in the Preamble to the Constitution cannot be achieved. The Constitution would fail."[41]

It is pertinent to note, that the right to education is an integral right without which the future of a child will suffer a lot. If a proper implementation of the right doesn't take place, it will seriously hamper the cognition and response to the external environment of a child.

The relevance of education cannot be ignored in a populous and a developing country like India. The same view was reiterated by the Supreme Court in the case of, Avinash Mehrotra vs. Union of India & Ors[42]

"Education occupies an important place in our Constitution and culture. There has been emphasis on free and compulsory education for children in this country for a long time. There is a very strong historical perspective. The Hunter Commission in 1882-83, almost 125 years ago, recommended Universal Education in India. It proposed to make education compulsory for the children."

It is not that the aspect of education was never discussed after India attained Independence. It is in this reference that we see that the Kothari commission was established by the Government of India, where the objective of the Commission was to, "The objectives of education should be to increase productivity, to achieve social and national integration, acceleration in the process of modernization, and also to cultivate social, moral, and spiritual values."[43]

Set up by the Government of India in 1966, the Kothari Education Commission generally advised free and compulsory education for children up to 14 years of age. The Commission noted that the disadvantaged had no other means of getting out of such a plight. In reference to education, the Supreme Court in the case of Ashoka Kumar Thakur mentioned an important facet regarding education and its importance in the country of India.

"It has become necessary that the Government set a realistic target within which it must fully implement Article 21A regarding free and compulsory education for the entire country. The Government should suitably revise budget allocations for education. The priorities have to be set correctly. The most important fundamental right may be Article 21A, which, in the larger interest of the nation, must be fully implemented. Without Article 21A, the other fundamental rights are effectively rendered meaningless. Education stands above other rights, as one's ability to enforce one's fundamental rights flows from one's education. This is ultimately why the judiciary must oversee Government spending on free and compulsory education."

There have been numerous other judgments of the Supreme Court giving impetus to right to education. But in the year 2020, because of the Coronavirus pandemic, we see that Right to Education has been blatantly been violated of the children, as no mainstream education was made available. It also submitted that there were lakhs of children which were affected by the coronavirus pandemic, which left them breathing for education. It is the view of the author, that the right to education has been ignored by the State governments in providing accessible education to the children between all age groups.

1.9 Conclusion:

For articulating a claim on education, we should serve the interest in a manner which will facilitate the maximum learning of the students in all age groups, where the access to education is not a challenge but a privilege, which is given to each and every child, irrespective of his status, class or caste. This purpose will serve two reasons; it will serve the interest of the community and reduce the cost of accommodating the diversity.

With regard to access education as a right, the author points out that in an education policy, there needs to be equal opportunities to access to socially valuable skills and knowledge which is very essential for the overall development of a child. The reason why many schools and political systems do not propagate education for the under-privileged section of the society, is still something which needs to be evaluated further.

As a result of which, the parents accept the whatever form of education which comes to them, as a result of which, there is inaccessibility of education for all age groups, especially the lower strata of the society. The corona-virus pandemic, is a big wake up call for all the people and the governments. It is the need of the hour to create an education system which is accessible and efficient to all the students in the country.

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2. Covid-19, Atma Nirbhar Bharat Abhiyan and the Role of Entrepreneurship and Startups with Special Reference to Women

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Abstract:

In any society, women are the backbone and always play a vital role. However, during this pandemic situation caused by COVID-19, women have become the silent sufferers. To fulfil the dream of Prime Minister Modiji's in making India atma nirbhar, each and every citizen of India should have the capacity to be self-reliant including women. For 'Atma nirhar Bharat', it is very important to take women along. It is therefore has become the utmost priority to work towards the sustainable livelihoods and economic empowerment of women especially in rural areas. This review article focuses on the various schemes under "Atma Nirbhar Bharat Abhiyan" and the role of society, culture, education and technology along with Entrepreneurship and Start Ups in making India self-reliant with special reference to women.

Keywords: Atma nirbhar Bharat, COVID-19, Self-reliant, Women.

2.1 Introduction:

Prime Minister Narendra Modiji has announced a special economic and comprehensive package of Rs 20 lakh crores under "Atma Nirbhar Bharat Abhiyan" with a vision to make India self-reliant on its own power and resources in every aspect. It includes packages for various sections including cottage industry, MSMEs (Ministry of Micro, Small & Medium Enterprises), labourers, middle class, industries, etc. All these efforts were made though the beginning of these new ventures to reform India's self-reliance by promoting our local market products into the global market.

This mission includes various objectives like to modify the infrastructure of India into a more digital one which suits the current developments towards 'Digital India' making India more self-reliant towards digital revolution and the one that represents 'Modern India' among the world; strives for a technology driven India where everything will be based on high-technology starting from one to all, etc. However, achieving all these objectives under this 'Atma Nirbhar Bharat Abhiyan' does not seem to be easy. There are major barriers that has to be crossed in order to actually achieve the objective so as to make India an actual 'self-reliant Bharat'. Some of the challenges that are to be overcome could be discussed under the following heads.

- **Issues related to Liquidity:** One of the major challenge towards achieving this mission is the issues related to liquidity of the scheme. Prime Minister Narendra Modi has announced an amount of Rs. 20 Lakhs Crore and the majority of the package are supposed to be transmitted by RBI to Banks and Banks to Citizens. This transmission does not seem to be as smooth owing to inefficient transmission of monetary policy.
- **Lack of Demand:** The demand ratio in every sector has been reduced due to this lockdown followed by COVID-19. This pandemic has really created a situation all over the world including India where there is a lack of demand which is becoming another obstacle in achieving the vision 'Atma Nirbhar Bharat'. To fulfil this vision, people in the form of investors having money should come up in different sectors to facilitate growth in every proposed sector under this mission.
- **Lack of Backward and Forward Linkages:** There is a lack of backward and *forward linkages due to this lockdown. Until and unless the rest of the domestic economy is revived from this present pandemic situation, the MSME sector may face a shortage of demand, and its production may soon sputter to a close.
- **Burgeoning Fiscal Deficit:** Under this mission, our Government claims that the stimulus package is around 10% of India's GDP. However, financing it would be difficult as the government is worried about containing the fiscal deficit. But fiscal deficit indicates that the government is going to bridge the gap through increased taxation, reduced expenditure, additional domestic or foreign borrowings or printing money.
- Difficulty in Mobilising Finances: There is also a difficulty in mobilising finances under this mission to achieve the various objectives. The government seeks a disinvestment to mobilise the finances for the plan. However, the majority of Indian industries are already a bit debt-laden to take up the stake in PSUs. Moreover, it is also difficult to borrow the foreign markets, as rupee with respect to dollar is always low.

Therefore, it is essential to find out the role of different sectors of the society including women in making India self-reliant and also to explore the possibilities of entrepreneurial startups in achieving the goals of this 'Atma Nirbhar Bharat Abhiyan'.

2.2 Government Policies:

To achieve this mission, Government of India has introduced a dozens of policies which are implanted at five different phases covering different sectors. These can be discussed under the following heads:

a. **Businesses through MSMEs:** Prime Minister Narendra Modi has announced a special economic and comprehensive package of Rs 20 lakh crores which is equivalent to 10% of India's GDP. This amount has been scattered in different sectors to promote the businesses in India in different packages such as,
   - Pradhan Mantri Garib Kalyan Package (1)
   - Pradhan Mantri Garib Kalyan Package (2), etc.

b. **Poor, including migrants and farmers:** The highlights under this policy are as follows:
   - Crore farmers with agricultural loans of Rs. 4.22 lakhs Crore availed the benefit of 3 months loan moratorium.
   - Interest Subvention and Prompt Repayment
   - Incentive on crop loans, due from 1st March, extended up to 31st May, 2020
   - 25 lakh new Kisan Credit Cards sanctioned with a loan limit of Rs. 25,000 cr.

- 63 lakh loans of Rs. 86,600 Crore approved in Agriculture between 1.3.2020 to 30.04.2020.
- Refinancing of Rs.29, 500 Crore provided by NABARD, to Cooperative Banks and Regional Rural Banks in March, 2020.
- Support of Rs. 4,200 Crore provided under Rural Infrastructure Development Fund to States during March, 2020 for rural infrastructure
- Working capital limit of Rs. 6,700 Crore sanctioned for procurement of agriculture produce to State Government entities since March, 2020.
- Support for Migrants and Urban Poor during last 2 months.
- MGNREGS support to returning Migrants which includes 14.62 Crore person-days of work generated till 13th May 2020, etc.

c. **Agriculture:** The main highlights under this section are as follows:
- Rs 30,000 Crore Additional Emergency Working Capital for farmers through NABARD.
- Rs 2 lakh crore credit boost to 2.5 crore farmers under Kisan Credit Card Scheme.
- During lockdown period due to COVID 19, Minimum Support Price (MSP) purchases of amount more than Rs 74,300 crores.
- Amendments to Essential Commodities Act to enable better price realization for farmers under which EC Act, 1955 was enacted in days of scarcity, etc.

d. New Horizons of Growth: Under this the various policy reforms were made to fast-track the various investment efforts made under Atma nirbhar Bharat. Some of the policy highlights under this scheme are as follows:
- Project Development Cell in each Ministry to prepare investible projects, coordinate with investors and Central/ State Governments.
- Ranking of States on Investment Attractiveness to compete for new investments.
- Incentive schemes for Promotion of New Champion Sectors will be launched in sectors such as Solar PV manufacturing; advanced cell battery storage; etc.
- Up gradation of Industrial Infrastructure Scheme will be implemented in States through Challenge mode for Industrial Cluster Up gradation of common infrastructure facilities and connectivity.
- Introduction of Commercial Mining in Coal Sector.
- Policy reforms were made in different sectors like mineral sector, defence sector, coal sector, traffic sector, atomic energy sector, etc.

e. Government Reforms and Enablers:
- Government has announced Rs. 15,000 crores for the health related steps to be taken during this COVID containment period. Under this Rs 4113 crores have been released to states; Rs 3750 crores for essential items and Rs 550 crores for testing labs and kits.
- Introduction to technology driven systems for online education during COVID including SWAYAM PRABHA DTH channels, DIKSHA, e-Paathshaala, etc.
- Rs 40,000 crores increase in allocation for MGNREGS to provide employment boost.
- New National Curriculum and Pedagogical framework for school, early childhood and teachers will be launched: integrated with global and 21st century skill requirements.
- National Foundational Literacy and Numeracy Mission for ensuring that every child attains Learning levels and outcomes in grade 5 by 2025 will be launched by December 2020.
- Public Sector Enterprise Policy for a New, Self-reliant India.

2.3 Role of Social, Culture, Education and Technology:

Society, culture, education as well as technology has a key role to play towards achieving the goals of Atma Nirbhar Bharat making India self-reliant in each and every sector (Stam).

- **Society:** The thinking process and the current mind-set of the people of the society has to be reformed so as to achieve the goals under the mission 'Atma Nirbhar Bharat'. The present society of India has many stereotypic thoughts regarding the work culture. We encourage our children to work more on technology than working with hand in fields. A farmer does not get the proper respect and money in our society due to which many of them has even committed suicide during this lockdown period. And to reform this though process, teacher can play a pivotal role in the society. A society is comprised of teachers, learners and the parent. The students or the learners has a mind-set that can be molded easily by inculcating modern thought process and respect towards every work. Even the work of a sweeper is important for the society. This job should get the same respect and privilege with any other job like doctor or pilot or ministers. Only then we can actually perceive Modiji's 'Atma Nirbhar Bharat'. It should now be the dream of each and every member of the society which will help in achieving this goal as quickly as possible and it is not possible without the active participation of women through various roles in the present society.
- **Culture:** The culture of our country has a tremendous effect on the mind-set of its people. India being a democratic country with a lot more number of different religions and cultures existing in harmony. The work cultures are different in different communities belonging to different cultures. All these people have now to understand the importance of a common culture which is "work culture" towards achieving the goals of 'Atma Nirbhar Bharat Abhiyan'.
- **Education:** Education has a tremendous effect and activities to do towards achieving the goals of Modiji's "Atma Nirbhar Bharat Abhiyan'. But due to this lockdown, our traditional face-to-face interaction process has now been forcefully replaced the online process of learning through different technologies such as SWAYAM PRABHA DTH channels, DIKSHA, e-Paathshaala, etc. All these are new educational initiatives to impart quality education among the youngsters. They should get proper education. The curriculum should include theoretical as well practical and vocational training contents so as to brainstorm the young mind through education (Elahi). The outcome of all these processes should be to develop a mind-set among the learners towards a solution finding approach to all the problems that we are facing at present. These should open up the young minds of the students through proper education (Manimala).
- **Technology:** This is another new revolution that has become important in each and every field of life. Now a days starting from education to agriculture technology has become an important integral part. New technologies are coming up every day and we are becoming handicapped without these.

  For example, the apps that we are using in our desktops, mobiles for doing different activities are becoming most important in doing all those activities. The app Tik Tok has now been advised among people to ban because it is a Chinese origin app. But many people of India are still using this app and China is earning revenues from us. The 4G internet that we are using is doing almost all of our work during this lockdown period. We are stuck at our homes but digitally we are all connected using this 4G. At present people are even working on 5G internet which is actually not required in doing our day-to-day activities.

But it is required in health sector e.g., a doctor sitting at New York will be able to a critical neurosurgery operation in India using robots through this 5G internet technology. Thus, it seems that technology has grabbed each and every sector of our life and without it, we cannot do our day-to-day activities especially during this lockdown time.

2.4 Role of Entrepreneurship & Start-Ups with Special Reference to Women:

Finally, our vision to make India a self-reliant country through Modiji's 'Atma Nirbhar Bharat' can only be possible through the role of Entrepreneurship and startups. For this, Government has launched different policies and schemes through this 'Atma Nirbhar Bharat Abhiyan'. All these schemes promote the role of entrepreneurs in our country. It is only the entrepreneurs who can change the current fall down of GDP and financial crisis in India. We need lots of entrepreneurs in each and every sector of society and anyone having an idea with a value in it which can be transformed into a business can become an entrepreneur (Smith). Government of India has many schemes for the entrepreneurs such as SIIP, MSME, PRAYAS, EIR, DST, DBT, BIIP, ANGELS, etc. Even at the student level, they can get grants from SIIP and EIR (Toma). One such brilliant example is from the School of Biotechnology, Kalinga Institute of Industrial Technology, and Bhubaneswar. Here, Dr. Vishakha Raina has an incubation centre and start-up which has helped a group of students to change their mind-set and take entrepreneurial start-ups utilizing these types of schemes. They have not only successfully find out the solution to a local problem but also added values to their products and have generated money from it. By using the weed biomass from a plant, the students made pulp source for making handmade papers which later on become the alternative source of livelihood for local tribal community near the Chilka Lake in Odissa. The supervisor of the laboratory Dr. Raina received MSME grants for her various innovative ideas and later on she established her 'Krea Foods And Beverages PVT LTD. They have also filed patent on her innovation cal 'acryl-aid' to improve the dieteray value of the bakery food products. They also developed biodiesel from used cooking oil which they collected from different restaurants and eateries under the team called' In-Dhan, Bioenergy Unit. They received grants from MSME and finally set up a Bioenergy pilot scale facility housed at KISSS, Bhubaneswar in the year 2014. The main objective of this team was waste management and clean renewable energy generation process for various applications. There are innumerous number of examples of such entrepreneurs and start up incubation centers in India already established using these schemes released by Government of India.

Dr Vishakha Raina (in the middle) and other co-founders with the team at Krea Foods and Beverages.

Figure 2.1: Role of Entrepreneurship & Start-Ups with Special Reference to Women

Another success story of Adivasi Women in Chhattisgarh is one of the many examples of a self-reliant India. As Covid-19 spread globally resulting in the shortage of hand sanitizers amongst other products, women from Chhattisgarh are steering contribution to India's collective fight against the coronavirus. They have developed 'Madhukam' which is a brand of herbal hand sanitizer with guidance from Samarth Jain, a scientist, researcher, and a consultant. He paved the way for developing the hand sanitizer from the base of the traditional mahua brew, which is an integral part of Adivasi life and culture. Earlier, the mahua brew prepared by the women would be used for making alcohol at home using traditional methods.

Figure 2.2: Adivasi Women in Chhattisgarh

2.5 Conclusion:

There is a pivotal role of women in the society to be played by these entrepreneurs and start-ups in our country which can help our country to become self-reliant in every sector (McMillan). Entrepreneurship and start-ups plays a key role in the socio-economic development of country including creation of employment, encourages better standard of living for women, expanding exports, etc. Entrepreneurs not only invest their own capital but it also attracts capital from the market. They make productive use of these savings and mobilize them by turning it into a productive resource. The pooled financial resource or capital is the basis of wealth creation in the economy, thus contributing majorly to the socio-economic development of a country (Morris).

Thus, there is a close relationship between the economic development and entrepreneurship. Over the years this relationship has gained a growing interest especially during this time of pandemic. Entrepreneurship has to play a key role in any country including India in its economic development (Bhinde). Entrepreneurs experiments on natural resources and add values to the waste products thereby helping in the rise of economic growth of a country (Nwachukwu). Countries like India have to get the big picture right and fix the details through entrepreneurship and new start-ups along with women.

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3. Impact of Covid-19 on Education

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Abstract:

Education is lifelong process. We learn different things from different situations formally and informally. Due to rise of Covid-19 virus sudden change occurs in life of human kind. Lockdown was implemented by all the affected countries.

Education including all other activities were stopped. After initial chaos, work from home become the principal of new normal of working. Education was also allowed to restart. School were closed but education started. As education system was not ready for it initially, later all stake holder accepted and adopted online education i.e. work from home.

Online education raised as an alternative for formal education in the lockdown period. It was no choice situation, so accepted. It makes great impact on whole education system. The gap between reality and expectation was much more than guessed. Teachers were finding ways out to reach students. Students were trying to get connected with teachers.

Teaching, learning, evaluation, research, extension, admission etc. all processes affected by the situation created by Covid-19 virus pandemic. The impact of the situation created by covid-19 pandemic has been described in the chapter on different processes of education. The impact even continue after pandemic, so post covid-19 pandemic era also considered in the chapter.

Keywords: education, online teaching, new normal in education, post pandemic education, education in lockdown.

3.1 Introduction:

India's first case of Coronavirus COVID-19 (Severe Acute Respiratory Syndrome Coronavirus – SARS-CoV-2) reported in Kerala. A medical student studying in Wuhan University was the patient zero in India. Then the graph of number of infected people was on high rise. Nationwide lockdown was ordered by Central Govt. of India from 24th of March 2020, for 21 days. On 14 April, India extended the nationwide lockdown till 3 May which was followed by two-week extensions starting 3 and 17 May with substantial relaxations. From 1st June 2020, the government started "unlocking" the country.

During the period of full lockdown i.e. 24th of March 2020 to 31st of May 2020 ‘Work from Home’ principle was encouraged and so online education was promoted where teacher can engage students for education. It is continued further during the process of unlock, because schools and college s were not allowed to start.

3.2 Impact of Covid19:

Impact of Covid 19 doesn't mean its infection here. Impact of situation which is occurred due to Corona virus; in absence of proper medicine on Covid-19 virus. Because the vaccination not available prevention was must to avoid physical distancing from infected people to non-infected people.

So maximum public places were closed in lockdown and initial phases of unlock down, including educational institutions. Online education was the only alternative left for education where education possible with physical distancing.

3.3 Education-Concept:

There are three ways of education widely accepted, formal, non-formal and informal education. Formal education means the education which is well planned, structured and designed for face to face education. Non-formal education also well planned and designed course but not for face-to-face mode i.e. distant mode. Informal education is not structured or planned like other type, still learning takes place in day-to-day life by people and experiences. Covide-19 left impact on all types of education.

3.4 Education-Processes:

Learning is at the centre of the education process. In fact education exists only because of learning. The sole purpose of all the processes to facilitate learning.

When we analyse the impact of Covid19 on education, we need to find out the changes in the nature of the processes. The impact is reflected in the processes.

- **Learning:** Learning is less or more permanent changes behavior in of a learner. These changes are directed well by goals of education. These goals are corresponding to the constitution of the country. Curriculum and syllabus designed to achieve these goals. All other processes are executed for the sake of best learning. So learner is always at the centre of the processes. So, the impact of Covid19 situation should be analysed by keeping learners at the centre.
- **Teaching:** Teaching is a process to facilitate learning. To help learners to learn with minimum errors. Teaching an act to provide various learning experiences to learners to achieve learning objectives. Covid impact analysis will help to improve process of teaching.
- **Evaluation:** Evaluation process that give the status of expected behaviour among learners. It provides feedback to learners and other stakeholders about attainment of learning objectives. How Covid19 making impact on evaluation process should be analysed.
- **Administration**: Administration helps to coordinate all the processes for better learning. Planning, execution, monitoring and reinforcing are expected in administration. During the covid19 period the administration played important role to coordinate all other processes.
- **Extension:** Extension is the process which takes education beyond the formal boundaries of classroom and students. It takes education to the society. It contribute lot in non-formal and informal learning.

3.5 Covid-19 Restrictions on Education in India:

Code 19 4th all governments. To initiate lockdown. All over the world. Due to the lockdown Educational institutions were closed an education started online. The impact of this online mode of education and the principle of 'work from home' leaving great impact on whole education process. The impact of whole scenario has been described in the form of processes. These process are connected to each other, they are not separate from each other. Just for the purpose of analyzing the impact the process these are separated from each other. All processes are complex and connected together. Impact on one process renders impact on other process.

3.6 Impact of Covid-19 Learning:

The impact of COVID-19 situation can be seen at the greatest level on learning process. Because of lockdown, face to face education was not possible hence online learning mode was adopted. Students and teachers were not ready for it. So lots of difficulties where faced by the student and teachers in that phase. Because of it learning was suffered.

Students are habitual for face to face learning not able to get connected with the teachers in online mode. Face to face interaction is full of enjoyment. Students and teachers like the face-to-face interaction. Due to the Corona pandemic lockdown this interaction was broken. The feeling of being human was missing in this technical interaction. Due to that learning became more technical rather human. Because of medium of technology, students and teachers were not feeling to get connected with each other. Because of lack of live interaction seriousness was lost. Students were thinking they are learning from mobile or computers and teachers were thinking they are teaching to the mobile our computers. Humans are social animals and teaching learning is a social interaction. Because this social interaction was missing, traditional learners were not able to learn properly as they expected.

COVID-19 pandemic lockdowns forced for learning from distance education. In the mode of distant education, learner has to learn on their own. Even they are receiving learning experiences from teachers in online mode they do not get connected as impressively as face-to-face mode. There are many technical limitations for two-way interaction hence interaction is not so effective in online mode. Technical limitations force teachers not to ask questions and not to participate students in the classroom. Even if students want to ask the queries, technical barriers disallow it. Unless the doubts in understanding not being cleared, learning is not effective. Because of the distant mode students not able to ask their queries to a teacher and teacher are not able to understand difficulties of students. Hence teachers do not get proper feedback from the students regarding learning. So, they do not able to improvise their teaching strategies. This creates a gap between the understandings about the students learning. Teacher has to understand the right status of the students learning and she has to ask the question to the students to evaluate the learning. Because of time consent and technical barriers it was not possible properly. The right status of the learning is not conveyed to the teachers properly and teachers do not able to understand the exact previous knowledge of students. Because of the gap of teacher's expectations and students learning the new element of the knowledge do not properly connected with the old element of the knowledge. The knowledge is not properly connected and so possible to be a weak chain. This is the greatest loss of education process. If the whole process of education is carried out to facilitate the learning and if the learning is not taking place then all other processes are useless.

Technology really helped in the COVID19 lockdown situation. It helps to continue the education process by keeping physical distancing on the other hand because of non-availability of the technology resources it becomes obstacle for some learners. Non availability of smartphone, computers, laptops, internet connectivity, electricity etc. are the learning obstacles. Because of the poor internet connectivity students and teachers disconnected frequently and the continuity of the content is broken. Hence learning does not occurs. In some families only one device is there and it has to be with the parents, if parents want to go on the work, their children do not able to join online classes and hence they are away from the learning. In some families more than two siblings having the classes at the same time but they do not have separate learning devices like smartphone laptop desktop computers for the learning, hence someone has to absent for the online classes. In spite of the great will to join online classes this technical difficulties disallow learner to learn. So COVID19 created a digital divide among students. Haves and Have-nots are having different learning attainment.

Learning material is provided in the form of PowerPoint Presentations, PDF file, video links etc. Learners required good connectivity to watch the videos which is generally missing. Either students have to see PowerPoint presentation or PDF file on screen or they have to take the print out. If they watching on the screen, mobile screen size is not enough or suitable to read, so can causes to eye sight problems. If they want to take printout, printer is not available in every family. Taking print out of each and every learning material is not affordable for the families. In the absence of proper learning material, learners face difficulties.

Due to the use of technological means, lots of physical problems occurred for the students. Continuous watching the screen causes to create eye problems. Improper seating arrangements created back pain issues among students. Because of lack of proper sitting arrangement for the online learning, back pain is possible.

Most of family don’t have separate rooms for study. So students seating in the common room, disturbed by different activities by family members e.g. cooking, cleaning, eating etc. Learning is surrounded by many obstacles in this online mode of education. In educational institutions, in face-to-face mode; learning environment is created for students and their comfort is taken care. They can feel the mental preparedness for the learning and it is the dedicated place for the teaching and learning. Such arrangement is missing in the online education.

COVID19 pandemic lockdown situation gives the opportunities to the teachers to explore new learning experiences. Teacher explored different learning experiences like animations, videos, interactive software etc. and used for the learning. This new kind of learning material is made. Students more curious in technology and show interest for the learning. In this journey students also were exposed to different ICT tools to learn something new.

In this pandemic, students became more independent for learning in the absence of direct interaction with the teachers. They started taking help from the Internet, started exploring different study materials other than provided by the teachers. Teachers also encouraged students for self-learning. Parents are also involved in this process because students were using internet. Parents are advised to observe students when they are using mobile and internet. So students have to make use of the Internet under the supervision. Supervised learning is more observed in the lockdown.

Student comes to know different aspects of the content because they were exposed to different learning material. Their study was not limited for the textbook content. It went beyond the books and notebooks. They found lot information on the Internet and they got different in-depth points of the same content. In this way learning becoming more versatile well supported by technology, teachers and parents supported. Have-nots students were left behind in the online education and digital divide was widen.

3.7 Impact of COVID-19 on Teaching:

Online education that is 'working from home' makes the teacher more techno- savvy. Most of the teachers were not technically enabled for online teaching. After declaration of lockdown school started online and teachers were encouraged to teach online. To deliver best teaching teachers started learning online skills.

Teacher started preparing a content in the form of PDF, Image file, Power Points, videos etc. Most of the teachers were enabled to prepare PowerPoint presentations they started making it fuller with content. To make these presentations more effective for the students, teachers learn to search various educational resources online. They also learned to find out a use free learning resources for students. They become smarter explorer of the knowledge.

There are two modes of online education for teaching i.e. synchronous mode and asynchronous mode. In the process of synchronous mode teachers learn to make various online conferencing apps e.g. Zoom, Google Meet, Microsoft team etc. for teaching. Most of teachers learned these online conferencing tools for teaching by their own. Some schools provided former training online. In spite of lots of technical difficulties and non-availability of technical resources; teachers learned lots of ICT tools during the lockdown to cop up with online mode.

Teaching become more challenging in the lockdown in online mode. Classroom management, answering students' queries, giving motivation for better learning, mischievous behavior by using various online features by students etc. were the obstacles in synchronous online teaching.

In the asynchronous mode of teaching, teachers learned to share various learning resources with the students. What's app and Telegram groups were created for sharing instructions and learning resources? Teachers took help of YouTube videos for teaching. Google Classroom was one of the most used all asynchronous mode tool in the lockdown. These classroom were playing important role to share learning material, instructions, meeting links etc. Teachers learned to create videos by using mobile, laptop, screen recorder, editing video and audio etc.

Non availability of desktop or laptop computers, poor Internet connectivity, lack of formal training etc. were major technical obstacles in online mode faced by teachers. Teachers found various ways to come out which solution. Due to COVID19 lockdown situation, teachers learned online teaching they learned how to share learning resources, how to make classroom management how to make students alert during the class how to take attendance etc. online skills. In the COVID19 lockdown, online education was the only safe way of learning. Students started depending more on Internet rather teachers. Teachers become facilitator because they were providing various learning resources and learning opportunities for students; instead of merely sharing the information prepared by teachers.

Teacher-made content was left behind and student-explored content came forward. The impact of teaching on learning decreases. Because teaching was not the only process that affecting the learning in online education. Students can explore the information on the Internet and they can learn many things on their own. They were less depend on teaching process. The overall impact of teaching on learning was reduced because of COVID19.

Teaching becomes suggestive rather compulsive. Due to the technical difficulties teachers do not get 100% time allotted for the period so the overall time of teaching is reduced. By considering the less time; teachers become more suggestive by suggesting various learning ways. They try to make students less dependent on teaching. So the obstacles like poor Internet connectivity lack of devices, lack of human interaction etc. should not affect learning.

Teachers appeared in more innovative ways. Teachers used different effective ways of teaching and learning. Online education is newer to use in India. Most of schools and teachers we're not familiar with the online teaching skills and methods. To cope up the lockdown situation, an online teaching teachers become more innovative to fulfil students need.

Teaching becomes more controlled, precise and formal in online education due to in COVID19 lockdown. Because of limited time available and the technical threats teachers make their teaching more precise and to the point. Instead of giving more illustrations they tend to give web links, PDF files, YouTube links etc. additional learning resources for more understanding.

Discussion, brainstorming, christening, group activity etc. learning centred teaching strategies are not possible in online learning; that's why teacher has to find out different alternative to this. Teachers were discussing, exploring, experimenting, researching, and studying for better teaching with the minimum resources they got. Teaching is a live interaction with the students on the basis of content. Since live interaction with the students is missing teaching becomes a technical activity because due to poor Internet connectivity. During the online interaction teachers do not able to see the students and so students, hence interaction is not proper. Teaching becomes more technical, non-interesting, and less interesting thing.

COVID19 situation shown the digital divide among the teachers on the basis of e-skills and availability of resources. Teachers who were able to use ICT tools were got more importance. Teachers having good financial conditions afford to purchase laptop or smart phone but rest do not. This created digital divide. Schools not provided resources to teachers for online education. Teachers have to use their own resources like own data and own mobile/laptop. Some teachers faced internet connectivity issue because of their location. These non-academic factors played role to increase the digital divide.

Teaching becomes one way interaction due to the technical barriers; two way communication was a failure. "Am I audible?", "Am I visible", "Is screen is visible to you?" Became the mostly used phrases. Teacher's questions and students answering these activities were having lots of problems e.g. breaking of the voice, non-audibility of the speakers, mute-unmute issues, fake attendance of the students etc. Parents interfere in teaching is one raising issues in online education. Parents' objection on teaching style, communication, language, nature of examples, use of variety of media, quality of technology etc. Some of them started giving suggestions to teachers for improvement, some started making complaints to the principals, some making fun and laugh on teachers in front of the students and making negative comments leaving negative impact on teachers' confidence and self-esteem.

In spite of better teaching skills, teachers are not able to deliver at their best because of technical issues that causes the loss of confidence in self-ability. They started judging themselves and their teaching skills and teaching ability not on the basis of overall teaching skills but merely on technical skills which affected the quality of overall teaching.

Because of less interaction with the students teachers not are not able to understand the status of students understanding hence they're not able to build new knowledge on old knowledge. This gap between the previous knowledge and new knowledge then through the failure of the teaching. What teachers are expecting and want students are expecting was two different points that causes the effectiveness of teaching negatively.

3.8 Impact of code 19 on Evaluation:

Due to COVID19 pandemic lockdown, online education started although online learning and teaching is easier but online evaluation is a big challenge. In the formative assessment during teaching and learning process the evaluation is not possible because of technical difficulties. Even though teacher want to interact, want to ask questions or ask to participate in the classroom, all students are not able to interact due to technical difficulties like poor internet connectivity from both side. So evaluation during teaching and learning was very difficult is very difficult.

In summative evaluation like periodic test unit test is difficult to organize online examinations having lots of questions. The authenticity and objectivity of the online examination is questionable. Technical difficulties black lack of training, none of ability of competent devices, Internet connectivity etc. created many obstacles in evaluation process so the synchronous examination conditions are not suitable for the evaluation. Asynchronous evaluation like submissions or practical assignments is the best way in online education because it gives sufficient time to students and teachers for downloading and uploading. Even though how to cheque online assessments and assignments, how to make marking on the assignments and how to return it to the students were the major concerns for the teachers.

Due to the code 19 evolution become more subjective and list object if because of that evaluation learning is not properly evaluated and fails to give proper an exact status of the learning for students, parents and teachers.

Google forms are being used where MCQs are asked and some descriptive questions too. MCQ remember only we for online evaluation which is easier for the students to answer and difficult for teachers to frame questions. Most of the MCQs generally are based on the factual information which targets understanding and remembering objectives based on memory. Descriptive questions that targets higher level objectives like application, analysis, synthesis, evaluate, attitude, etc. The construction of application level MCQs creates ambiguity and subjectivity and difficulty for the students to select the right choice. This situation creates a chaos and cause of conflict between parents, students and teachers. To avoid this conflicts teachers were forced by the situation to frame the easier questions for better results we do not target the higher level thinking skills and so students were on lower level of the content only. One of the challenge is how to evaluate students with different learning level. Due to the technical and other reasons all students do not get equal opportunity to learn. So how to make evaluation making justice to all students having different levels of learning, was unanswered.

3.9 Impact of Covid-19 on Administration:

Administration played important role in the pandemic lockdown. They coordinated all the process is to require online education. Due to COVID-19 disaster administrator learn to be proactive they have to follow all the SAP. They learn to work online and coordinate among all the stakeholders of education. They followed all the instructions of government and peculated for the all stakeholders of education. The administration is led by ahead of the Institute. Their responsibility to take the consent from the parents to make the preparation of the students Anne to provide the training and devices and skills to the teacher required for online education.

3.10 Impact of Covid-19 on Extension:

Extension means taking education beyond classroom and beyond students. Extent of education from educational institution to society. COVID-19 has given opportunities to perform an extension activity. Many extension activities were carried out in the pandemic lockdown. Many seminars and conferences where organized for teachers, parents, administrators, students and public i.e. all the stakeholders of education. Lots of webinars were arranged freely free of cost for all the stakeholders to make them competent to face problems in education. Webinar enabled to have interaction with international and eminent experts. Webinars introduced lots of ICT tools for teachers, provided health related and technology related information to students and parents. Many webinars were conducted for teachers to make them enable to acquire various skills and tools useful for online education.

In the lockdown, all were sitting at home and they had time to learn. Many organizations and government, organized useful webinars to create awareness in society. Many webinars were conducted to give the psychological support to all the stakeholders of education. They helped to keep all the stakeholders positive and away from depression. Many online quizzes were arranged to spread the awareness about COVID-19 among the public. Many programmes posts, images, videos, webinars, sessions etc. were conducted to keep everyone positive an optimistic in the lock down. This is of the remarkable contribution of the extension activities to share knowledge skills an awareness in the society.

The response to various webinars was spectacular; thousands of participants were attending webinars s which was not possible in seminars. Zoom, Google meet, WebEx, Microsoft team etc. were used for extension activities although it was not sufficient; so live streaming method was also adopted to cope up the huge number of participants e.g. live streaming on YouTube and Facebook live. Social media was successfully used for extension activities by various stakeholders of education for to fight against COVID-19 virus social media platform provided solid foundation in the face against COVID-19 in the war of human race against COVID19 virus.

3.11 New Normal in Education:

‘Work from Home’ and ‘Online Education’ was new experience in the education. This experience enhanced understanding of all stakeholders regarding learning, teaching and evaluation which created new normal in education. Some of the things which were not accepted before COVID19 now accepted as a normal thing e.g. use of mobile.

Teachers become more techno savvy due practice of online education in Corona pandemic lockdown. They acquired various his skills required for synchronous and a synchronous mode of online education. They are capable to create the content which can be used add the study material in online education. They know different I city tools to create a share he learning material. They understood the importance of online skill along with offline skills. Before COVID19 teachers were not that much techno savvy, they did not have that much exposure of technology. COVID19 provided opportunity for teachers to learn and use various ICT tools. In this process teachers become more confident about using ICT tools for learning, teaching and evaluation. Teachers also understood how to do classroom management in online mode they got the experience of student behavior in online mode.

Initially when online education started students were more techno savvy than teachers. On the basis of experience teachers started understanding technological settings of different ICT tools to control students' mischievous behavior. They also understood the students behavior in online education, for example in live classes, after making video off students were not attending a class. After realizing this behavior teacher started asking question to students to check whether they are attending the classes or not. When students understood this they become more attentive. Teachers learned how to keep engaged students in a class. In the new normal when school will reopen teachers will be more competent teachers with the help of online teaching skills. They will enjoy more the interaction was with the students which was missing in the offline education.

In the new normal after reopening the school student will enjoy to meet the friends and to interact with the teachers in the classroom. They understood various obstacles in the learning process in online mode. They come to know the importance of teachers unlike classroom sessions where they can ask the queries to the teachers without any technical barriers and they will get dancers from the teachers at the same moment. Because they are facing many technical difficulties to interact with the teachers and to understand the content in the new normal situation they will become more interactive serious and cooperative with the teachers.

In the new normal evaluation process would be more refined. Various different tools of online evaluation have been used and experienced by teachers and students so they have understood the advantages and limitations of it. In the new normal there will be combination of online and offline evaluation tools depends on the types of evaluation.

To accommodate the online mode of education; schools need to prepare for sufficient infrastructure. Management needs to give proper training for the teachers for advanced teaching and learning ICT tools.

They also need to provide possible support to the students and parents to enable them for online education. Whenever the situation is there that students or teachers cannot come to the schools due to some natural disasters or man-made disasters online education online class would be an effective alternative for it.

Present curriculum is made only for a specific mode of learning and teaching that is offline mode. In the new normal, curriculum should be made flexible to adopt the online and offline mode of teaching education. Some activities, modules, subjects, credits of a curriculum can be kept for online education in optional mode. This alternative will make teachers and students ready for any kind of situation where only online education possible.

Teachers have prepared lots of e-content during COVID19 pandemic lockdown for online education that can be reused and refined. Many schools and teachers created YouTube channels, developed websites or created tailor-made platforms suitable for online education that can be used continuously further as an alternative for offline education. Because parents and students and teachers are familiar to use the technology in education; it has opened a horizon of lots of new opportunities in education which will definitely reform the education; hopefully for the betterment of the learning.

Blended approach of education will be the highlight of new normal education. Blended approach indicates the combination of online and offline mode, traditional and technological mode. All the process in education like learning, teaching, evaluation, administration etc. will be having balanced use of technology and traditional ways e.g. now seminar and conferences can be allowing both mode of attendance i.e. online and offline. Previously online attendance was not acceptable. In the new normal of education online education will be integrated part along with the offline education. Wherever possible technology can be integrated with the traditional schools because teachers, students and parents are technologically prepared for it.

3.12 Conclusion:

In spite of many negative impacts of Covid19, there are some positives called new normal. The importance of health and medical services, cleanliness, use of technology for daily life, importance of social interaction, importance of live interaction, importance of family, society, friends, preparedness for disasters, importance of technology to carry out various activities from distance etc. aspects are revised in the shadow of Corona virus. It has shown work from home can be possible effectively.

It also highlighted the Digital Divide in society. People lose their jobs. People who were depend on daily badges, faced biggest starving phase of life. People with good economic conditions, enjoyed lockdown by making and sharing new dishes. On the other hand many people served for the people not having enough resources to survive. Lots of human stories based on humanity are coming out spreading the humanity in the society across various regions caste and religion. Government played important role. Central government and state government shown Great Spirit to protect people from corona virus. They made all possible efforts to provide medical facilities to the people.

Education is not away from the impact of Covid 19. Educational institutions were closed but education was going on. In spite of lots of obstacles all stake holders came together and faced to Coid19 disaster successfully. They tried everything in minimum resources and without preparedness.

COVID-19 has left huge impact on human life. It has exposed the limitation of medical science and governing system of states. It has proven that nature is always greater than human. A tiny virus had challenged the human brain which shown how nature is complicated and revolving. COVID-19 has taken many lives around the globe across various countries, religions, regions, language, gender etc. It has lived and negative impact on the human life in the form of loss of lives, jobs, economy etc. This experience is lifetime experience for all the stakeholders of education. Covid-19 given a message to us to human race that if you want to survive successfully technology and human efforts should go hand in hand for better future!

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4. Covid -19 and Turbulence in Petroleum Products Consumption in India

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Abstract:

A disruption of economic activity in China, USA and European countries due to “lock down” emergency measure to control spread of the COVID-19 reverberate around the world as well as in India. This disruption, in turn, has a direct impact on oil markets. The present article described the change in pattern of usage of petroleum products in India and comprehends the recovery once “unlock” process started in our country. The aviation industry is dented by pandemic situation followed by public & private transport sector. So usage of ATF fell drastically to 55,000 TMT followed by diesel, motor spirit, naphtha and other petroleum products.

4.1 Introduction:

On January 7, 2020 Chinese government announced regarding identification of new virus in the Hubei region of the country and designated as corona virus disease 2019 (Covid-19). By the end of February 2020, cases were reported not only in Asian countries but also throughout Europe and American continent, prompting the World health Organization (WHO) to declare a global emergency and later on as pandemic.

The USA declared national emergency on 3rd March 2020 followed by various countries and drastic measures such as “Lock down” imposed across continents. The Government of India have announced lockdown on 22nd March 2020 initially for twenty one days and later on for another two weeks followed by unlocking phase wise relaxing restrictions slowly but gradually. Till date restrictions are there in various parts of our country. This extended disruption of economic activity across the world and considering the interconnectedness would have long term impact on petroleum products markets.

4.2 The Drop in Economic Activity and Its Effect:

The strict measures to arrest the spread of Covid-19 adopted by governments worldwide and in India have halted the economic activity across the globe, demand for petroleum and petroleum products plummeted. As economies reopened, demand renewed still after effect exist in the market. The severity is such that the total consumption of petroleum products is 213,686 thousand tonne (TMT) in India in 2019-20 and growth in consumption is only 0.21 per cent. This value is lowest in at least previous 10 years as data analysed by ETEnergy World of present decade.

As economic activity slowed sharply in the month of March and April of 2020 so analysis on consumption of petroleum and petroleum products are carried out year wise for the year 2019 and 2020.

High speed diesel (HSD), motor spirit (MS), liquefied petroleum gas (LPG), aviation turbine fuel (ATF), naphtha, bitumen, petroleum coke, lubricants and grease are important petroleum derived products that drive global economy.

According to analysts, petrol pump dealers and executives at OIL Marketing Companies (OMCs) the demand for petrol, diesel and ATF in the country has been severely impacted as economic activity and public movement has come to a near standstill in the month of March and April 2020.

Consumption of petroleum products stood at 17.834 million tonnes in November 2020 in India. This is higher than the 17.759 million tonnes of petroleum products consumed in the preceding month.

There is constant improvement in demand since April 2020 when demand halved due to lock down on year-on-year basis. The demand gap is narrowing down gradually when it crosses in October 2020 to become positive. This is depicted in Figure 4.1.

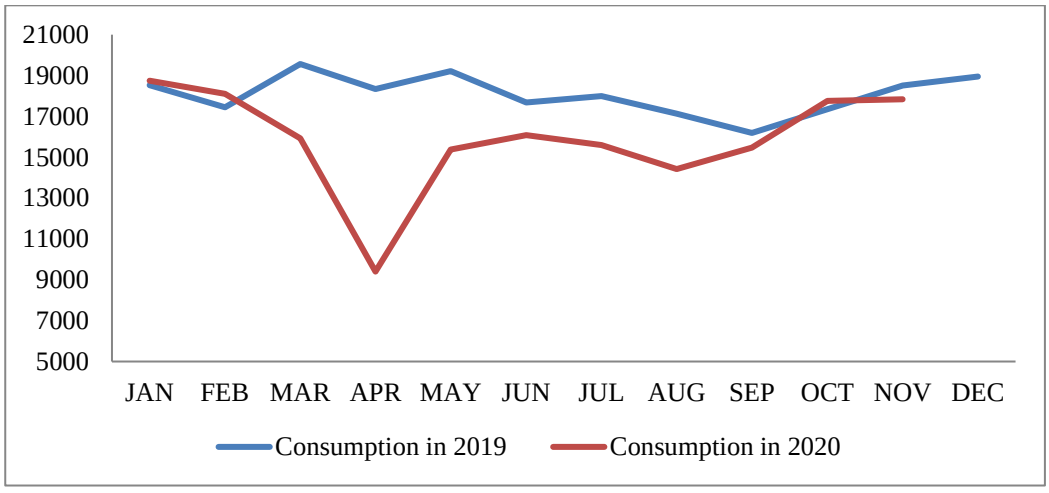

Figure 4.1: Variation in total consumption of petroleum products in India, January 2019 to November 2020. Consumption is in thousand metric tonnes.

4.3 Lock-Down and Its Impact in Consumption of Petroleum Products:

Motor spirit fell 16.37 per cent to 2156 thousand metric tonnes (TMT) in March 2020 as compared to the corresponding month a year ago, after growing for 30 straight months up to February 2020. The crash in demand happened on April 2020 to 973 TMT. Figure 4.2 explains the trend of motor spirit consumption. From September 2020 onwards the consumption of MS exceeds the pre-pandemic monthly usage. Consumption of motor spirit has been increasing owing to increased preference for petrol driven vehicles, as the strict pollution control norms, improved road conditions and competitive price difference between motor spirit and diesel.

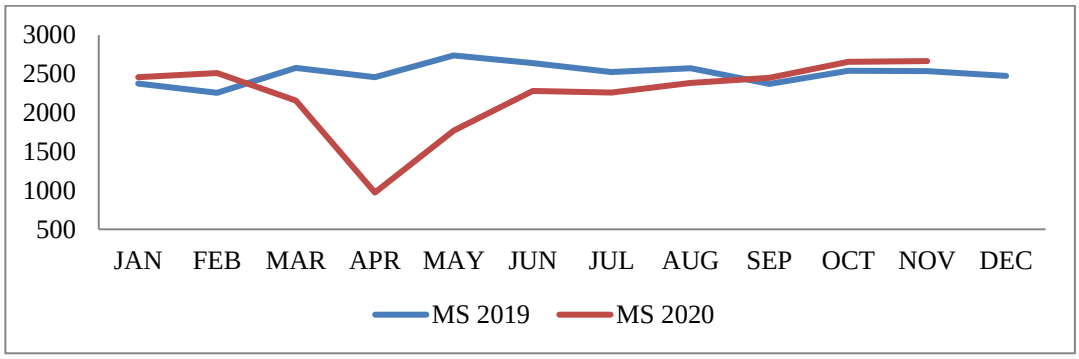

Figure 4.2: Consumption of Motor Spirit (MS) in India, January 2019 to November 2020. Consumption is in thousand metric tonnes (TMT).

Diesel is the largest consumed fossil fuel in our country. Transport sector, Indian railways along with the agriculture and industrial sector uses diesel. Consumption of diesel fell 55.58 per cent to 3253 TMT in April 2020, as compared to the corresponding month a year ago. In 2019-20, diesel consumption declined 1.13 percent, as compared to the previous financial year. The previous decline in consumption is observed in financial year 2013-14 when consumption declined by 1.03 percent compared to 2012-13. The variation in consumption of diesel has been shown month basis in figure 4.3.

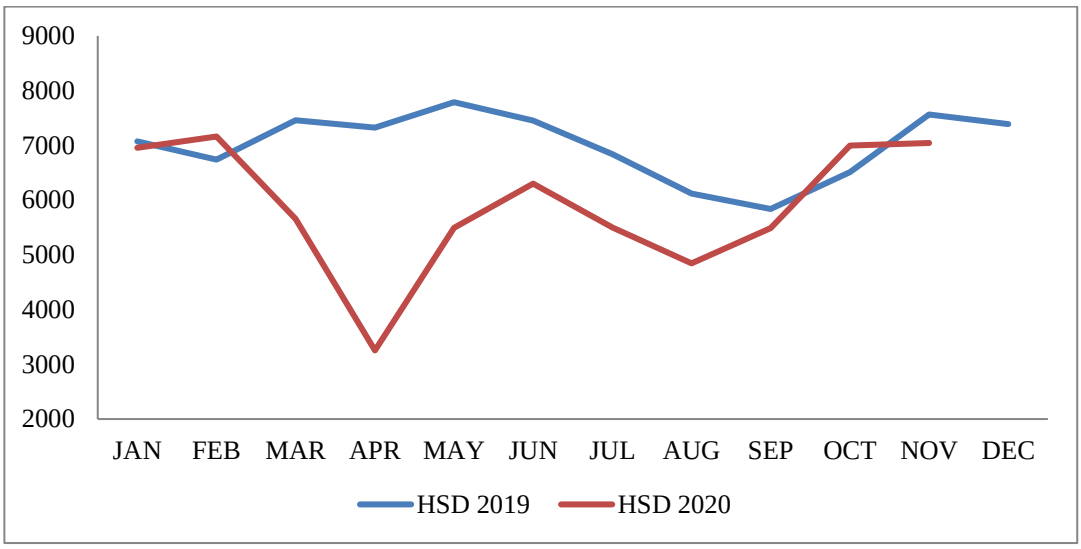

Figure 4.3: Consumption of High Speed Diesel (HSD) in India, January 2019 to November 2020. Consumption is in thousand metric tonnes (TMT).

Aviation industry is badly impacted as airlines ceased operation due to restricted movement across border and unwillingness of people to travel. So consumption of ATF touched bottom at 55 TMT in April 2020 from 739 TMT in January 2020 and it recovers steadily to 372 TMT in November 2020. Despite this improvement, the demand is still half of corresponding monthly consumption in 2019.

Data of Petroleum Planning and Analysis Cell (PPAC) showed, ATF consumption declined 3.61 percent to 8,000 TMT in the year 2019-20. This is the first incidence of decline since 2013-14. Figure 4.4 shows shock in aviation industry due to Covid-19.

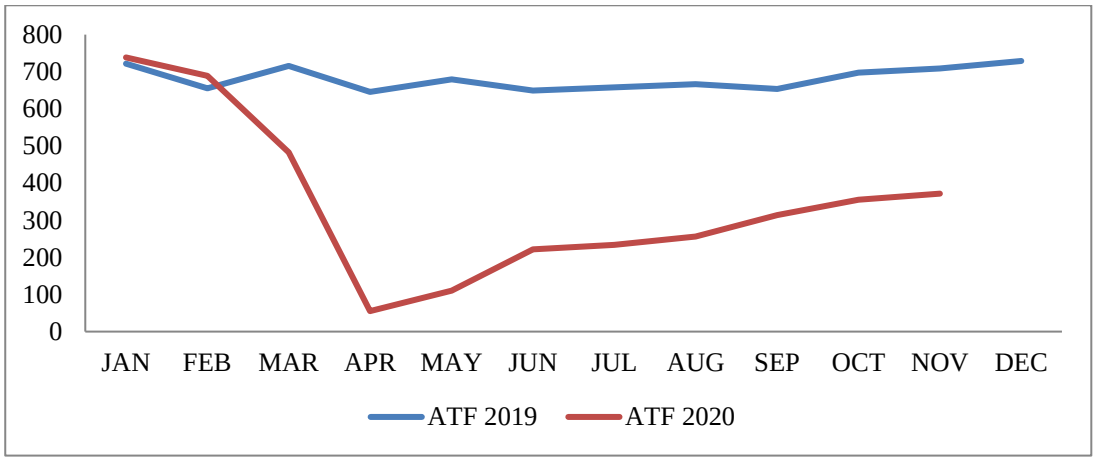

Figure 4.4: Consumption of ATF in India, January 2019 to November 2020. Consumption is in thousand metric tonnes (TMT).

Though the usage of transportation fuel such as MS, Diesel, and ATF took a beating, Liquefied Petroleum Gas (LPG) used in household showed encouraging trend. The usage of LPG increased marginally in March 2020 as compared to March 2019 and the market is maintaining it till date. LPG consumption stood at 2353 TMT in November 2020, a rise of 4 percent compared to corresponding month of 2019. The usage of LPG is shown in figure 4.5.

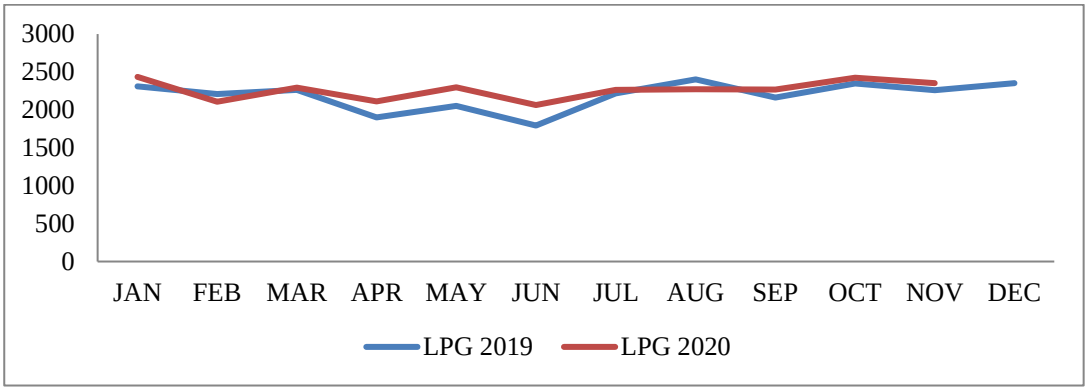

Figure 4.5: Consumption of LPG in India, January 2019 to November 2020. Consumption is in thousand metric tonnes (TMT).

Another petroleum product Naphtha, commonly used as a solvent, cleaning fluids and dry cleaning agents, paint and varnish diluents, rubber industry solvents have bypassed the pandemic situation. Naphtha demand increased 7.77 percent to 1345 TMT in November 2020. For the financial year 2019-20, the demand for naphtha increased 1 percent to 14268 TMT. Figure 4.6 shows the usage of naphtha in 2019 and 2020.

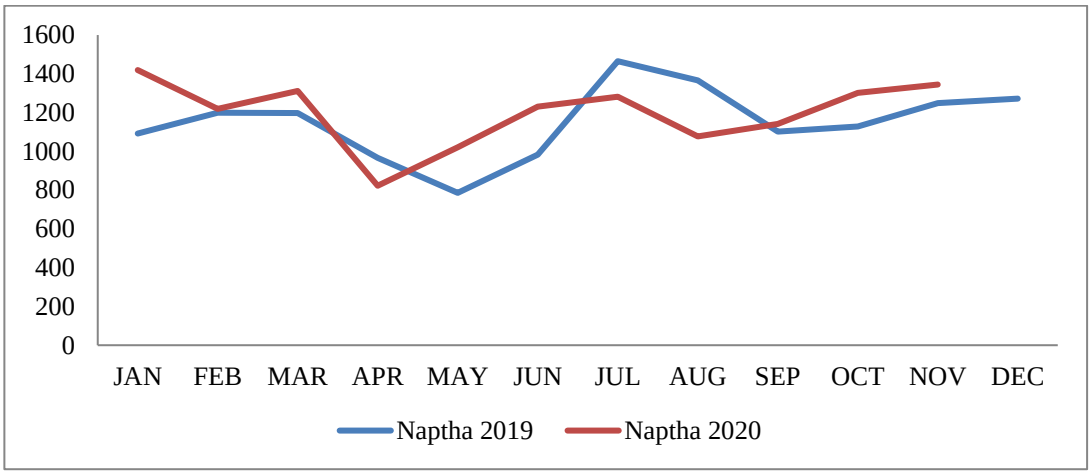

Figure 4.6: Consumption of naphtha in India, January 2019 to November 2020. Consumption is in thousand metric tonnes (TMT).

According to Care Ratings, cumulative capacity utilization of refinery has been around 81 percent in the period April-October 2020 compared with 101 percent capacity utilization achieved in the same period in 2019.

Fall in demand with the outbreak of the Covid-19 and restrictive measures compel refiners trim their capacity utilization to protect their margin and remain afloat.

Overall consumption has fallen by 15.7 percent as compared to same period in last year but regained the market as the country is channeling towards the unlock process. The usage of superior kerosene oil (SKO), light diesel oil (LDO), lubricants and grease, FO & LSHS, bitumen, coke and other petroleum products are shown in figure 7 to 14.

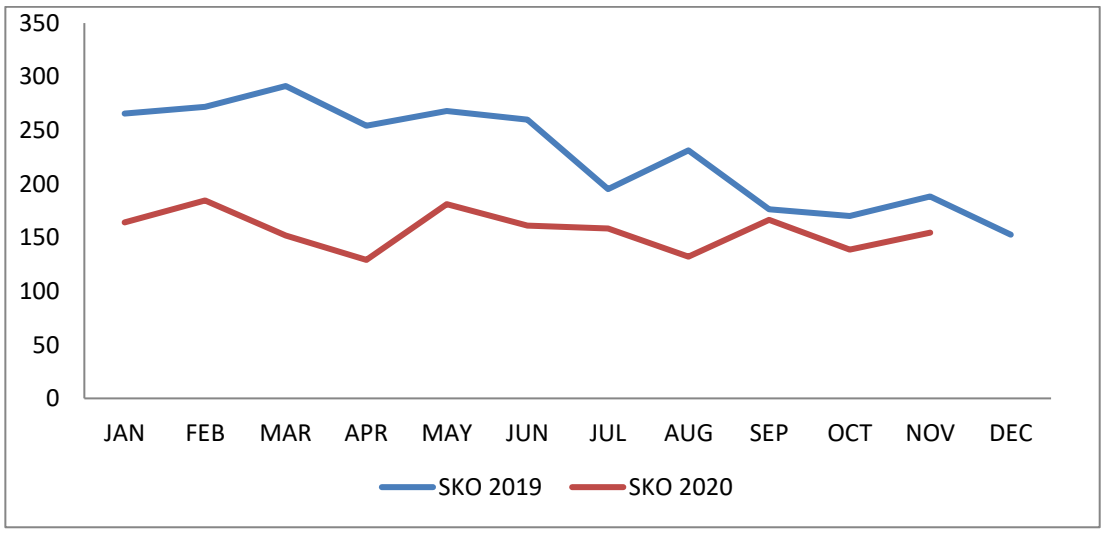

Figure 4.7: Consumption of SKO in India, January 2019 to November 2020. Consumption is in thousand metric tonnes (TMT).

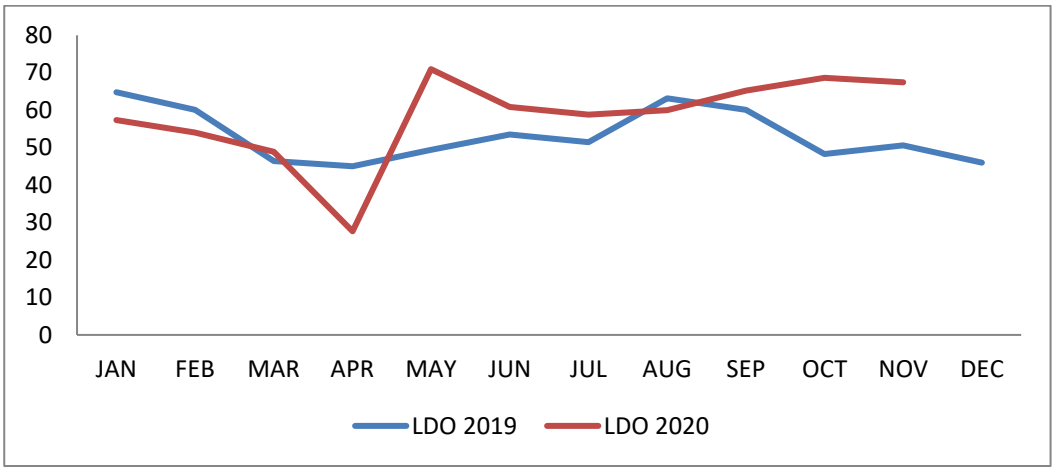

Figure 4.9: Consumption of LDO in India, January 2019 to November 2020. Consumption is in thousand metric tonnes (TMT).

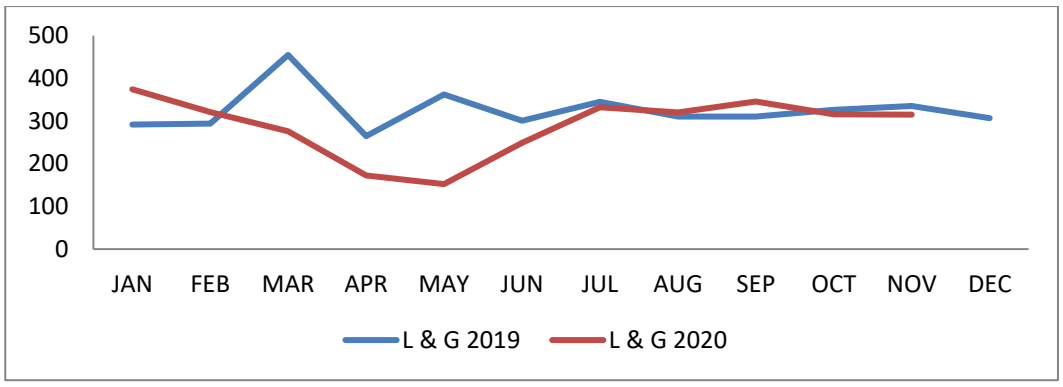

Figure 4.10: Consumption of lubricants and grease in India, January 2019 to November 2020. Consumption is in thousand metric tonnes (TMT).

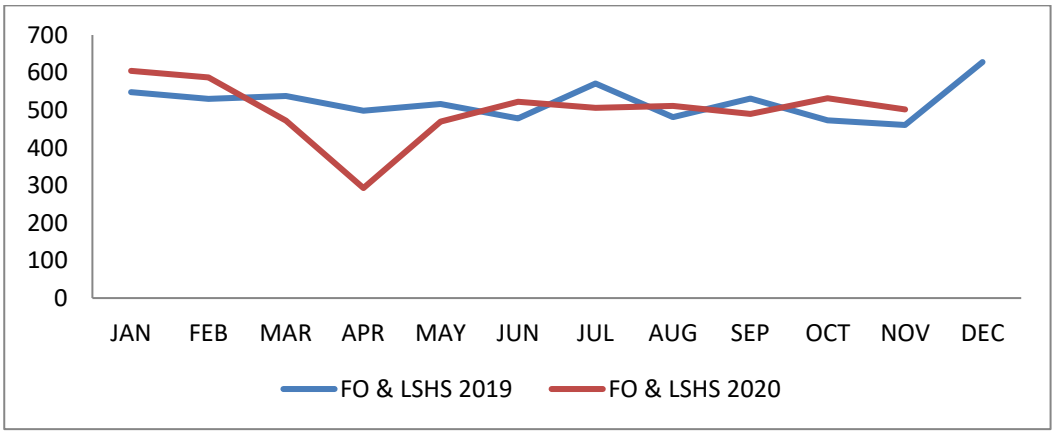

Figure 4.11: Consumption of FO & LSHS in India, January 2019 to November 2020. Consumption is in thousand metric tonnes (TMT).

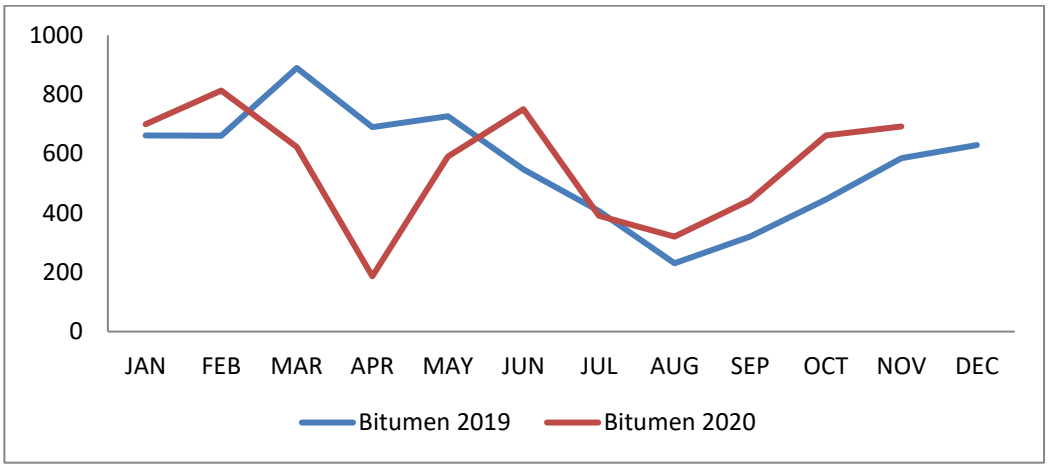

Figure 4.12: Consumption of bitumen in India, January 2019 to November 2020. Consumption is in thousand metric tonnes (TMT).

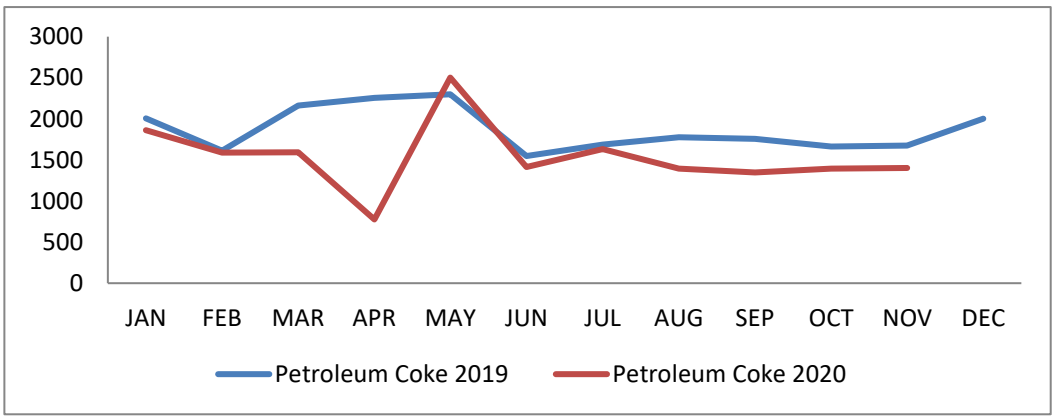

Figure 4.13: Consumption of petroleum coke in India, January 2019 to November 2020. Consumption is in thousand metric tonnes (TMT).

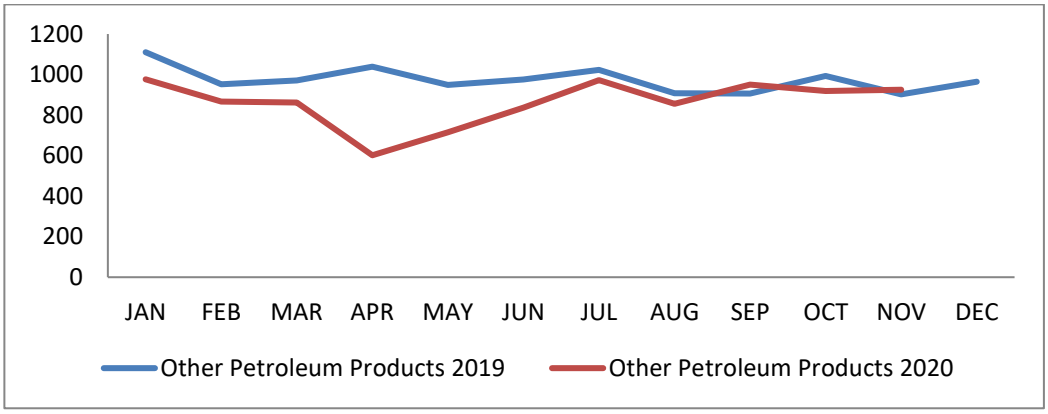

Figure 4.14: Consumption of other petroleum products in India, January 2019 to November 2020. Consumption is in thousand metric tonnes (TMT).

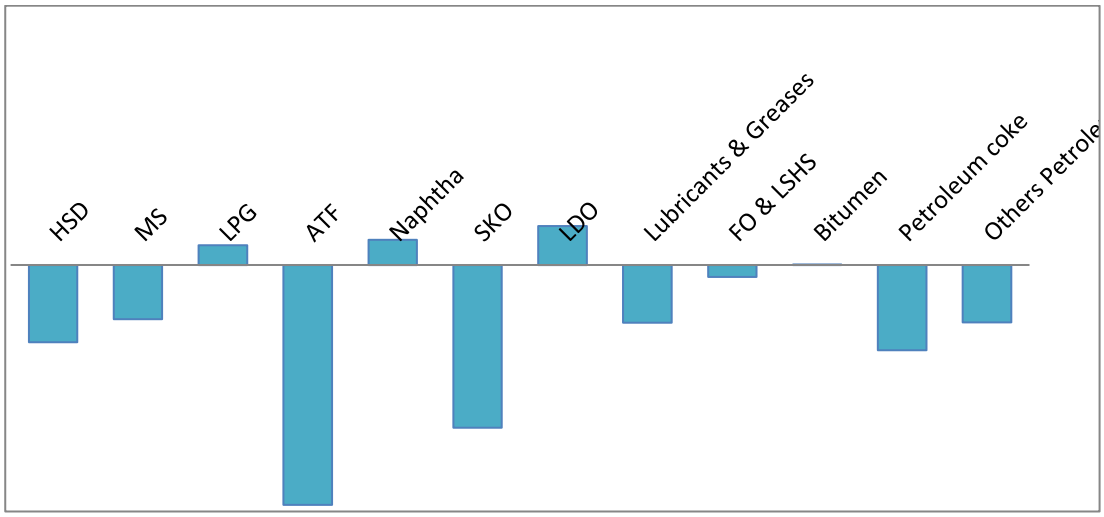

Figure 4.15: Net change in consumption of various petroleum products in India in the period January- November 2020 compared to same period in the year 2019.

4.4 Conclusion:

The pandemic situation in 2020 have effected everyone from poor to rich, child to elderly people, daily workers to industrialist, house wife to entrepreneurs. This once in a century phenomenon altered the economics of every person and this has direct influence on purchasing capacity of people. This dented the consumption of petroleum products in our country immensely affecting the economy. The study shows transportation industry specifically aviation industry consumed the shock due to the COVID-19 situation; time requires to heal the damage. Data analysis shows the market bounce back considerably once channelling the unlocking process. The good news of vaccination will boost confidence in market but caution must be maintained considering the new strain of covid-19 found in the UK.

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5. Yoga for Immunity Enhancement to Protect Against Infections and Covid-19

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5.1 Introduction:

Health is a vital state of all living beings. For humans, health is not only about the physical form or condition, but there should be complete wellbeing at physical, mental, emotional, social level. Human being faces various health challenges from time to time. The communicable disease was the major health challenge during the 19th century; later, in the late 20th century, non-communicable diseases took over. We thought that communicable diseases are conquered with the advancement in modern medical care, and it would not be a major health challenge in the future. But due to the COVID-19 pandemic caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), our assumption about infectious diseases are failed. World health organization (WHO) has reported that globally nearly 1 billion people got infected, and 2.1 million deaths from SARS-CoV-2 till January 2021. Recently analyzed, the mortality rate is 5.7%.

These indicate that despite advancements in medical care, both non-communicable and communicable diseases are unresolved health challenges for humanity. To deal with such health challenges, multidimensional health care is essential. Various complementary and alternative therapies can be integrated with modern medical care for better health outcomes. Many of the alternative therapies like Ayurveda, Yoga, Homeopathy, Unani, Siddha, and various regional therapies have some potential to deal with current health care crises for infectious diseases.

Yoga is a spiritual discipline that originated in India, but in recent times it has gained worldwide popularity due to beneficial health effects on the mind and body. It is considered one of the mind-body medicine interventions and is widely practiced. It influences the mind and then body to bring wellbeing in all dimensions of an individual, including physical health. The present topic is exploring the effectiveness of Yoga to strengthen immunity so that the infections caused by various pathogens can recover soon and further prevent the acquiring of infections.

5.2 Psychological Stress and Immunity:

It is a well-accepted scientific fact that the mind influences body and vice versa. The field of Psycho-neuro-immunology investigates the relations and consequences of the interaction among the mind, brain, and immune system. Nervous, endocrine, and immune systems get influenced due to psychological stress or emotional disturbances. Psychological distress activates the autonomic nervous system (ANS) and the hypothalamic-pituitary-adrenal (HPA) axis. These stress-signaling pathways lead to physiological stress and contribute to immune deregulation. HPA axis and sympathetic-adrenal medullary axis stimulate the adrenal gland to release an adrenocorticotropic hormone that modulates immune functions. The immune system and its functions are very complex. Due to complexity, there are many ways they may set different types of pathways of pathogenesis.

Adaptive (acquired) immunity and innate (inborn) immunity defense mechanisms help to protect an organism from various bacteria, viruses, or other diseases like autoimmune disorders. Among various types of immune cells, T and B lymphocytes play a major role. T cells induce an immune response by producing various cytokines, and B cells produce antibodies against the antigens. Long time exposure to chronic stressors deregulates innate and adaptive immune responses by altering cytokine balance. It sets in inflammation and suppresses the immunity.

5.2.1 Psychological Stress and Infections:

Various research studies have demonstrated that psychological distress increases the susceptibility to various kinds of infections. One of the meta-analyses conducted on upper respiratory infections shows that psychological stress is associated with increased susceptibility to infections. Stress suppresses the host's resistance to infection and increases rates of infection. Another meta-analysis study on influenza vaccinated people reported that people having a high level of stress lead to a lower level of antibody response to influenza virus vaccination compared to less stressed people. Also, a study by Seiler et al., 2014 reported that negative emotions modulate the antibody and T cell response to antiviral vaccinations, resulting in suppressed immune responses. So stress is a significant risk factor for immune suppression or overexpression. It increases the susceptibility to illness after exposure to infectious agents. It also inhibits antibody and virus-specific T cell responses that lead to poor response to treatments.

5.2.2 Physical Activity and Infections:

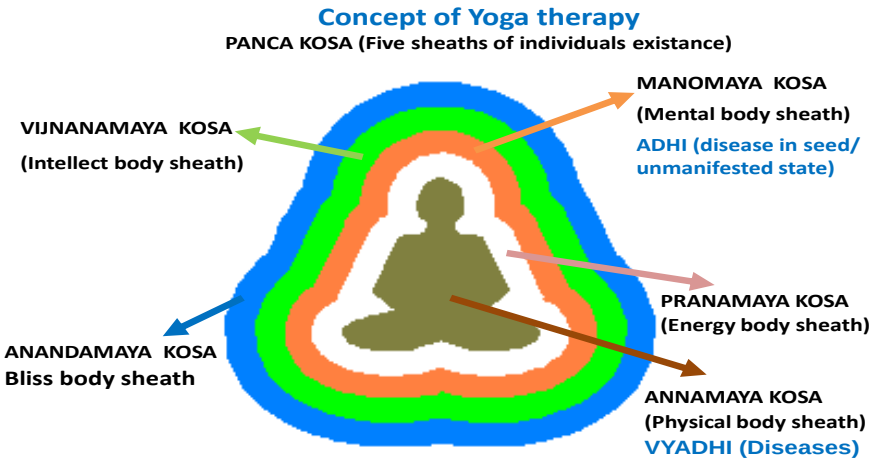
Physical inactivity is one of the root causes of various diseases. People who live a more sedentary life are more susceptible to multiple infectious diseases. Daily physical activity is an important component of a healthy lifestyle. Studies have shown the impact of physical activity on the enhancement of immune functions. Moderate to vigorous-intensity physical activity produce distinct and highly active immune cells that strengthen the immune response compared to physically inactive people. Epidemiologic studies reported that regular physical activity is associated with decreased incidence rate due to influenza and pneumonia. When the immune system acts against healthy cells and tissues in the body, it leads to various autoimmune disorders. Various types of physical activities are found useful for autoimmune diseases.

5.3 Introduction to Yoga:

Yoga is a spiritual discipline that focuses on bringing harmony between mind and body. The science of Yoga has its origin thousands of years ago. The philosophy of Yoga dates back to the pre-Vedic period (2700B.C), and it flourished rapidly as science, art, and a way of living between 500BC-800BC. Yoga is a technology for inner wellbeing and upliftment and did not hold on to any particular community, religion, or belief system. Yoga is also considered one of the (shad-darsana) six major treatises of Indian philosophy. The word 'Yoga' is derived from the Sanskrit root word 'yuj' that means 'Union'. Union or joining of individual consciousness with the universal consciousness.

In the words of Patanjali- Yoga is a process of gaining mastery over the mind 'Yogaha cittavrittinirodhaha' (PYS: 1.2). Sage Vasistha articulates Yoga as 'manaha prasamanopayaha yoga ityabhidheyate' (Yoga Vasistha: 3.9.32), which means- Yoga is a skillful trick to calm down the mind'. The Bhagavad Gita puts forth Yoga as 'Samatvam yoga ucyate' (2.48) which means- Yoga is a method that bestows the even-mindedness of mind in success and failures. Evenness is verily Yoga. 'Yogaha karmasu kousalam' (2.50) – 'Yoga is excellence in the action'. Swami Vivekananda mentions the four main streams of Yoga that lead to the same goal. These are Karma yoga, Bhakti yoga, Jnana yoga, Raja yoga.

Ashtanga yoga given by Patanjali explains a comprehensive & systematic approach for developing the body and mind. It includes-Yama and niyama (disciplines; don'ts and do's), asanas (the postures of the body), pranayama (the control and expansion of prana, i.e., the life force), pratyahara (withdrawal of senses from their objects of enjoyment), dharana (focusing of the mind), dhyana (deconcentration and defocusing), samadhi (super-consciousness, a state of oneness of meditator, object of meditation and act of meditation). Yoga practice harmonizes the different bodily functions and helps to bring the overall balance at the mind and body level. It works on all aspects of the individual: the physical, vital, mental, emotional, psychic, and spiritual. Though, in essence, Yoga is a spiritual path, but in modern times it has gained worldwide popularity due to its beneficial effects on all aspects of health and wellbeing.



5.3.1 Concept of Illness in Yoga:

Yogic texts (Taittariya Upanishad) propound that humans exist not merely as the physical body, but in five layers called, Annamaya kosa, (The physical body sheath) Pranamaya kosa (Energy body sheath), Manomaya kosa (mental body sheath), Vijianamaya kosa (Intellect body sheath), and Anandamaya kosa (Bliss body sheath). In Anandamaya kosa, an individual is healthiest with perfect harmony and balance of all faculties. At Vijianamaya kosa, the mental faculties move but are aligned in the right direction. All the perturbations start at the Manomaya kosa level, which is the seat of our likes and dislikes. These likes and dislikes govern our actions and often in the wrong direction resulting in imbalances at the mental level. These imbalances are called adhi, which are not manifest at the physical level. But, gradually, these adhis causing mental instability start disturbing the prana flow in the nadis (energy channels) in vital layer and eventually manifest at the physical level in the form of various diseases called vyadhi (diseases). An individual's hereditary tendency also plays an important role in this process. So all the non-communicable diseases can be categorized as adhis.

Vyadhi are of two types – adhija and anadhija. Adhija vyadhi are twofold – samanya (ordinary) and Sara (essential). Samanya are psychosomatic illnesses, which are treated by suitable interventions or techniques. Sara adhija vyadhis are innate and carried from one birth to another Realization of one's real nature gives freedom from the Sara adhija vyadhis. Anadhija vyadhis caused by infection, injuries, and natural calamities do not originate in the mind and treatable through conventional medicines. Disturbance in mind can also hinder the healing process of the anadhija vyadhis.

The concept of vyadhi is elaborately explained by sage Vasistha to Sri Rama in Yoga Vasistha where the primary cause for the samanya vyadhi i.e., mental agitations, is described along with the treatment. Following the life of purity by adopting the path of sattva reduces the mental agitations, gradually promotes the free flow of prana, and, ultimately, the prevention or elimination the diseases. Yoga emphasizes working on all levels, namely- manomaya, pranamaya, and annamaya kosha, for the quickest results. Therefore, an approach that brings balance at all levels needs to be followed for bringing the overall health.

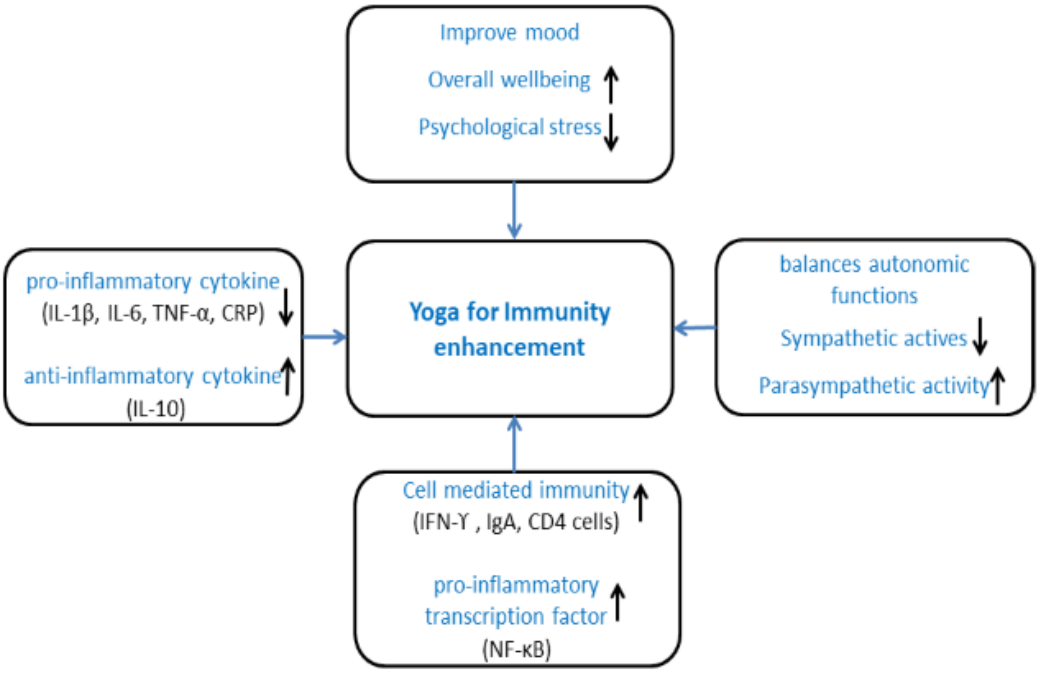
5.4 Yoga for Immunity Enhancement:

Clinical studies have demonstrated that yoga practices have a substantial effect on our immune system. Yoga practices decrease the pro-inflammatory markers like IL-6, TNF-alpha levels in the circulation. The long-term practice of Yoga has a protective impact on the immune system. A study conducted on long-term yoga practitioners reported a significant reduction in pro-inflammatory markers. Pro-inflammatory cytokines mediate the inflammatory response and are vital for an adequate immune function. Studies have also reported increasing anti-inflammatory cytokines like IL-10 etc., after the yoga practice. These effects of Yoga can be attributed to its impact on reducing the pro-inflammatory transcription factor nuclear factor kappa B and increasing the anti-inflammatory glucocorrrttticoid receptor activity. Yoga practices also showed beneficial effects on cell-mediated as well as mucosal immunity. Yoga practice increases the IFN-gamma levels in healthy people and is a central regulator of cell-mediated immunity. It has antiviral, immune-regulatory, and anti-tumor properties. A randomized controlled study indicates that yoga practice can reduce eosinophil counts in asthma patients.

Studies conducted on HIV-infected subjects have shown an increase in CD4 count. There is an increase in IgA in pregnant women after yoga practice reflects that Yoga has the potential to protect against invading pathogens.

These effects of Yoga on immune system mediated via Psycho-neuro-immunological and hypothalamic-pituitary-adrenal pathways. Yoga practices reduce psychological stress and improve mood. It slowdowns the sympathetic actives and brings balance in autonomic functions. As stress, glandular secretions like glucorticods, sympathetic over activity are the root causes for the altered state of immune function. Different yogic practices have an effect on all the levels simultaneously, which gives better outcomes. The immune system is hyperactive against our own body in autoimmune disorders and allergies. Yoga practices reduce the immune reaction in such conditions against the body. When the immune response is suppressed against infections after yoga practice immune response gets strengthened. This indicates Yoga has the capability to establish homeostasis in the immune system.

Figure 5.1: Mechanism of Yoga for Immunity Enhancement.



5.5 Yoga as an Adjunct for Prevention and Recovery from COVID-19:

Yoga is a way of living in harmony within ourselves and nature. Since ancient times, it has been practiced in various forms. In recent times traditional Hatayoga practices are widely used for health benefits. Researches indicating Yoga is effective in strengthening immunity through various pathways. Infection of coronavirus causes mild to acute symptoms like fever, cough, fatigue and further leads to the mild or acute respiratory syndrome. Due to this, releasing various pro-inflammatory cytokines causes lung inflammation. Depending on the severity of cytokine storm and active immune response decide the course of disease progress or recovery. Appropriate antiviral drugs and the development of vaccines will help to a larger extent for its effective management.

However, the certainty of the effectiveness of antiviral drugs and associated adverse effects is unclear. Also, controlling and preventive measures should be implemented in a judicious and cost-effective manner. By investigations, it is observed that T cell counts are reduced during coronavirus infection, and surviving T cells are get exhausted and unable to function effectively. Earlier evidence of Yoga interventions supports that it effectively reduces the inflammatory cytokines and increases the T cell count. Efficacy of Yoga in various communicable diseases like HIV, tuberculosis, and acute respiratory illnesses is proven that Yoga helps to enhance immunity. Due to COVID-19 pandemic, people have a high level of psychological distress due to various reasons. Stress weakens immune competence through immunosuppression. Psychological health essential to have good immunity. Yoga interventions for proven their effectiveness for promoting psychological health in healthy and psychologically ill persons. Yoga practices help in all dimensions of health that is physical, psychological, and spiritual. So, can be used as an adjunct to prevent COVID-19 along with other health measures. Also, it will be effective to recover from infection along with conventional care.

5.6. Yoga Practices for Immunity Enhancement:

- The cleansing technique (Kriyas)- Kapalbhati, Neti, Vamana dhouti, Shankhaprakshalana
- Physical postures (Asana)- Loosening and strengthening asanas, Surya namaskar.
- Breathing practices (Pranayama)- Nadishodhana, Bhramri, Bhastrika
- Chanting (Nadanusandhana)
- Meditation (Dhyana) and Relaxation

Learning these practices from a trained yoga teacher or therapist is essential before doing these practices. It will help the practitioner to do it correctly and for greater benefits. The practice of Asana for half an hour, pranayama for fifteen minutes, and meditation for fifteen minutes all together one-hour daily practice will enhance immunity and overall health.

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6. E-Learning Initiatives in Assam, During and Post Pandemic Covid 19

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Abstract:

The onset of COVID 19 outbreak has changed the entire educational system in the world with Assam as no exception. The entire educational system has moved to 100 percent online mode overnight. The online education has started in each and every part of India because of the nationwide lockdown in end of March 2020 and it still continues till date (September 2020). This paper reflects the educational situation in Assam during and post pandemic COVID 19. The study has been conducted with the help of both primary and secondary sources of data. The study found that though many students are getting online classes to enhance their knowledge, there are many who are left out in this crisis time as they do not have access to internet and smart phone.

Key words: e- learning in Assam, COVID 19, online learning, Rural, Urban, Semi urban population.

6.1 Introduction:

Since March 2020, billions of students across the globe were out of school due to the closure of pandemic COVID 19. To slow down and prevent its spread, many countries including India followed strict protocols, such as complete lockdowns or regulations to facilitate social distancing. Government of India issued many regulations to stop the viral outbreak such as working from homes or closing many institutions where people could infect one another with COVID19 (Bozkurt, Sharma, 2020). This situation forced all levels of educational institutions to operate online or remotely maintaining social distancing. Because of this situation the e-learning initiatives have been undertaken in Assam.

The internet as the backbone of e -learning was developed in 1969 by the Advanced Research Project Agency of the Department of Defense, United States. Since then the Internet has grown exponentially with the emergence of World Wide Web (WWW) in 1991. In India first publicly available internet service was launched by VSNL on 15th August 1995 (Wikipedia.org). The internet and its WWW have captured the imagination and interest of many educators around the world leading to use of terms such as web-based learning, online-learning etc. Now this e-learning has become the only option during this pandemic Covid 19 situation. Different researcher has defined e-learning in many ways. S. Naidu (2006) has defined e- learning as intentional use of electronic media and Information and Communication Technologies in teaching and learning process. In general term we can say that, e-learning is the use of networked information and communication technology used in teaching and learning.

It gives us the advantage of 24X7 and 365 days access compared to conventional mode where time is rigid. The web-based learning environment provides lots of advantages such as quick production, alteration and updating of course materials, location and time independent delivery of course materials etc. But on the other hand, access to computer and internet is a major problem for many. As stated by Goel S. (2012) e-learning can best be defined as the science of learning without using paper printed instructional material. With the progress of information and communication technology development, e-learning is emerging as the paradigm of modern education. The advantages of e-learning include liberating interactions between learners and instructors, from limitations of time and space through the asynchronous and synchronous learning network model (Pei-Chen Sun et al., 2008).

A number of terms are used to describe this mode of teaching and learning. They include online-learning, virtual learning, distributed learning, network and web-based learning etc. The term e-learning comprises a lot more than only online mode of learning, as the letter "e" in e-learning stands for the word "electronic". E-learning would incorporate all educational activities that are carried out by individuals or groups working online or offline (S. Naidu, 2006). E-learning can be a powerful and cost-effective alternative to classroom learning but it restricts to only those who can have the access to electronic media and here the most of the students of Assam are deprived of.

6.2 Rationale of the Study:

During this pandemic time, e-learning is the only option in the delivery of educational opportunities to the learner. The first case of COVID 19 pandemic in Assam was reported on 31st March 2020 and as of 31st August 2020, total positive case is more than one lakh with fatality rate 0.38% (www. wikipedia.org). The lockdown in Assam started from 23rd March along with the other states of the country. It is almost five months that entire conventional educational system is closed. The state government has now announced that they will slowly open the educational institutions starting from class IX to XII and gradually they will open the other classes also in phase wise manner. This paper tries to explore opportunities for disseminating education through online mode in Assam in this tough time.

6.3 Characteristics of E-Learning:

There are many factors potentially influencing e-learning effectiveness, such as media characteristics, learning context, technology, and learner characteristics. While studies show that e-learning can be at least as effective as conventional classroom learning under certain situations, but it is also dependent on situation and e-learning cannot replace traditional classroom learning under certain circumstances.

But the need of the hour is that we have to opt e-learning as a tool of education. Not every student will find e-learning suitable for his or her learning style. Some students are not used to this technology and some gets bored of using technology. With proper training to the teachers and the students, e-learning can substitute the classroom learning to some extent. Efforts should be given on how to create more appealing and effective online-learning environments. One way to achieve this is to integrate appropriate pedagogical methods, to enhance system interactivity and personalization, and to better engage learners (Zhang et al., 2004).

As stated by Kybartaite et al. 2010, the web-based learning environments can be of two types: synchronous and asynchronous learning. Synchronous learning occurs where an instructor teaches a traditional class with the teacher and students online simultaneously and communicating with each other. Again, in case on asynchronous learning, instructor interacts with students intermittently and not in real time.

6.4 Methodology:

Today, e-learning is still in an early stage in Assam. The pedagogy used for learning in Assam during this pandemic time has been categorized under primary, secondary and higher education. The area selected for this study are rural, semi urban and urban. The study covers selective area of lower Assam, which represents only a small portion of entire Assam. The learning institutions considered in this study includes both government and private institutions. Personal telephonic interview and secondary data have been the source of information presented in the study. For each segment 35 respondents were interviewed based on convenient sampling. For each selected area, data have been collected for Primary, Secondary and Higher educational institutions. The respondent selected for this study are teachers, parents and students in each category. The area selected for this study are shown in the following table.

Table 1: Selection of area at different levels of education:

Primary Education Institutions			**Secondary Education Institutions**			**Higher Education Institutions**		
Rural	Semi-urban	Urban	Rural	Semi-urban	Urban	Rural	Semi-urban	Urban
Barpeta	Mangoldoi	Guwahati	Barpeta	Mangoldoi	Guwahati	Barpeta	Mangoldoi	Guwahati
Sarupeta	Jagiroad, Digaru	Tezpur	Sarupeta	Jagiroad, Digaru	Tezpur	Sarupeta	Jagiroad, Digaru	Tezpur

From the study it has been observed that, all the primary, secondary and higher educational institution in Assam started the e-learning programme as replacement of conventional learning. Most of the primary and secondary institutions concentrates on synchronous mode of online studies whereas for higher educational institutions, they are using both synchronous and asynchronous mode of online learning.

6.5 Governmental Measures:

India had 37.4 million students enrolled in higher education in 2018-19. The country has become the second largest market for e-learning after the US (www.ibef.org). The government of India has taken many measures in this field focusing on new education techniques such as e- learning and m- learning. Swayam platform has emerged as the largest online platform in the world today. Other MHRD initiatives like e- PG Pathsala, National Digital library, Vidwan, e- Shodh Sindhu, etc. have benefited many students and teachers. The government has taken the initiatives to launch mobile apps for NEET and JEE examinations. For the benefit of students residing in rural area, government has strengthened 32 existing Swayamprabha TV channels which are available on dish TV, Doordarshan etc. (as stated by Dr. Ramesh Pokhriya, Hon'ble Minister of Human Resource Development, in a webinar").

6.6 State Government's Initiatives in Assam:

The government of Assam has taken many measures to continue education during this pandemic time. In Assam, the learning takes place in both vernacular medium (Assamese medium) and English medium. The government owned schools and colleges are providing education mostly in Assamese medium for primary and secondary levels and higher educational institutions provide in English medium. The school session in Assam starts from January and ends in December (for State Board), but this time due to the pandemic situation government has decided to extend the session till March (Hindustan times news, Guwahati). The Assam government has declared early summer vacation for schools and colleges as a precautionary measure amid Covid 19 lockdown. The state government has suspended all teaching and learning activity from 23rd of March and declared early summer vacation in May instead of July which is the usual summer vacation time. All government schools were instructed to commence compulsory online classes for class X and XII from April. Apart from conducting classes in local television channels, government has initiated the new television channel called "Gyanbriksha" for Assamese medium learner. Many local channels were providing classes for learners in specific time slot in local Television channels. The Hon'ble Education Minister of Assam in a press release stated that, after lockdown 4.0, the schools and colleges will gradually open. He also stated that the classes might start for class X and class XI students and then from class VIII onwards it may start in alternate days.

This year, due to the pandemic situation government has declared all admissions of state's Universities, Colleges, and institutions will conduct all admissions in online mode for the forthcoming session.

6.7 Teaching Learning Tools Used by Different Institutions During the Crisis:

It has been observed from the study that most of the schools and colleges are using e-learning techniques for disseminating regular classes in urban and semi urban areas and few in rural areas. Most of the schools and colleges are conducting regular online classes with the help of mobile phones and internet services. But the worst sufferer in this situation are the students who resides in rural areas and who does not have internet or mobile connectivity. Many of them do not have television and smart phones at their home. Many of them do not even have electricity. And with the first wave of flood in many villages the situation has worsened. In a tragic incident, a 15-year-old students of class X from Chirang districts of Assam committed suicide as he failed to attend online classes and exams because of non-availability on smart phones (www. nenow.in). The total population of Assam is 3.5 crore (www.populationu.com). And out of this 86% lives in village area (https://des.assam.gov.in). So, the situation is really pathetic. Though all the institutions are providing online education, the quality and pace varies from institute to institute. In this situation, open and distance universities have less damages of COVID 19 than traditional universities. The traditional universities of Assam are conducting classes through online mode with the help of mobile and computer applications. The open and distance-learning is convenient for many people because of its flexibility and cost effectiveness. Krishna Kanta Handiqui State Open University (KKHSOU), is providing education to its learner during this COVID 19 pandemic time in following ways: different multimedia tools like CDs, DVDs of the learning materials are distributed to the learners on regular basis for facilitating better understanding among the learners. University also conducts counselling sessions through KKHSOU You Tube channel with nearly twenty thousand subscribers.

KKHSOU has a full-fledged official website (www.kkhsou.in) for its learners and general public. The Website provides all relevant information to its stakeholders. An e-learning portal by the name of e-SLM (http://eslm.kkhsou.in/) has been launched by the university and all the study materials of the programmes can be assessed in this portal. To provide easy access to various open access journal across the world, KKHSOU has developed the Open Access Journals Search Engine (OAJSE) which is available for the users from the URL www.kkhsou.in/library/oajse. The university has its own mobile application to help the learners to connect 24x7 with the university (www.kkhsou.in).

6.8 Use of Online Educational Tools in Assam during This Pandemic Time at Different Levels:

For primary educational institutions for both private and government medium schools, the following two facilities are used only in English medium schools of urban and semi urban areas of Assam. The researcher get no information related to online class for primary school children in rural area in Assamese medium. In the study it has been observed that, hundred percent (100%) respondents agree that they are getting WhatsApp messages from teachers related to class (irrespective of rural, semi urban or urban area). Eighty six percent (86%) respondents say that they are also getting you tube link related to class.

- YouTube link
- WhatsApp messages (typed and voice messages)

For secondary educational institutions for both private and government medium schools in urban, semi urban and rural areas of Assam the following online tools are used:

- You Tube link (82% response)
- WhatsApp messages (100% response)
- Google class (85% response)
- Google meet (65% response)
- Free Conference call App (14% response)

Some of the respondents from rural area complaints that, though online classes are going on, due to the poor connectivity, they are unable to get the lessons.

For Higher educational institutions for both private and government institutions in urban and semi urban areas and few in rural areas of Assam the following online tools are used:

- You Tube link (100%)
- WhatsApp messages (100%)
- Google class (65%)
- Google meet (67%)
- Free Conference call App (40%)
- Zoom (60%)
- Facebook live classes (25%)
- SWAYAM (25%)
- SWAYAM prabha (18%)

- Soodhganga (35%)
- Email/ discussion forum/ blogs (40%)
- Facebook (60%)
- Online Digital Library etc (35%)

The tools mentioned in the above category are based on the personal interview of teachers in each category. It has been observed from the study that, there is not much online activity visible in the rural areas of Assam. For students of class IX, X, XI and XII online classes were held in rural areas, but could not get much response from primary and higher educational institutions. Availability of online material in vernacular medium is another issue in this regard.

6.9 Strategies for E- Learning Implementation:

Though different schools and colleges are providing e- learning classes to the students, the credibility of the classes is at stake. As the students and teachers both are not trained in this system, proper training and strategy is needed in future for successful implementation of e-learning.

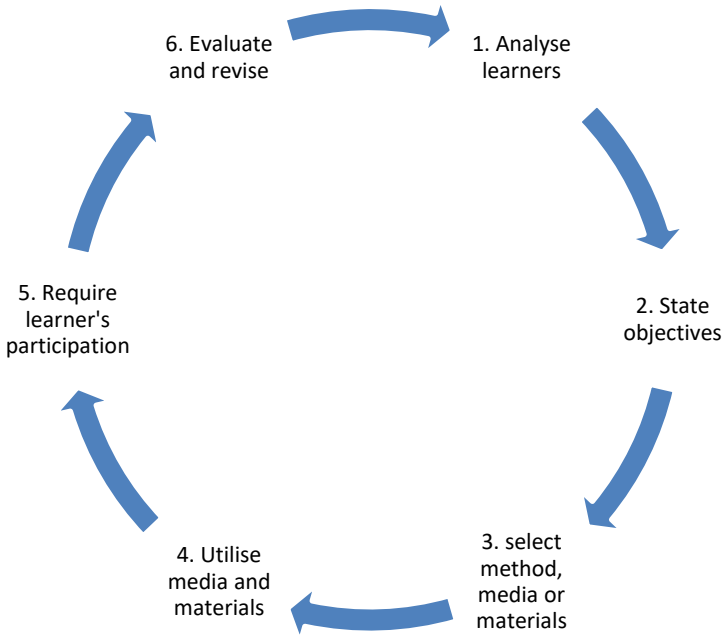
In this study it has been found that the duration of classes in different schools and colleges varies from 1 hour to 6 hours per day, which is a huge variation. Just consider this for three months it will be almost 450 study hours of difference. There needs to be some uniformity among the schools and colleges for conducting online classes.

Though government has stated regulations regarding the class hours, many schools are doing it as per their own convenience. We have now seen that the education system, in general, is unprepared and vulnerable to external threats. As a response to the global educational crisis, online teaching has been put into practice. However, we stumble into defining what we are desperately trying to accomplish. Online education is a learning process that provides learners agency, responsibility, flexibility and choice. It is a complex process that requires careful planning, designing and determination of aims to create an effective learning ecology (Bozkurt, Sharma, 2020).

One can adopt ASSURE model, for proper implementation of e- learning. Government can also think of blended learning approach for future implementation of e- learning courses in long run. To make this approach successful first we need to analyse the learners, whether they are in primary level, secondary level or in higher education.

The grasping power of learners varies depending on their age and environmental factors. So, the strategic plan should be as per the requirements of the learner of each segment. Once the analysis of the learner is done, specific objectives needs to be set for each category of learners.

There will be different methods, media and material needed for different segments of learner. Learners can use different Open Educational Resources available in the internet or materials can be prepared for learners depending on their requirements. There should be two-way communication between the learner and the instructor, so learners; participation is also very important. Then at the end of this process things need to evaluated and revised to measure the effectiveness.



6.10 ASSURE Instructional Design Model:

Source: https://www.instructionaldesign.org

In this regard, when we consider online distance education, we should go beyond sharing simple tools, tips and tricks and instead focus on the changing learners' needs, learning contexts, and the availability and accessibility of the tools. Another significant distinction we have to highlight is how learners are involved in the process.

Today an entire industry has emerged to do virtual class. Course Management System software has been used by many schools and colleges in the United States of America like blackboard (www.blackboard.com), WebCT (www.webct.com), e college (www.ecollege.com), Moodle (http://moodle.org) etc. which can also be in the future of Indian virtual classrooms.

Initially a blended form of e learning approach can be adopted by our institutions. For conducting effective e-learning, proper assessment mechanism should also be there.

6.11 Conclusion:

The world is changing and the educational system is also changing because of this pandemic COVID 19. During this pandemic time, more than 300 million students worldwide are having their education disrupted. As stated by Lynch (2020), global pandemics require highly motivated, highly educated bureaucrats; schools that train students to think both deeply and flexibly; and teachers that can model critical thinking and problem-solving. As the situation emerged all of a sudden, we need to cope up with the situation as well as we need to prepare for future educational system. Many educational institutions are developing online materials to provide helping hand to reach this learner in different way. The entire educational system should collaborate with different stakeholders to come up with better way of teaching learning.

Government of India is providing free educational learning material through SWYAM platform. E- Learning is the need of the hour. It can be enjoyable to those who can have access to it. The state government of Assam is also trying its best to provide e-learning facilities to the learners to overcome this situation. Thus, the day is not far away when e-learning will become the future popular method of education throughout the world.

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7. Examining Relationship between Communalism & Mass Media during the Covid 19 Pandemic

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Abstract:

Corona virus disease, more commonly, known as COVID 19 was discovered in Dec 2019 in Wuhan, China that rapidly spread across the globe and its outbreak was so intense that was declared a global pandemic which means global health emergency. The mass media played an indispensable role in bring the World into strict vigilance and keep posted about all the relevant news related to the issue. The study intends to examine the relationship between communalism and the mass media and it finds that the latter is the dominant and distinctive factor in spreading communal hatred. Global statistics reveal that the developing economy, India in particular, engages with very distressful results. Out of two broad categories of mass media, i.e., Indoor and Outdoor, the former plays the dominant role in impacting communal harmony, the Digital media to be precise.

Keywords: Mass media, communalism, COVID 19, information, communication.

7.1 Introduction:

The meaning of mass media communications is correspondence that ranges and impacts an enormous number of individuals. At some point in the past people use to turn on the radio for listening declaration information or get the paper for examining each day title writings and information to understand what's going on the planet all-around with some tea in their grip. However, with time, development has changed and there are other media familiar with give information to masses, for instance, Print media like Newspaper, Books & Magazines, Televisions, Radio, Internet, Films and so forth.

Traditional media incorporates the theaters, dramatizations, society appears, manikin shows and so forth. In Modern culture and condition, expansive interchanges has gotten one of the basic forces. A wide scope of wide correspondences exchanges whether oral, created or convey contacts a greater group. The print media are the paper, books, and magazines. Electronic media incorporates the TV, radio, phone and so on. The electronic media incorporates the sites, email, online life like Facebook, Tweeter, Instagram and so forth; Ecommerce, Videos on the web, Blogs, Video Blogs and so on. The Outdoor media are the banners, hoardings, bulletins, flags.

What' more, last yet not the least the travel media remembers notices for the trains, transports, aircrafts and so on. Mass media plays a significant role in Indian governmental issues and politics. Escalated utilization of Mass media has made simple to arrive at each edge of the globe. It helps in the advancement of products and enterprises. Illuminate, Educate and Entertain Masses is a fundamental target of broad communications.

7.2 Coronavirus (Covid 19) Pandemic:

Coronavirus disease (COVID-19) was first identified in December, 2019 in Wuhan, China, and has since spread globally, resulting in an ongoing pandemic. And on 31st December 2019, Wuhan City of Hubei Province has passed the information to WHO regarding the critical situation going on in China. Coronavirus disease (COVID-19) is an irresistible ailment brought about by a newfound coronavirus 2 (SARS COV-2) causing extreme intense respiratory issues. A great many people who fall wiped out with COVID-19 will encounter mild to moderate symptoms and recuperate with no additional standard treatment. The infection that causes COVID-19 is for the most part transmitted through droplets that is produced when an infected person, wheezes, coughs or breathes out.

These droplets are too overwhelming to even think about hanging noticeable all around, and rapidly fall on floors or surfaces. What's more, can keep going extremely long on these surfaces. One can get infected by taking in the infection in the event that he/she is inside nearness of somebody who has COVID-19, or by contacting a debased surface and afterward carrying the hands to the eyes, nose or mouth. Starting at 22nd May, 2020, more than 5.1 million cases have been accounted for across 188 nations and territories, bringing about in excess of 3,33,000 deaths.

More than 1.95 million individuals have recuperated. Among the most Common indications incorporate fever, cough, weakness, difficulty in breathing, and loss of smell and taste. While most of cases bring about gentle manifestations, some advancement to intense respiratory misery condition (ARDS), multi-organ failure, septic shock, and blood clumps. The time from introduction to beginning of manifestations is commonly around five days yet may extend from 2 to 14 days.

Suggested measures given by the WHO (World Health Organizations) to forestall contamination incorporate incessant hand washing with liquor based sanitizers or cleansers, keeping up physical good ways from others (particularly from those with side effects), isolate (particularly for those with manifestations), covering hacks, and getting unwashed hands far from the face. Also, the utilization of a face covering is suggested for the individuals who presume they have the infection and their parental figures.

Suggestions for face covering use by the overall population differ, with certain specialists suggesting for them, some suggesting against them, and others requiring their utilization. There is constrained proof possibly in support of the utilization of veils (clinical or other) in solid people in the more extensive network.

As per the World Health Organization, there are no accessible antibodies nor explicit antiviral medicines for COVID-19. The board includes the treatment of side effects, strong consideration, separation, and test measures.

7.2.1 Scenario of India:

The primary instance of the COVID-19 pandemic in India was accounted for on 30 January 2020, starting from China.

The number of confirmed cases have been increasing drastically and numbers have even crossed more than the epicenter China amidst the lockdown in the whole nation.

On 22 March, the Government of India chose to totally lockdown 82 locale in 22 states and Union Territories of nation where affirmed cases have been accounted for till 31 March 2020. On 23 March, Delhi was put under lockdown till at any rate 31st of March. Essential services & commodities were to continue however. 80 urban areas including significant urban communities, for example, Bengaluru, Chennai, Mumbai, Chandigarh and Kolkata were likewise put under lockdown. Inter-state developments are permitted during the lockdown time frame. Anyway a few states have shut their borders. On 23rd of March, association and state governments declared the lockdown of 75 locale where cases were reported. On 24th of March, PM Narendra Modi reported a total across the country lockdown, beginning from 12 PM for 21 days. By 6th of April, the development pace of the pandemic had eased back to one of multiplying at regular intervals, from a pace of multiplying at regular intervals earlier. As the finish of the lockdown time frame drew nearer, a few state governments suggested broadening the lockdown. The legislatures Odisha, Punjab, Maharashtra, and West Bengal governments have stretched out the state lockdowns to 30th of April. On 14th of April, PM Narendra Modi broadened across the nation lockdown till 3 May, with a restrictive unwinding from 20th April for the zones that have had the option to contain the spread. On 29th April, Punjab government reported for expansion of curfew till 17th of May. On 1st of May, the Government of India broadened across the nation lockdown further by about fourteen days until 17th May. On 5th of May, Telangana government declared for augmentation of lockdown till 29 May in their state. Similarly, Punjab government has also declared for augmentation of lockdown till 31st May. On 17th of May, NDMA expanded the lockdown till 31 May in every single Indian state.

7.2.1 Zone Wise Division:

The Government divided the whole country into three zones –

1. Green Zone,
2. Red Zone,
3. Orange Zone
4. Red zone (Hotspots)

7.3 Literature Review:

A study based in UK undertaken by Hilton S, Hunt K (2010) find that the newspaper coverage of swine flu pandemic was immense. And due to that, number of articles on swine flu has increased. Saxon B et al. (2018) studied about how in America the local newspapers were used in order to communicate the information so as to communicate the risk factors and it was found that media plays a big role in communicating information that helps in removing the fear of the risks.

Mejia R. C et al. (2020) examines the perception of media and their effectiveness in passing their information during the Covid-19 situation and found that distortion of the media, created fear and data got from health personnel, family, and companions, which could all have some impact as indicated by how they illuminate individuals about the COVID-19 pandemic.

7.4 How the Mass Media is playing the Role in Communicating the News of the Covid 19 Pandemic:

As the Indian Media houses are working hard in communicating the news all over the nation and journalists are bearing the risk of becoming a victim of Covid-19 by coming in contact with the infected ones, there are few media houses which are taking the advantage of playing a communal game, as a result creating nuisance and hatred among the general public.

The mass media are doing their level best in keeping us well informed about the situations all round and the initiatives taken by the government without whom we wouldn't be able to get the information that is happening during this crisis situation, thanks to the media houses in that prospective. Also very saddened to know that on 20th of April at least 53 media persons tested positive of Corona Virus as published on The Hindu.

Before the lock down began on 25th of March PM, Narendra Modi has announced that "Newspapers carry tremendous credibility and the local page of a region is widely read by people," and the Union Home Ministry guidelines include media in the list of essential services permitted to operate during the lockdown. According to the International Press Institute, "amid the Covid 19 pandemic, the free flow of news and information is more essential than ever, ensuring open dialogue and the exchange of vital information. IPL is closely monitoring press freedom restrictions in this exceptional situation." Some media persons were also being attacked around the globe amidst the Covid 19 situation as per the IPL:

7.5 How Some Media Houses Played The Communal Game?

The coronavirus pandemic is the most basic crisis the world has looked since World War II, yet a portion of the traditionalist media in India has found somebody to fault and they are the Indian Muslims. Particularly an association called Tablighi Jamaat. Tablighi Jamaat is an Islamic fundamentalist evangelist advancement that fixates on asking Muslims and asking people to return to practicing their religion as it was taken a shot at during the lifetime of the Islamic prophet Muhammad, and particularly in issues of custom, dress and individual lead.

The Tablighi Jamaat expected to coordinate the program some spot in Vasai, Maharashtra. After the erupt of COVID-19 in Maharashtra, the Government of Maharashtra and Mumbai Police collected off the gathering. After the excusal from the Government of Maharashtra, the Nizamuddin gathering of the Tablighi Jamaat held the exacting congregational program (Ijtema) in Nizamuddin West, Delhi. The Delhi Government's solicitation for 13 March that no classes, get-togethers or any enormous event (past 200 people) are to be held was clearly disregarded by the affiliation, and the Delhi Police also fail to maintain it. There were in like manner other encroachment of rules by remote speakers including maltreatment of guest visa for minister practices and not taking 14-day home confine for voyagers from abroad.

At any rate 24 of the members had attempted positive for the disease among the 300 who showed reactions by 31 March 2020. It is acknowledged that the wellsprings of pollution were pastors from Indonesia. Many had returned to their states and moreover offered shelter to remote speakers without the data on close by governments.

Furthermore, at long last started neighborhood transmissions especially in Tamil Nadu, Telangana, Karnataka, Jammu and Kashmir and Assam. The entire Nizamuddin West zone has been cordoned off by the Police beginning at 30 March, and clinical camps have been set up. After takeoff from the markaz, of the scores of jamaat members, 167 of them were segregated in a railroad office in south east Delhi amidst stresses over their security and transmission of the disease. The Tablighi Jamaat gathering rose as one of India's major coronavirus hotspots in India, after nore that 1400 out of 4067 cases were associated with members as showed by the Health Ministry.

On 18 April 2020, Central Government said that 4291 cases (or 29.8% of the full scale 14,378 avowed occurrences of Covid-19 in India) were associated with the Tablighi Jamaat, and these cases were spread across 23 states and Union Territories. Different inquiries have been raised concerning how the Delhi Police allowed this event to proceed in the midst of a pandemic, while a similar event was denied in Mumbai by the Maharashtra Police. When the COVID lockdown occurred in Delhi from 22 March onwards, the evangelists remaining in the Nizamuddin Markaz were gotten, and the functionaries began to search for help from the specialists for their departure. As of fourth of April, more than 1000 cases, addressing 30% every affirmed case in India, were associated with the Nizamuddin event. Around 22,000 people that collaborated with the Tablighi Jamaat evangelists must be isolated. On 31 March 2020, a FIR was archived against Muhammad Saad Kandhlawi and others by Delhi Police Crime Branch under Section 3 (discipline for offense) of the Epidemic Diseases Act, 1897 and Sections 269 (Negligent act obligated to spread tainting of ailment), 270 (destructive act subject to spread illness of ailment), 271 (resistance to segregate rule) and 120b (control of criminal interest) of the IPC. On eighth of April 2020, the Delhi Police followed Tablighi Jamaat pioneer Maulana Saad Kandhalvi in Zakirnagar in South-East Delhi, where he maintained to be under self-isolate. A wide range of people from the instructor pack have similarly been held for purportedly helping spread the illness, fusing by stowing endlessly in mosques, a police official declared. Regardless, the Government of India has denied that it is singling out Muslims.

Thereby some of the media houses took the advantage of blaming the Indian Muslims directly by publishing various news all over. And after the spread of such news all over the nation, the communal virus is becoming more dangerous than the Covid 19 itself.

Regardless of whether the Tablighi Jamaat acted wrongfully, there can be no two sentiments about the way that it acted unreliably and absurdly by sorting out a social affair of a few thousand individuals at its home office in Nizamuddin in Delhi. Many individuals from a few nations and a few States of India gathered there; several returned homes with infection, making a transmission affix that gives off an impression of being the single longest for coronavirus in India since its episode. Tablighi's blinding fixation on the great beyond and incapacitating obliviousness of this present reality are stunning yet not special. Likewise, there is nothing only Islamic about consolidating obliviousness and imprudence; on the off chance that anything, this is a common quality across religions.

Similarly a day after the PM went ahead TV and required every single strict assembly to end, Chief Minister of U.P. Yogi Adityanath, drove a strict occasion in Ayodhya. Unexpectedly, when the devotees were congregating at the Nizamuddin, the U.P. organization was all the while proceeding with its groundwork for the Ram Navami festivities in Ayodhya from March 25, where lakhs would have assembled.

A few journey places stayed open well after COVID-19 had gotten a worldwide pandemic. But these news media targeted only the Islamic religion and blamed them which is totally communalism. And this not the proper time to play the blame game.

The Indian authorities had connected many instances of COVID-19 to a Muslim group that held its yearly gathering in Delhi toward the beginning of March, and wellbeing authorities were dashing to find any individual who had contact with the members. Coronavirus fears and strict pressure were at that point at a fever contribute India, and it didn't take long for the two powers to blend.

Recordings erroneously professing to show individuals from the evangelist bunch spitting on police and went viral on social media, compounding an effectively risky air for Muslims.

Till March 28, various tweets with hashtag #Corona Jihad have showed up almost multiple times and conceivably observed by 165 million individuals on Twitter, as per information imparted to TIME by Equality Labs, a computerized human rights group. Coming only weeks after strict massacres directed by Hindu patriots left 36 Muslims dead in Delhi, the flood in disdainful tweets exhibits how tensions over the coronavirus have converged with longstanding Islamophobia in India, when the Muslim minority 200 million individuals in a country of 1.3 billion feels progressively focused by the decision Hindu patriots. One of the most well-known false news #Corona Jihad tweets professes to show a Muslim man from the Delhi assemblage deliberately hacking on someone. The tweet alluded to Muslims as "such vile minded people" and recorded hashtags including #Corona Jihad & #TablighiJamatVirus, a reference to the strict gathering that met in Delhi. In any case, the video included in the viral tweet was really shot in Thailand, not India, and there is no confirmation that the man was an individual from the Delhi assemblage. The tweet was as yet online as of 3rd of April, with more than 4,200 retweets and 503 ans. Another video shared on both Facebook and Twitter indicating to show Muslims purposefully wheezing on one another was exposed by the reality checking association AltNews. Another tweet, which reached around 2,000 retweets before it was expelled for damaging Twitter's standards, included a drawing of a personified Muslim man marked "Corona Jihad" attempting to push a Hindu off a bluff." Corona jihad is this new idea that Muslims are weaponing the coronavirus to target Hindus," says Thenmozhi Soundarajan, official executive of Equality Labs. The tweet has since been expelled for abusing Twitter's principles, yet a few different kid's shows connecting Muslims to the coronavirus, shared by a similar record with in excess of 15,000 devotees, were as yet online as of April 3rd. Amidst the Coronavirus pandemic that keeps on costing many lives each day and the impact of the lockdown has left many jobless, Bhartiya Janata Party MLA in Uttar Pradesh has asked individuals not to purchase vegetables from Muslim merchants. A video floated on the social media that shows BJP MLA, Suresh Tiwari conversing with a gathering of individuals, purportedly in Deoria area, and offering the comments that numerous social media users portrayed as 'communal'. The lawmaker from the Barhaj supporters can be heard saying: “I am telling everyone openly. Nobody should buy vegetables from Muslims.” Hate speeches against the Muslims saw an uptick after Tablighi Jamaat central station in Delhi's Nizamuddin was proclaimed as the hotspot of the Coronavirus. A few BJP pioneers censured the Jamaat for spreading the infection in the nation. In the repercussions of these comments, a few occurrences were accounted for where Muslim sellers were refused from entering a few neighborhoods on the doubt that they may spread the infection. The social media was buzzing with rumors that Muslim sellers spit on foods grown from the ground so as to spread the Coronavirus.

In such a case Kerala police have filed a FIR against the reporter of ZEE News, Sudhir Chaudhary for explaining different types of Jihad in his television show using flow charts. On 1st April 2020 Supreme Court has announced their concern on circulation of fake news all over. Media ought to keep up a solid awareness of other's expectations, while dispersing news on corona virus and ought to guarantee that unconfirmed and counterfeit news isn't distributed, the Supreme Court said on Tuesday after the focal government caused the court to notice the chance of individuals freezing because of "counterfeit" news associated with Covid-19.

7.6 Conclusion:

Mass media plays a great role in rendering us with humongous and varied information. So, the type of information that they communicate highly matters. The information should be genuine and clear. Because there would be thousands of viewers and receivers who would be getting those news and if false or fake news are being published it has high risk of creating nuisances among the general public. And mass media shouldn't promote posting communal news by blaming any individual that may create riots and hatred among the public.

The Govt. should take strict actions and measures against spreading of such spurious news. And book under section 505(1) of Indian Penal Code, 1860. The punishment for making, publishing or circulating any statement, rumor or report which may cause fear or alarm to the public, or to any section of the public.

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8. Education in Times of Corona: the Psychological Impact of the COVID-19 Epidemic on College Students in Assam.

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Abstract:

The COVID-19 epidemic has been spreading in India and other parts of the world since December 2019. The epidemic has brought not only the risk of death from infection but also unbearable psychological pressure. We sampled college students from different colleges by using convenience sampling. They responded to a questionnaire packet that included the 7-item Generalized Anxiety Disorder Scale (GAD-7) and those inquiring the participants' basic information. We received 204 responses. Results indicated that of the 204 college students, 21.6% had no symptoms of anxiety, whereas the proportions of students with mild, moderate, and severe anxiety were 24%, 20.1%, and 34%, respectively. The results also indicate that living in urban areas in contrast to rural area was a protective factor against anxiety experienced by the respondents (OR =1.978, 95% CI = .725 – 5.396). However, having a relative or an acquaintance infected with COVID 19 was a risk factor for anxiety (OR = 1.982, 95% CI =.248 – 15.833). Moreover, there is a negative association between social support from family and friends during COVID 19 situation ($r = -.133$, $p < 0.058$) and ($r = -.320$, $p < 0.001$). It also indicates that college students are going through anxiety as the number of cases has been increasing day by day which made them to worry about their academic delays.

8.1 Introduction:

Coronavirus disease 2019 (COVID-19) is an infectious disease caused by severe acute respiratory syndrome coronavirus 2 (SARS- CoV-2). First identified in December 2019 in Wuhan, China, it resulted in an ongoing pandemic. The first case may be traced back to 17 November 2019.As of 4th June 2020, more than 6.51 million cases have been reported across 188 countries and territories, resulting in more than 386,000 deaths. More than 2.8 million

people have recovered. The COVID-19 coronavirus pandemic is the biggest health crisis for generations, and it has had a devasting impact on the lives of people across the world. The pandemic is also a mental health risk for our society.

The uncertainty, anxiety, fear of becoming ill or seeing a love one become ill, loss of normal routines, difficulties of social connection, and in many cases disruption to education could have a profound impact on the nation's mental health. Common symptoms include fever, cough, fatigue, shortness of breath, and loss of smell and taste. While most cases result in mild symptoms, the time from exposure to onset of symptoms is typically around five days but may range from two to fourteen days. The epidemic brought not only the risk of death from the viral infection but also unbearable psychological pressure to people in India and the rest of the world. The continuous spread of the epidemic, strict isolations measures and delays in starting schools, colleges and universities across the country is expected to influence the mental health of college students. For children and young people who are already struggling with their mental health, this is an extremely difficult time. This is the time when we must all pull together, and lookout for those who are most at risk in our society. We hope the government will fully recognize the growing mental health impact that COVID-19 will continue to have on children and young people.

The closure of schools and universities to most students creates uncertainty both in the short term and in relation to educational and employment outcomes in the future. For children who are living in difficult or dangerous situation, the closure may also represent the loss of a safe and stable environment. Many of them manage their mental health through maintaining routines that are being disrupted by the measures to control the pandemic because they are not being able to take part in day-to-day activities that they regarded as important coping mechanisms for example, dance or exercise classes and staying at home for a long time without having anything to do can mean to overthink things and were more likely to use negative coping strategies, like self-harm. As well as social distancing with friends, non- immediate family and other trusted adults may affect in their day-to-day life as many are confident or comfortable using phones or who had limited access to technology because they are more comfortable in physical proximity with their friends and felt that talking online not same as talking physically. College student's anxiety about COVID-19 might have been related to the effect of the virus on their studies (Cornine, 2020) and future employment. Despite the extraordinary challenges many students with mental health needs will face over coming months, most were keen to share advice, support and solidarity with others. So, it's very important to share supportive messages, blogs, videos and advice with one another in this epidemic situation.

The main purpose of this study to find out how the COVID 19 has impact on the students in their studies. The global lockdown of education institution has cause major (and likely unequal) interruption in students learning, disruption in internal assessments and the cancellation of public assessments for qualification or their replacement by an inferior alternative. Going to school / universities is the best public policy tool available to raise skills even a relatively short period of missed school / universities will have consequences for skill growth. Perhaps to the disappointment of some, children have not generally been sent home to play.

The idea is that they continue their education at home, in the hope of not missing out too much. Families are central to education and are widely agreed to provide major inputs into child's

learning as described by Viarengo (2014) that the link between students test scores and the school students attend, the policies and practices of the school, student's family background and their parents involvement in their education. This global home schooling will surely produce some inspirational moments, some angry, fun, frustrated moments.

The closure of schools, colleges and universities not only interrupts the teaching for students around the world; the closer also coincides with the key assessment period and many exams have been postponed or cancelled. Internal assessment is perhaps thought to be less important and many have been simply cancelled. But the loss of this information delays the recognition of both high potential and learning difficulties and can have harmful long-term consequences for the students.

8.2 Review of Literature:

As per Sintema, (2020) the learning institutions pre-maturely closed on 20 March 2020 and all the citizens were advised to self-isolate in a bid to control the spread of COVID-19. According to him it was hypothesized that COVID-19 would negatively impact on the performance of students in the 2020 Grade 12 national examination for mathematics, science and design and technology subjects as they need more practical knowledge then theory. Thus, it might somehow cause difficulties for the students to understand over voice call or video call. So, due to COVID-19 there will be likely drop in the pass percentages of secondary school students in their subject area and if the COVID-19 epidemic is not contained in the shortest possible time considering that the school academic calendar was abruptly disturbed by the early untimely closer of all schools in the country.

According to Ming-Yen Ng, (2020) study approval was obtained from the institutional Review Boards of the university of Hong Kong- Shenzhen Hospital, where written consent was obtained for patients in Shenzhen, whilst consent requirement were waived for the cases recruited in Hong Kong according to local institutional review board requirements. The COVID-19 infection pulmonary manifestation is predominantly characterized by ground-glass pacification with occasional consolidation on Computed Tomography (CT). Radiographic findings in patients presenting in Shenzhen and Hong Kong are in keeping with 4 previous publication from other side.

As per Sahu, (2020) worldwide many teachers and students have been excited by the move to the online delivery mode but there is always a chance that some faculty who are not tech-savvy will not be able to cope up with this mode and also transition to online mode has raised question for the faculty about their capability to deal with the existing technology and many universities do not have enough infrastructure or resources to facilitate online teaching with immediate effect.

The transition from face-to-face teaching to online delivery has a serious impact on assessments and evaluation. Applying assessments online on those courses designed for face-to-face learning is a challenging task for students as well as for faculty. In addition, student who do not have an internet facility will suffer a clear disadvantage while participating in the evaluation process, which would adversely affect their grade point averages which will lead to unfavorable effect on the psychological health of students. He also suggests that universities should cancel or postpone all events, sports, workshops, conferences and other activities for an indefinite period.

According to Raj Kumar, (2020) symptoms of anxiety and depression (16-28%) and self-reported stress (8%) are common psychological reactions to the COVID-19 pandemic and may be associated with disturbed sleep. Several individual and structural variables moderate this risk. According to him in this situation both the needs of the concerned people and the necessary preventive guidelines must be considered. He thinks that there should be more representative research from other affected countries, particularly in vulnerable populations.

In another study, Kidger (2012) concluded that school environment has a major influence on adolescent mental health, although students' perceptions of teacher support and school connectedness are associated with better emotional health. Most of the time spent in schools and colleges help many to release their stress in the campus by occupying any particular area in the campus, however due to the current epidemic situation students are being kept far from their school environment. Duong et al. (2020) state that for the first time in a hundred years since the 1918 flu pandemic, the US population was mandated to stay in their households and avoid public contact. As now it is happening, due to COVID-19 where every colleges and universities have cancelled in- person classes and campus activities, impacting millions of students. As due to this situation students are unable to contact their teachers properly over the phone and we know the difference between face to face and over a phone conversation.

8.3 Scope of the study:

The petrifying and severe impact of COVID-19 has shaken the world to its core. Further, most of the government around the world have temporarily closed educational institution to contain the spread of the COVID-19 pandemic. So, these studies help the researcher to know up to how much it has effect on students as they are the one who must face lots of difficulties in these situations like:

- Potential loss of contact with friends
- Concerns about how their grades would be assessed or about the impact on their university or career prospects
- Concern about home learning, both for practical reason and because of stress related to the pandemic
- Loss of structure that school represents
- Loss of formal or informal pastoral support
- Loss of their 'safe 'place away from difficult or dangerous home environment

As these studies will help the authors to find ways to help those young peoples who have lost their support- not least because, in many cases they have lost many of their coping mechanisms, including contact with friends or routines that help them to manage their conditions. It is true that many young people who previously might not have needed mental health support are likely to do so in future, as the impact of the pandemic and the restrictions on their lives continues to sink in.

8.4 Objective of the Study:

Method of guiding students to effectively and appropriately regulate their emotions during public health emergencies and avoid losses caused by crisis events have become an urgent problem for college and universities. Therefore, knowing how the young people/ students deal

with these epidemic situations and also what are the new strategic they had applied to overcome their stress regarding academic is of outmost importance. The main objectives of the study is (1) To evaluate the mental situation of college students during the epidemic; (2) To provide a theoretical basis for psychological in preventions with colleges students; and (3) to provide a basis for the promulgation of national and government policies.

8.5 Research Methodology:

Descriptive Research design has been used to obtain information concerning the current status of the phenomena and to describe "what exist" with respect to variables or conditions in a situation where as exploratory research design was used to approach for gaining background information on a particular topic, a survey method using structure questionnaire was used for data collection. Data was collected through a survey of 204 respondents who were asked the factors affected influencing the resurrection movement.

The 7-item Generalized Anxiety Disorder Scale (GAD-7) is one of the most widely used instruments for the detection and screening of anxiety disorder is also used for the study. It is the module of the 'Patient Health Questionnaire' which is the first self- reported questionnaire developed for primary care, to aid the diagnostic process of specific disorder (Toussaint, 2020). The scale was developed to address the limited number of anxiety measures in clinical problems and to address the common issue of symptoms ratings seldom being used in clinical practice because of "their length, proprietary nature, lack of usefulness as a diagnostic and severity measure, and requirements of clinician administration rather than patient self-report".

8.5.1 Data Analysis:

Data were analyzed with SPSS Version 25.0. An analysis of descriptive statistics was conducted to illustrate the demographic and other selected characteristics of the respondents. A univariate analysis (Nonparametric test) was used to explore the significant associations between sample characteristics and the anxiety level during the COVID- 19 epidemic. Statistically significant variables were screened and included in multivariate logistic regression analyses. The estimates of the strengths of associations were demonstrated by the odds ratio (OR) with a 95% confidence interval (CI). Spearman's correlation coefficient, r, was used to evaluate the association between COVID-19-related stressors, including economic and daily- life related stressors, as well as stressors related to delays in academic activities, and anxiety level. A two-tailed $p < .05$ was considered statistically significant.

8.6 Results:

The demographic and selected characteristics of the study population are shown in Table 2. Among the sample of 204 college students, approximately 56.4% were female and 43.6% were male. The respondent living in a urban, rural –urban and rural area is 54(26.5%), 82(40.2%) and 68(33.3%) respectively. 61.3% of the respondents has a steady income and 59.3% of the respondents live with their parents whereas most respondents 198(97.1%) had no relatives or acquaintances who were infected with COVID 19 further more families without a steady income (38.7%), not living with parents (40.7%) and having a relative or an acquaintance infected with COVID 19 ((2.9%).

8.6.1 Levels of Anxiety among College Students during the Epidemic:

Table 1: Number of Students with Different Level of Anxiety			
		Frequency	Percent
Anxiety level	Normal	44	21.6
	mild	49	24.0
	moderate	41	20.1
	severe	70	34.3
	Total	204	100.0

Table 1 shows how the mental health of college students was affected to varying degrees during the outbreak. Of the 204 college students, 21.6% had no symptoms of anxiety, whereas the proportions of students with mild, moderate, and severe anxiety were 24%, 20.1%, and 34%, respectively.

8.6.2 Factors Influencing College Students' Anxiety during the Epidemic:

A. Univariate Analysis:

Table 2 shows the relationship between the demographic variables of students and anxiety. Gender, Place of Residence, Family Income, Living with parents and Relatives or acquaintance getting COVID 19 had no significant effect on anxiety.

Table 2: Univariate analysis (Nonparametric test) of college's students' Anxiety about the Epidemic.							
Variables	**Total**	**Anxiety level**				**Statistics**	**P(sig.)**
		Normal	**mild**	**moderate**	**severe**		
Gender Female	115(56.4%)	24(20.9%)	25(21.7%)	23(20%)	43(37.4%)	4729.500[a]	.335
Male	89(43.6%)	20(22.5%)	24(27%)	18(20.2%)	27(30.3%)		
Place of resident Urban	54(26.5)	14(25.9%)	11(20.4%)	10(18.5%)	19(35.2%)	2.955[b]	.399
Rural – urban	82(40.2%)	17(20.7%)	17(20.7%)	16(19.5%)	32(39%)		
Rural	68(33.3%)	13(19.1%)	21(30.9%)	15(22.1%)	19(27.9%)		
Steady family income Yes	125(61.3%)	30(24%)	30(24%)	19(15.2%)	46(36.8%)	4833a	.792
No	79(38.7%)	14(17.7%)	19(24.1%)	22(27.8%)	24(30.4%)		
Live with parents Yes	121(59.3%)	24(19.8%)	32(26.4%)	26(21.5%)	39(32.2%)	4941.500a	.841
No	83(40.7%)	20(24.1%)	17(20.5%	15(18.1%)	31(37.3%)		
Relatives or acquaintance got COVID 19Yes	6(2. 9%)	1(16.7%)	1(16.7%)	1(16.7%)	3(50%)	495a	.471
No	198(97.1%)	43(21.7%)	48(24.2%)	40(20.2%)	67(33.8%)		
a Maan- Whitney test b Kruskal- Wallis test.							

B. Ordinal Regression Analysis:

Results of ordinal multivariate analysis of factors associated with anxiety during the COVID-19 crisis are presented in Table 3. As ordinal regression use interactions between independent variables to predict the dependent variable. By ordinal regression we can be able to determine which of the independent variables have a statistically significant effects on the dependent variable. Here the result indicates that living in urban areas, in contrast to rural areas was a protective factors against anxiety experienced by the respondents (OR =1.978, 95% CI =.725–5.396). The stability of respondents steady family income (OR=.508, 95% CI =.223 – 1.160). However, having a relative or an acquaintance infected with COVID 19 was a risk factor for anxiety (OR =1.982, 95% CI =.248 – 15.833)

Table 3: Ordinal Logistic Regression Analysis of Factors Influencing College Student's Anxiety.

Factor	Number	Std. Error		OR (Exp (B)	P (SIG.)	OR (95% confidence interval for Exp (B)
					Lower bound	Upper bound
Place of residence						
Urban	54(26.5%)		1.978	.183	.725	5.396
Rural- Urban	82940.2%)	.512				
Rural	68(33.3%)	.477	2.362	.071	.928	6.013
		_	–	–	–	–
Steady family income Yes	125(61.3%)	.421	.508	.108	.223	1.160
No	79(38.7%)	_	–	–	–	–
Living with parents Yes	121(59.3%)	.414	.823	.638	.366	1.852
No	3(40.7%)	–	–	–	–	–
Relative or acquaintance infected with COVID 19 Yes	6(2.9%)	1.060	1.982	.519	.248	15.833
No	198(97.1%)	_	–	–	–	–

Correlation between the COVID-19-related stressors (included economy and life affected, studies delayed) and levels of anxiety during the COVID-19 epidemic.

The results of the correlation analysis are shown in Table 4. It has indicated that the college students are going through anxiety as the number of cases has been increasing day by day which made them to worry about their academic delays because as there is academic delay which will directly impact on the career of the students. The result of the correlation analysis in Table 6.3, worry about the economic influences of the epidemic were positively related to the levels of anxiety in college students ($r = 0.549$, $p < 0.001$). Moreover, worried about academic delays ($r = 0.557$, $p < 0.001$), "I am worried about my upcoming exams" ($r = 0.418$, $p < 0.001$) and "I am worried that delays will impact my career" ($r = 0.594$, $p < 0.001$) were also moderately and positively correlated with the level of anxiety. It can also be seen that there is a negative association between social support from family and friends during COVID 19 situation ($r = -.133$, $p < 0.058$) ($r = -.320$, $p < 0.001$).

Table 4: Correlation Analysis Between the COVID 19 Related Stressors and College Students' Anxiety When Facing the Epidemic.

	Anxiety level r	Sig. p
I am worried about economic influence will have on me	0.549	0.001
I am worried about academic delays	0.557	0.001
I am worried about my upcoming exams	0.418	0.001
I am worried that delays will impact my career.	0.594	0.001
I have no social support from my family	-.133	0.058
I have no social support from my friends during this COVID 19 situation	-.320	0.001
r=Correlation coefficient		

8.7 Discussions:

From this study, it has been found that 56.4% of the respondents are female and 43.6% are male and most of the respondents 82(40.2%) are between the age of 18- 25 years group and 26-35 years (22.1%). During the survey it was found that 65.7% of the respondents are students among which 59.3% from the total respondents of 204 live with their family and had a below Rs 250000 family income and lived in an urban area but 33.3% are the respondents who live in a rural area. Most participants (97.1%) had no relatives or acquaintances who were infected with COVID-19.

From Table 5 it has found the most of the respondents are worried about their income, upcoming exams, career, day to day activities, academic delays since due to COVID 19 everything was shut down and there were no other ways to earn money as the government had announce a complete lockdown due to which schools or colleges were shut down and students

had to stay home and study through online mode which is not easy for everyone to followed that because during the survey it has found that there are some respondents who live in a rural area where there used to be a problem of network connectivity and as there is a delay of academic so the exams has been postpone due to which the respondents cannot apply for any job as still they didn't completed their exam which has worried them about their career. From the same Table 5 it was also found that the highest mean of (x=2.86) has been calculated where the respondents were more worried about economic influence which will have on their family due to this COVID 19 situation.

During the survey it has found that the respondents are worrying too much about different things like becoming easily annoying or irritable and feeling afraid as if something awful might happen because of this COVID 19 situation they are not allowed to go anywhere and at home also they have to maintain a social distance due to which they feel alone and easily got offended on small things and as they don't have anything to keep themselves busy which made them getting irritated on small things and they always worry about the health of their love ones as in this situation if anything awful happen then would anyone come forward to help him or not.

Table 5

	N	Mean	Std. Deviation
I am worried about economic influences will have on my family	204	2.86	1.249
I am worried about economic influences COVID 19 situation will have on me	204	2.77	1.224
I am worried about economic influences COVID 19 situation will have on India	204	2.54	1.188
I am worried about my upcoming exams	204	2.60	1.147
I am worried that academic delays will impact my career	204	2.68	1.146
I am worried about the influence of COVID 19 situation on daily- life	204	2.54	1.098
I am worried about academic delays	204	2.70	1.168

From the study it has found that when the respondents were asked whether they would help the COVID 19 infected person or not then 53.4% are those respondents who may or may not help the COVID 19 infected person because as it used to be in news that COVID can be infected from person to person easily so the respondent are confused whether they will help or not because for them the first priority is to take care of their health first and among 204 respondents only 39.2% clearly says that yes they will help the COVID infected person if they required any help from their side.

In Table 5 it has being found that the highest mean (x =2.86) was calculated for the statements "I am worried about economic influence will have on my family" because due to this pandemic situation no one was allowed to move from their house and they don't have specific earning method through which they can survive in these pandemic situation which made them to worry about their family whereas (x =2.54) was the least mean which was calculated for COVID 19

situation will influence on daily life because in this pandemic anyone was not allowed to move outside and due to which they have to be at home and made themselves busy within their home only because they are not allow to go for social gatherings, party etc. From Table 1, it has found that out of 204 respondents, 54.4% were female and 40.2% of the respondents live in rural – urban area, whereas 2.9% of the respondents having relatives or acquaintance who were infected with COVID 19.

In table 2, the result indicates that living in urban areas in contrast to rural area was a protectives factors against anxiety experienced by the respondents (OR =1.978, 95% CI = .725 – 5.396). However, having a relative or an acquaintance infected with COVID 19 was a risk factor for anxiety (OR = 1.982, 95% CI = .248 – 15.833).

In Table 3, it can be clearly seen that there is a negative association between social support from family and friends during COVID 19 situation ($r = -.133$, $p < 0.058$) and ($r = - .320$, $p < 0.001$). It also indicates that college students are going through anxiety as the number of cases has been increasing day by day which made them to worry about their academic delays as it will directly impact their careers.

8.8 Conclusions:

The COVID 19 crisis has shattered dreams of many young students of Assam to pursue higher education in Delhi, Bengaluru and other metro cities after clearing their higher secondary or plus II examinations. There are many young people who are struggling with their mental health, but have not yet managed to access support, and others who are experiencing anxiety for the first time as a result of the pandemic. These young people need to know where to go for help which remains available during this time, with clear signposting and access to digital support, families, careers and teachers, etc. who will be a crucial source of support for young people, but they too will need help to play this part. In the absence of face-to-face support, respondents highlighted the important of online and digital tools to facilitate ongoing and existing support. While face-to-face support has public health risks and it is therefore understandable that it is extremely difficult to manage, it is important to plan for a resumption of service when it is possible. However, most respondents felt that support by phone or online would be ineffective or less effective than face-to-face support because of a lack of privacy at home or a fear of their family overhearing the session. Many respondents have experienced anxiety because of this COVID 19 outbreak. Living in urban areas, living with parents, having a steady family income were protective factors for college students against experienced anxiety during the COVID 19 outbreak. However, during the survey, it has found that out of 204 respondents only 2.9% of the respondents having a relative or an acquaintance infected with COVID 19 was an independent risk factor for experienced anxiety. The COVID 19, related stressors that included economic stressors, effects on daily-life, and academic delays were positively associated with the level of anxiety symptoms of college's students during this epidemic. It is suggested that the government and schools should collaborate to resolve this problem in order to provide high- quality, timely crisis-oriented psychological service to college students. As COVID 19 is a sudden crisis so people are still trying to adjust or accept the rules and regulation of COVID 19 as somehow one is infected with the COVID 19 then he/she should isolated themselves from their family members as it may also infect them if they don't maintain the social distancing which made them to worry that in this sudden crisis they fear if any of their family members are got infected then how they will deal with the situation and will anyone come forward to help in that situation.

Most of the respondents are worried about their academic delay they were unable to complete their courses on time which made then to think whether the situation will be normal or not and if the situation gets normal then would the environment be same as before or not. So, from the study is has been clear that almost all are worried due to COVID 19 and still they are trying to deal with the situation according to their convenience.

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9. Impact and Challenges of COVID-19 on Pursuing Education

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Abstract:

Education can be defined as the systematic process of receiving or giving instructions at school, college or university which helps in acquisition of knowledge, skills, believes, values and habits. The blunt and caustic impact of COVID-19 has jerked the world. Due to the Pandemic COVID-19 all the functions of human beings which lead to productivity have stopped. In the same way, the Government around the world has temporarily closed all the educational institutions to restrain the spread of COVID-19. We always believe that superior learning is the outcome of studying at the campus where the students get personal attention from faculty, developed cross learning and social skills, growth in learning ability, etc. But COVID-19 Pandemic impacted most of the students in all over the world at all the levels of education. The government has come over with e-learning program to tackle the loss suffering by the students during the Pandemic. Online teaching will never replace the physical learning environment. If we really want holistic development of personality there is need of campus learning platform. Nowadays all the educational institutions are involved in creating 360 degree integrated plan to serve education. In this deaden situation only two options left with educational institutions that is either embrace to digital transformation or end of perish and it would be better of embrace to digital transformation. This study aims to study the impact of COVID-19 on education.

Keywords: Pandemic covid-19, cross learning, social skills, holistic development, digital transformation.

9.1 Introduction:

Education is a fundamental right of every citizen. In some of the countries education is compulsory and free of cost. In India, education up to the age of 14 free Education is provided to all without any discrimination as a basic right of every citizen. Education is such a mechanism which is very important for holistic development of children. Education is the systematic process of receiving or giving instructions at school or college or university which help in acquisition of knowledge, skills, believe, values, and habits. Basically education serve under the supervision of educators, however, learner may educate themselves.

Even the all-powerful Pointing has no control about the blind texts it is an almost unorthographic life One day however a small line of blind text by the name of Lorem Ipsum decided to leave for the far World of Grammar. The Big Oxmox advised her not to do so,

because there were thousands of bad Commas, wild Question Marks and devious Semikoli, but the Little Blind Text didn't listen. She packed her seven versalia, put her initial into the belt and made herself on the way.

Informal is that education which is acquired outside the formal structured curriculum. This kind of education is not limited to the structured curriculum set up by the recognised authority. It bridges the gap between education with traditional classroom and outside the traditional classroom.

Education is recognised as one of the most important mechanism which may help in-

a. Inheritance of values and culture, customs and tradition from one generation to another generation;
b. Sustainable economic development of the nation;
c. Follow the Democratic and maintenance of peaceful society;
d. Enhancing the morality towards the society.

On 31st December, 2019, the term corona virus came into focus when World Health Organization was informed by China about number of cases of pneumonia with unknown cause in the city called Wuhan, China. Gradually the disease spread to more and more places in province cities in China as well as to the rest of the World. Now the disease is declared as pandemic by World Health Organization. The disease is caused by a virus named as SARS-CoV-2 and the disease is popularly known as COVID-19.

The blunt and caustic impact of COVID-19 has jerked the whole world. Due to COVID-19 most of the economic functions around the world have temporarily closed or under lock down which worse the economic status of whole world. In the same way the governments around the world have temporarily closed down all the educational institutions in order to contain the spread of COVID-19 pandemic in the community. Closure of educational institutions has impacting the education all over the world from lower level of education to higher level of education.

9.2 Objectives:

The objective of this study is to elaborate and discuss the impact and challenges of COVID-19 on pursuing education in India.

9.3 Methodology:

This study is descriptive and analytical in nature.

9.4 Discussion:

World Health Organization declared COVID-19 as pandemic which continues to spread throughout the globe. Many countries like India has decided to close schools, colleges, universities and all other educational institutions as a part of maintaining the policy of social distancing to contain the spread the COVID-19 in the community and which can reduce the burden on health department as well.

The closure of Educational institutions has impacted the education of children globally. This situation is not only impacting the students, but also their parents, teachers and educational institutions as well.

In order to keep the track of learning the government of various nations came up with e-learning program during this pandemic situation. During this pandemic situation only two options left with them. Either drop out the course or pick up a job. But by drop out of course they will never get a managerial job in their life. This has become a big challenge for the students, parents and educational institutions. The country like India, it is not possible for all the parents to provide the facility of learning in the e-learning platform due to poverty and lack of financial support. They can't afford a smart device that will help their children in learning via e-platform. A big question is that in this pandemic it is hard to manage one time meals during the day then how they could manage the facility for their children in e-learning. Although government has taken the initiative by providing a platform of e-learning to pursue education but it's quite impossible for the children of poor people.

We always believe in superior learning which is the function of studying at the campus where the students get personal attention from faculty, cross learning, enhance social skills, and growth in learning ability. Home learning affects the productivity of students, social life and learning outcome. Online learning will never be able to complete replace the physical learning environment.

Most of the students looking at how the present situation could be tackle over. From students perspective it is clearly understand that if we really want a holistic development of personality there is no other replacement of campus life learning that will prepare the students for future. But the scenario of this pandemic situation worsened the education system.

The pandemic COVID-19 has impacted not only to the students as well as the educational institutions. It has become a great challenge for educational institutions in functioning their activities. Only two options left with the educational institutions in this pandemic situation are-

a. Either end of perish; or
b. Embrace to digital transformation.

As an educational institutions their responsibility is to create 360° integrated plan to serve education to the children. Hence, they have to adapt the requirements to challenge this pandemic situation.

By the above discussions it is found that the pandemic COVID-19 has a great impact on education globally. It is impacting not only the students as well as their parents, teachers and educational institutions. Although government has taken various steps to maintain the track of learning via e-platform but still it stood like a stone to the poor people who even can't afford one time meal during this pandemic. No doubt some children begins learning via e-platform but never replace a complete physical platform of learning which is very important for holistic development of children. Although most of the educational institutions transforming themselves to digital platforms for functioning their activities but still it's a great challenges for them in country like India.

9.5 Suggestion:

Education recognised such a mechanism in our life which can't get skip. The holistic development of a nation is possible only through education. In order to maintain the track of learning in this pandemic situation I would like to suggest the following-

a. Although government has provided the platform of e-learning but poor students are unable to avail this facility. There for government should take some proper initiatives to avoid e-learning discrimination among poor and rich children;
b. The rich people should take care of the poor students around them by providing them facility of e-learning.

9.6 Conclusion:

On studying the topic 'Impact of COVID-19 on Education' it can be concluded that education is one of the most eminent mechanism of holistic development of children as well as economic growth of the nation. E-learning can't replace a physical life campus learning which can make the children all round development and growth. Although the pandemic COVID-19 worsened the whole education system around the globe but the government and educational institutions have taken various initiatives to keep the track of learning. No doubt children began to learn via e-learning platform but still it's a big challenge for poor children. It can be observed that e-learning platform leads to discrimination in learning among rich and poor.

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10. Social Media and Health Communication during the Covid-19 Pandemic: Impacts, Prospects and Challenges

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Abstract:

The presence of social media platforms such as What Sapp, Facebook, Twitter, etc., has made sharing of information faster and easier although with the challenges of being able to spot fake news. The outbreak of the Coronavirus disease 2019 (COVID-19) became a major concern as over 200 countries were affected leading to over 1,500,000 deaths. This quickly caused a panic worldwide and the social media took centre stage for misinformation. While some are jokes, some are not. Medical professionals and organization resorted to using social media platforms to educate people of ways to contract, the virus, prevention, symptoms, etc. The Nigeria Centre for Disease Control (NCDC) quickly created a Facebook page and updated Nigerians at around 11:00 pm daily on newly reported cases, deaths and recoveries in the country. As media experts and educators, we have an important role to play both now and in the future of the world. Governments and healthcare authorities should use social media to spread updates, news, and scientific discoveries about COVID-19. Information to be spread can include who should be tested, when they should be tested, and where they would go to get medical care.

Keywords: Social media, health communication, disease outbreak, pandemic, coronavirus.

10.1 Introduction:

During the outbreak of the "Spanish" influenza pandemic in 1918-19, people did not have the same sources of communication we now have in the 21st century to quickly share news and information, hence this period has been described as social media age. Social media is an important element in disaster and health crisis related communication.

First reported in Wuhan, China in December and declared a pandemic by World Health Organisation (WHO) on March 21st 2020, the coronavirus disease 2019, also known as COVID-19, caused by a novel human coronavirus (SARS-CoV-2) has rapidly spread to over 200 countries and territories globally (Zhu, Zhang, Wang, Li, Yang and Song, 2020; World Health Organization, 2020a; Worldometer, 2020). The on-going COVID-19 pandemic has threatened the lives of almost 80 million people. As in December, 2020, there were 76,028,497 cases recorded and 1,681,521 deaths while 53,299,788 have recovered worldwide. Researchers globally are racing to identify an effective vaccine and treatment for the viral disease, in order to curb the high morbidity and mortality associated with this virus.

WHO has recommended maintaining a social distance universally to reduce human to human transmission of COVID-19 (World Health Organization, 2020b). As a result, there has been widespread lockdown in most countries in a bid to reduce public gatherings and rapid spread of the disease (Tanne, Hayasaki, Zastrow, Pulla, Smith and Rada, 2020). This has affected nearly all sectors, the health sector not spared. Except for COVID-19 related studies, other biomedical researches that involve contacts with participant's onsite have reduced significantly in many countries (Omary, Eswaraka, Kimball, Moghe, Panettieri and Scotto, 2020). Researchers have been advised to utilise virtual means including teleconferencing, virtual lab meetings and research seminars to maintain studies that can be conducted remotely (Olum and Bongomin, 2020).

In our society that relies on effective and efficient communication, media plays an important role in informing multiple aspects of individuals' lives, including their access to health information. Traditionally, public health organizations have used print and radio media and social marketing frameworks to disseminate important health messages to the public. In the past few decades, electronic media have stepped to the forefront of communication, and public health communication has evolved to reflect this. In the wake of the "Web 2.0" phenomenon, public health communication strategies are also changing to match the increasingly influential and rapidly evolving social media revolution (Anand, Gupta and Kwatra, 2013).

10.2 Social Media:

Social media refers to websites and applications that are designed to allow people to share content quickly, efficiently, and effectively without geographical hinderance. While many people access social media through smart phone apps, this communication tool started with computers, and social media can refer to any internet communication tool that allows users to broadly share content and engage with the public (Hudson, 2020). The ability to share photos, opinions, and events in real-time has transformed the way we live and the way we do business. Here are the basics of understanding social media and how it can be used to help promote your business.

Though social media can broadly be defined as "a group of Internet-based applications that build on the ideological and technological foundations of Web 2.0 and allow the creation and exchange of user-generated content" (Kaplan and Haenlein, 2010, p. 61), many variations and types of social media exist. Facebook (a social network), Snapchat (an instant photo messaging application), Instagram (a photo-sharing application), Twitter (a microblogging application), LinkedIn (a business- and employment-oriented social networking service), Google+ (an interest-based social network), and Pinterest (a "catalog of ideas" or photo-sharing website) represent different types of social media, each with unique architectures, cultures, and norms (Van Dijck, 2013). For example, while Snapchat allows users to share 10-second videos, and Twitter allows them to share brief tweets of 140 characters (with hashtags, @mentions, a photo or video, URLs, or geotags), a platform such as Facebook allows communication using more elaborate messages (Voorveld, van Noort, Muntinga and Bronner, 2018).

Social media is any digital tool that allows users to quickly create and share content with the public. Social media encompasses a wide range of websites and apps. Some, like Twitter, specialize in sharing links and short written messages. Others, like Instagram and TikTok, are built to optimize the sharing of photos and videos. What makes social media unique is that it is both broad and relatively uncensored.

While many social media companies impose some limitations—such as taking down images that display violence or nudity—there are much fewer limitations on what someone can share than there with other means of mass communication like newspapers, radio stations, and television channels.

Anyone with internet access can sign up for a social media account. They can use that account to share whatever content they choose to, and the content they share reaches anyone who visits their page or profile.

10.3 Covid-19:

The coronavirus disease (COVID-19) is an infectious disease caused by a newly discovered coronavirus (World Health Organization, 2020). Cases of COVID-19 first emerged in late December 2019, when a mysterious illness was reported in Wuhan, China. The cause of the disease was soon confirmed as a novel coronavirus, and the infection has since spread to many countries worldwide and has become a pandemic disease (NewScientist, 2020).

The COVID19 epidemic, and our knowledge about the virus, has exponentially grown since media reports of a cluster of acute respiratory infections in Wuhan, Hubei province, China were first reported in December, 2019 (Pollett and Rivers, 2020). By January 08, 2020, the etiology of these cases was identified as a novel betacoronavirus, then named 2019-nCoV, and 41 cases had been reported. Three months later, over 1.3 million cases and 75,000 deaths had been reported across the world. The human and social toll of this pandemic has already spurred several major public health 'lessons learned', and the theme of effective and responsible scientific communication is among them. The expansion of the outbreak has demanded a rapid response from public health authorities; fundamental epidemiological and scientific evidence has been acquired at break-neck speed to support those decisions. The demanding pace and large volume of COVID19 science generated in the last three months, however, has made timely scientific communication through the conventional route of published biomedical journals at best challenging, and at worst obsolete. Twitter has an estimated global user network of 330 million monthly users, including an extensive network of scientists and epidemiologists who frequently use this media for scientific exchange. We propose that Twitter has played a fundamental – but often precarious - role in permitting real-time global communication between scientists during the COVID19 epidemic, on a scale not seen before.

10.4 Social Media and Health Communication:

We live in a digital world surrounded by a deluge of information. The Internet has made us more connected than ever in one sense, and yet we seem disconnected from each other in a fundamental sense. In this new information age, we are always surrounded by information, a large part of which is reliable with the more significant chunk unverifiable (Ugwuanyi, 2017). Prior to the adoption and widespread acceptance of the Internet as a source of health information, people received health information from many sources of information such as the physician, family members, acquaintances and mass media (Habibi, Farpour and Pirzad, 2017). Since 2000, the dependence of people on the Internet search engines has been increased, because the search engines have allowed access to all the web pages around the world (Hamshahri Training Center (2013). So it can be said that we live in a time of expansion in access to health information.

Data that previously could be obtained by spending hours researching medical libraries, all can be readily found by Internet access. Thus, the ability to acquire extensive knowledge of research findings from many different medical specialties has been increased. However, medical specilists are not the only people who search the Internet for such information. Also, patients have the ability to search a medical topic entirely via the Internet (Biermann, Gollada, Greenfield and Baker, 1999).

COVID-19 pandemic is currently the greatest public health concern affecting majority of countries globally. Social distancing guidelines and lockdowns have also posed a challenge to public health campaigns. This therefore necessitates a shift from popular print media (newspapers, magazines, banners, etc.) to wireless media. Our study suggests that common wireless media like televisions, radios and social media can be effective in improving awareness on COVID-19. Over 40% of the world's population have access to internet to date (Internet Live Stats, 2020). Health campaigns aimed at increasing the awareness of the public on transmission and prevention of the virus are also being employed by various international and local organisations.

Members of the general public, patients, health professionals, and health organizations are all part of the users of social media for health communication include. Social media is used for health communication to provide health information on a range of conditions; provide answers to medical questions; facilitate dialogue between patients and between patients and health professionals; inform users and general public of outbreak of diseases such as Ebola, Lassa fever, COVID-19, etc., symptoms of such diseases, preventive measures, possible ways to contract them, reduce stigma, etc. With emerging advances over time, including new platforms and purposes, these uses will change and expand, increasing usability and thus providing more opportunities to use social media in connection to healthcare in the future. However, both patients and health professionals may require training to fully maximize the uses of using social media in healthcare (Moorhead, 2017).

Delivering fast and reliable information is crucial to decrease the transmission of highly contagious infections, not only for healthcare workers but also for the general population (Chan, Nickson, Rudolph, Lee and Joynt, 2020). Several websites have published information about COVID-19 and have given different instructions to their users about ways to prevent the spread of the virus, such as keeping a distance between themselves and others, using masks, and washing their hands (Hernández-García, Giménez-Júlvez, 2020).

The biggest challenge may be to deliver information to the people who are at the battlefront in severely affected areas faster than the dissemination rate of the disease. Many scientific journals have allowed open access for most manuscripts on COVID-19. For health professionals, this may be adequate. However, for the general population, this has no impact on raising awareness. These days, people are overwhelmed by the information they receive on their smartphones through channels such as Facebook, Twitter, What Sapp, YouTube and Instagram (Lima, Lopes and Brito, 2020). The biggest problem is in determining which news to trust. Even a pandemic can be used as a political battle, where some will recommend social isolation while others recommend doing nothing that will stop the economy. Who is right, the ones who recommend chloroquine or those who tell you to take your antipyretic medicine and stay home if you have mild symptoms? It is not uncommon to see hundreds of daily texts, videos and even scientific publications in social media groups defending each argument.

Social media has numerous benefits for health communication, including increased interactions with others; more available, shared, and tailored information; increased accessibility and widening access; and increased peer/social/emotional support. While there may be further benefits of using social media in healthcare, there are many limitations of social media for healthcare communication as well. The main reported limitations include a lack of reliability; quality concerns; and lack of confidentiality and privacy. From the available evidence, it is clear that maintaining patient privacy as well as the security and integrity of information shared are concerns when using social media.

As patients and members of the general public use social media widely, some may expect it in healthcare, thus it important for health professionals and organizations to manage expectations of social media in healthcare communication. This results in challenges ranging from encouraging staff to use social media to dealing with user problems and complaints (Moorhead, 2017). It is recommended that organizations embrace social media but have a specific purpose for each activity and platform while continually monitoring traffic. Regardless of the nature or size of the healthcare organization, it is time to adopt appropriate guidelines for the use of the social media in healthcare communication to address the challenges and the growing expectations of using social media, especially within healthcare contexts. The key message is that social media has the potential to supplement and complement but not replace other methods to improve communication and interaction among members of the general public, patients, health professionals, and healthcare organizations.

Social media has become a source of disseminating information to the public. Many individuals will experience isolation during hospitalization or when quarantining at home (Pappot, Taarnhøj and Pappot, 2020). Social media can be an efficient source of information and an effective means for staying abreast of the vast amount of medical knowledge (McGowan, Wasko, Vartabedian, Miller, Freiherr and Abdolrasulnia, 2012). While Facebook, Twitter, and YouTube have all recently ramped up efforts to take down COVID-19 misinformation following public outcry, social media platforms “fall short” when it comes to curbing the flow (Pazzanese, 2020)

10.5 Jokes and Fake News:

Despite the use of social media for communication of information, we are as well wary of the great threat it poses in sharing of fake news through unconfirmed sources. During the outbreak of the Ebola virus disease, news circulated online that salt water helps prevent the disease. Many Nigerians bought into this idea and ended up being killed, not by the virus itself, but by their excess consumption of salt. During the steady update of the Nigerian Centre for Disease Control (NCDC) on social media, it was observed that some social media users started making jokes out of it as a result of their perception of the whole pandemic to be a hoax in Nigeria.

Mass media and social media have been frequently used to disseminate infographics on the pandemic (Chan, Nickson, Rudolph, Lee and Joynt, 2020). The COVID-19 pandemic has introduced unique challenges for health communicators. One of these challenges is the increasing amount of false content circulating on social media platforms. Even though some of this information is spread without malicious intent, the language, sentiments and tactics are similar to that observed from antivaccination proponents (e.g. emotionally charged false narratives of vaccine side effects), conspiracy theorists (e.g. COVID-19 was started in a Chinese laboratory) or climate change deniers (e.g. COVID-19 is a hoax).

No aspect of the COVID-19 pandemic – from origin, to symptoms, to prevention – has been left untouched. Particularly concerning is the spread of misinformation relating to a potential vaccine for the disease, even well before a vaccine is available for public use. Rumours of safety scares and conspiracies relating to a COVID-19 vaccine have swirled throughout social media, leading to social media outlets taking active measures to limit misinformation (Rosen, 2020 and Silverman, 2020). These measures, although important, have not prevented a saturated information system nor blocked harmful misinformation from undermining science-backed sources. Similarly, WHO has boosted its own efforts to address a "second 'disease'" that is spreading parallel to the virus, one of an infodemic – when excessive amounts of information become detrimental to addressing a certain issue (World Health Organization, 2020c).

10.6 Impacts of the Coronavirus Pandemic:

The coronavirus pandemic brought about the new normal. The spread of the virus across the world led to many countries declaring lockdown. The lockdown made families who hardly had time to spend together to be together for months. Parents got to know of their children's behaviours. However, on the negative aspect, this led to the rise of incest especially in Nigeria. Siblings caught feelings and had sex. Also on the negative side, businesses were heavily affected. New health behaviours were also learned. These include wearing of facemask in public places; avoidance of hugs and handshakes among friends and families; use of hand and surface sanitizers; wearing of face guards; social/physical distancing especially in public places; no more large gatherings; etc.

10.7 Conclusion and Recommendations:

The COVID-19 crisis has been the first pandemic to be almost 'livestreamed' on social media and digital platforms. It is critical that health communicators worldwide are more proactive in tackling risk communication challenges related to COVID-19, with likely prevention achieved through vaccination and societal COVID-19 resilience. Social media is extremely important to fight this contagious disease, not only to get information and be updated about it but also to understand how it spreads, how people interact, and how we can respond to it.

As media experts and educators, we have an important role to play both now and in the future of the world. We must work to educate media consumers on what constitutes good and reliable information and how to critically think through this information. Since younger people are also consuming information from social media and then spreading it to their family and friends, universities are ideal places to design courses and symposiums that can help students and faculty discern how to search for, find, and evaluate health information in the case of an epidemic or pandemic.

Governments and healthcare authorities should use social media to spread updates, news, and scientific discoveries about COVID-19. Information to be spread can include who should be tested, when they should be tested, and where they would go to get medical care. Due to the overflow of information, practical steps should be taken when dealing with the social media infodemic. Information from reliable sources such as government healthcare authorities and specialists should be trusted. Unreliable information should not be circulated before evaluating the sources and their conflicts of interest.

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11. Covid-19 and Its Impact on the World

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Abstract:

The coronavirus disease has terrifically affected lives of people around the globe. At this moment, insecurity takes on new meaning and along several axes. The novel coronavirus disease (COVID-19) has created tremendous chaos around the world, affecting people's lives and causing a large number of deaths. The COVID-19 outbreak has affected all segments of the population including every sphere of social groups in the most vulnerable way. It is utmost necessity of government as well as other entities to ensure that the public is aware of the seriousness of COVID-19 with proper information. A high degree of population understanding solidarity and discipline is required to apply strict personal hygiene, coughing etiquette, self-monitoring and social distancing measures.

But at the same time, some good signs were also seen especially in environmental and climatic conditions. The global account of greenhouse gases has decreased to a noticeable amount due to shut down of industries globally. Another major change has been noticed in the education system where COVID-19 has forced educational system to go online as much as possible where people were seen adopting various online study methods like online classes, online study materials, webinars leaving behind traditional offline practices. Obviously, coronavirus disease has led to a pandemic situation which has significantly disrupted the whole societal scenario. Keeping an eye to this, this is our small effort to pen down about COVID-19 and its impact on society in various domains.

11.1 Introduction: Covid-19 - A Pandemic Created by Virus:

In the month of December 2019, a new respiratory tract disease was diagnosed among the residents in the city of Wuhan, Hubei province, China [1]. Yet unknown to that point, it was referred to as novel coronavirus 2019 (nCoV-2019) initially and was identified as the causative agent.

The coronavirus disease (COVID-19) is caused by the virus called severe acute respiratory syndrome coronavirus-2 (SARS-CoV-2) and has rapidly spread around the globe, emerging as a significant threat worldwide [2]. The new virus has 80% sequence identity with the SARS-CoV virus, which caused the severe acute respiratory syndrome (SARS) outbreak in 2002 [3].

The novel SARS-CoV-2 virus infection is mainly transmitted by micro-droplets generated in the airway of an infected person and is ejected during cough, sneeze and ordinary talk. It was very contagious in nature and can infect a healthy person when he/she comes in contact with an infected person. On January 13, the first case of COVID-19 was recorded in Thailand, outside of China. But by the end of February, it was creating an adverse situation in many European countries like Italy, France, Spain, Germany, UK etc. Towards the month of March, it spread almost all over the globe including countries like USA, Canada, India, Russia, Brazil etc. Deeply concerned by the alarming levels of spread within a small span of time and its severity, on 11th March, World Health Organization (WHO) made the assessment that COVID-19 can be characterized as a pandemic. Towards the end of May 2020, more than 55 Lakhs (5.5 Million) of infection has been reported with almost 3.5 Lakhs of deaths worldwide. The same number for India is: more than 13.9 Lakhs of infected case with more than 4 thousand deaths.

COVID-19 outbreak has dramatically exposed our weaknesses on various points at the individual, scientific, and organizational levels. However, it has also given us a chance to rethink our possibilities as well as responsibilities as man-kind and how the human race can be saved along with various flora and fauna through our united efforts. One of the first lesson of doing this can be an unprecedented global open access to high-quality knowledge and international exchange of clinical experience, organizational and technical expertise.

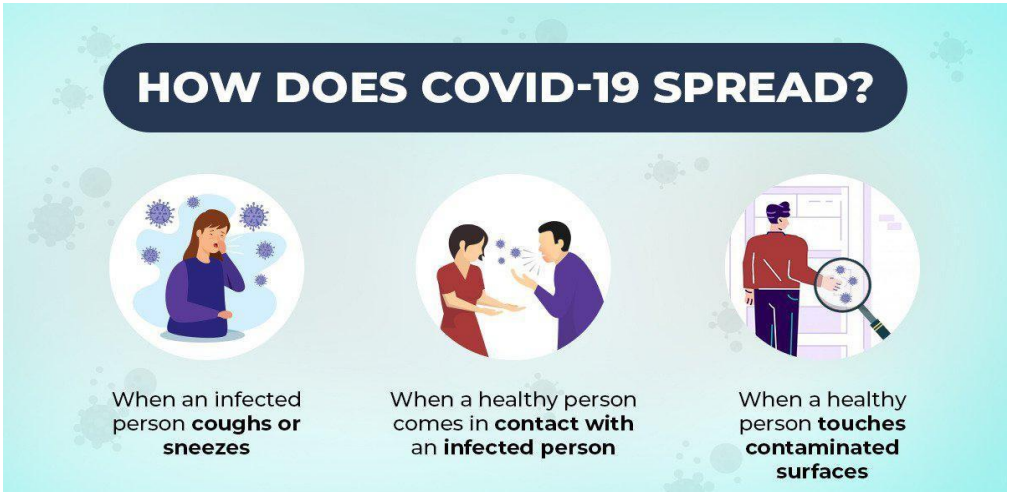
11.1.1 History:

Coronaviruses (CoVs) are a large family of viruses belonging to the family Coronaviridae. The limited number of coronaviruses known to be circulating in humans can cause mild infections and they were regarded as relatively harmless respiratory human pathogens. The emergence of the severe acute respiratory syndrome coronavirus (SARS- CoV) and the Middle East Respiratory Syndrome (MERS) virus revealed that coronaviruses can cause severe and sometimes fatal respiratory tract infections in humans. The first known case of SARS-CoV occurred in Foshan, China in November 2002 and new cases emerged in mainland China in February 2003. The first emergence of MERS-CoV occurred in June 2012 in Saudi Arabia. These events demonstrated that the threats of CoVs should not be underestimated and that it is of paramount importance to advance the knowledge on the replication of these viruses and their interactions with the hosts to develop treatments and vaccines. These successive outbreaks also highlight the long-term threat of cross-species transmission events leading to outbreaks in humans and the possible re-emergence of similar virus infection that should be considered seriously. SARS-CoV and MERS-CoV are two major causes of severe atypical pneumonia in humans and share important features that contribute to preferential viral replication in the lower respiratory tract and viral immunopathology. In December 2019, a typical pneumonia cases emerged in Wuhan, capital of Hubei Province in the People's Republic of China with clinical presentations consistent with viral pneumonia. The cause was quickly identified as being a novel disease, which was named 2019 novel coronavirus (COVID-19). The virus responsible for the infectious disease COVID 19 is called SARS-CoV-2 and named coronavirus in short due to its visual appearance (under an electron microscope) to solar corona (similar to a crown). The novel coronavirus SARS-CoV-2 (previously known as 2019-nCoV) is the seventh member of the Coronaviridae family of viruses which are enveloped, non-segmented, positive-sense RNA viruses. COVID-19 represents a new strain of Coronavirus and presumably representing a mutation of other Coronaviruses.

Investigations of the epidemiological, clinical, laboratory and radiological characteristics, treatment, and outcomes of patients infected by COVID-19 demonstrated that the infection caused clusters of severe respiratory illness similar to SARS-CoV. Early clinical investigations showed that although the COVID-19 can cause severe illness in some patients, it initially did not transmit readily between people. However, more recent epidemiological data suggest coronavirus has undergone human host adaptation/evolution and has become more efficient in human to human transmission. Within a short span of time COVID-19 has spread rapidly across the globe, and therefore WHO has declared it to be a pandemic. At the present situation, COVID-19 infections are a major healthcare challenge around the world due to the huge number of infections.

11.2 Situation Handling During the Pandemic:

The COVID-19 pandemic has triggered an urgent need to contribute to the fight against an immense threat to the human population. COVID-19 mainly spreads through person-to-person contact during official and unofficial meetings, travel via public transport, and social and religious congregations. The contagiousness of COVID-19 has transformed it into a



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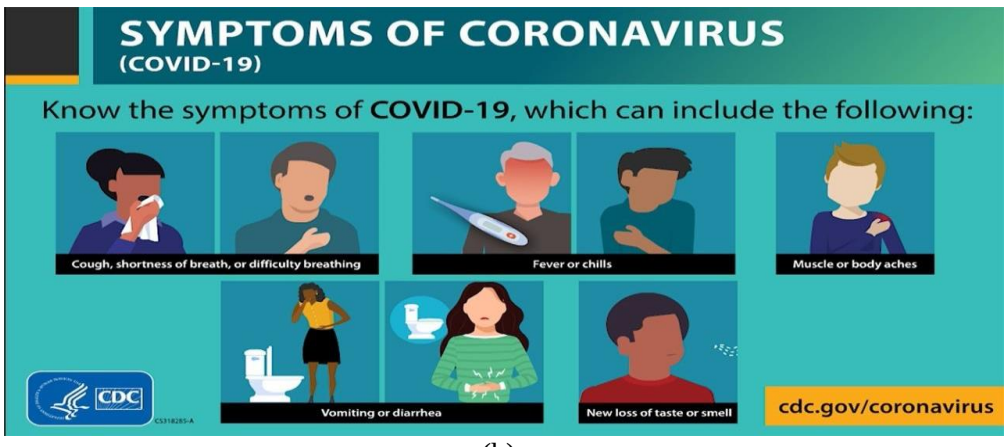

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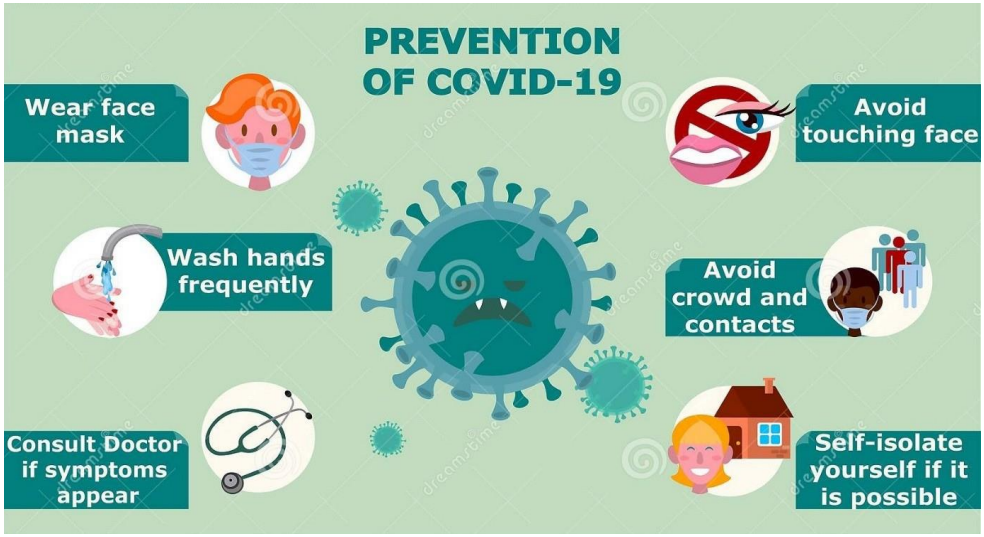

(c)

Figure 11.1: COVID-19 (a) Spreading methods; (b) Symptoms; (c) Preventive measures (Image Courtesy: Internet source).

Pandemic within a very short period of 2 months. There are no vaccines available for the previously unknown virus and due to the absence of a vaccine or any targeted therapy, the only available preventive methods are non-specific.

For example, testing and isolation, quarantine, prevention/protection of foreigner entry, sanitary cordon, social distancing, etc were the main measures taken during the pandemic. Till the present day in the month of December 2020, social distancing has emerged as the most widely adopted strategy for its mitigation and control.

Social distancing measures should be implemented early in order to mitigate the impact of the epidemic and to delay the epidemic peak. This can interrupt human-to-human transmission chains, prevent further spread, reduce the intensity of the epidemic and slow down the increase in cases, while allowing healthcare systems to prepare and cope with an increased influx of patients.

Such measures should include:

a. the immediate isolation of symptomatic persons suspected or confirmed to be infected with COVID-19;
b. the suspension of mass gatherings, taking into consideration the size of the event, the density of participants and if the event is in a confined indoor environment;
c. social distancing measures at workplaces (for example teleworking, suspension of meetings, cancellation of non-essential travel);
d. measures in and closure of schools, taking into consideration the uncertainty in the evidence of children in transmitting the disease, need for day care for children, impact on nursing staff, potential to increase transmission to vulnerable grandparents;
e. cordon sanitaire of residential areas with high levels of community transmission;

The scientific response to combat COVID-19 has been far quicker and widespread. Numerous scientific approaches have been proposed so far, dealing with different aspects to combat the COVID-19 pandemic.

11.2.1 Medical and Healthcare Facilities:

The mortality rate of COVID-19 is 6.30% which less than that of the severe acute respiratory syndrome (SARS) and Middle East respiratory syndrome (MERS) coronavirus diseases (10% for SARS-CoV and 37% for MERS-CoV). However, it is highly infectious, and the number of cases has been increasing rapidly. So, it creates a highly challenging task for medical professionals to practically and effectively screen suspected infectious cases from individual households. Such a massive undertaking is time-consuming and labor intensive and is constrained by the availability of testing technologies at this extremely critical time. The existing infrastructure for the detection of COVID-19 positive patients is insufficient and manual detection is time-consuming. The sudden explosion and uncontrolled worldwide spread of COVID-19 show the limitations of existing healthcare systems to timely handle public health emergencies. Hence, dealing with the coronavirus (COVID-19) is one of the major healthcare challenges around the world today. It is seen that even some developed countries like Italy, USA, and France have faced major challenges in providing health care facilities to COVID-19 patients. Where as, some countries like Taiwan, South Korea, Japan have shown tremendous success not only in providing good healthcare facilities, but also were able to control the contagion disease. In case of India, overall infections all over the country is quite less compared to the overall population. But the case is more severe in some major cities like Mumbai and Delhi.

Major Healthcare Measures are:

a. Prevention and control of COVID-19 in hospitals and long-term care facilities is an immediate priority in order to: (1) slow the demand for specialised healthcare, such as ICU beds; (2) safeguard populations vulnerable to severe outcomes of infection (3); protect healthcare workers that provide care; (4) minimize the export of cases to other healthcare facilities and the community.

b. Countries should identify healthcare units that can be designated to care for COVID- 19 cases, to minimize transmission to non-cases and to conserve PPE. The highest priority for use of respirators (FFP 2/3) are healthcare workers, in particular those performing aerosol-generating procedures, including swabbing.

c. As resources or capacity are limited, rational approaches should be implemented to prioritise high-yield actions, which include: rational use of confirmatory testing, reducing contact tracing to focus only on high-yield contacts, rational use of PPE and hospitalisation and implementing criteria for de-isolation.

d. National surveillance systems should initially aim at rapidly detecting cases and assessing community transmission. As the epidemic progresses, surveillance should monitor the intensity, geographical spread and the impact of the epidemic on the population and healthcare systems and assess the effectiveness of measures in place.

e. Ensuring the public is aware of the seriousness of COVID-19. A high degree of population understanding, solidarity and discipline is required to apply strict personal hygiene, coughing etiquette, self-monitoring and social distancing measures.

Science and technology: Compared to the Spanish flu pandemic in 1918, we are now fortunately living in the age of exponential technology. Science and technology has been applied successfully in almost every corner of humans' lives. When every individual, every organization is struggling in this battle, in such contexts, government must try their best to fully explore and employ innovative technologies to support humans to encounter this battle against the deadly coronavirus pandemic. Governments of many countries have proposed policies to mitigate the impacts of the COVID-19 pandemic.

Science and technology have contributed significantly to the implementations of these policies during this unprecedented and chaotic time. For example, robots are used in hospitals to deliver food and medicine to coronavirus patients or drones are used to disinfect streets or public spaces. Many researchers are rushing to produce drugs and medicines to treat infected patients whilst others are attempting to investigate vaccines to prevent the virus. On the other hand, many others have tried for early detection of infectious patients using techniques that can process and understand medical imaging data such as X-ray images and computed tomography (CT) scans. A framework for COVID-19 detection using data obtained from smartphones' on board sensors such as cameras, microphones, temperature and inertial sensors is also proposed. With the advancement of Internet of Things (IoT), technical report and travel history of persons having contact with probable and confirmed cases of COVID-19 can be made available through contact tracing apps on demand of public health management.

Preventive Measures: Given the current epidemiology and risk assessment, some preventive measures has to be taken by each and every individual as given below:

a. Wash hands frequently while indoor or use hand-gloves while outdoor.
b. Avoid touching eyes, nose and mouth with hands.
c. Practice respiratory hygiene by covering mouth and nose by mask.
d. Bent head or cover nose and mouth with elbow or tissue while coughing or sneezing.
e. If you have fever, cough and difficulty in breathing, seek medical care at the earliest.
f. Stay well-informed and follow the advice given by healthcare provider.
g. Always maintain social distancing.

A strategic approach based on early and rigorous application of these measures will help reduce the burden and pressure on the healthcare system, and in particular on hospitals, and will allow more time for the testing of therapeutics and vaccine development.

11.3 Impact of COVID-19 on Global Village:

The coronavirus disease has terrifically affected lives of people around the globe. At this moment, insecurity takes on new meaning and along several axes.

The novel coronavirus disease (COVID-19) has created tremendous chaos around the world, affecting people's lives and causing a large number of deaths. COVID-19 is also going to change the international relations in a big way.

11.3.1 Economic Impact on Global Village:

The virus spread has caused the global economic a massive shock with the interruptions of many sectors such as supply chain, industry, insurance, agriculture, transport, and tourism, forcing governments and owners to shut stop operations on a worldwide scale [4].

According to the Organisation for Economic Cooperation and Development (OECD), the global economy could grow at its slowest rate since 2009 in this year due to the coronavirus outbreak [5]. The insecurities of many under- developed as well as developed countries are clear in recent reports by the IMF, UN and World Bank among others.

As the number of infections rises, many governments around the world have instituted drastic lock-downs and curfews and called for social distancing and work from home to reduce the rate at which the virus spreads.

11.3.2 Global Recession:

Amid the coronavirus pandemic, several countries across the world resorted to lockdowns to "flatten the curve" of the infection. These lockdowns meant confining millions of citizens to their homes, shutting down businesses and ceasing almost all economic activity.

The pandemic has pushed the global economy into a recession, which means the economy starts shrinking and growth stops. According to the International Monetary Fund (IMF), the global economy is expected to shrink by over 3% in 2020 – an outcome "far worse" than the 2009 global financial crises. Advanced economies have been hit harder, also emerging markets and developing economies are expected to contract.

In the US, COVID-19-related disruptions have led to millions filing for unemployment benefits. Similar situation prevails in many European countries like Italy, France, Spain, and Germany and Asian countries like China, South Korea and India.

There are various sectors and economies that seem most vulnerable because of this pandemic, such as, both the demand and supply have been affected by the virus, as a result of depressed activity Foreign Direct Investment (FDI) flows could fall between 5 to 15 percent.

Besides, the most affected sectors have become vulnerable such as tourism and travel-related industries, hotels, restaurants, sports events, consumer electronics, financial markets, transportation, and overload of health systems.

11.3.3 Global Transport, Tourism and Hotel Industry:

Due to the pandemic, global transport and global tourism came to a halt where tourist hotspot countries like Thailand, Indonesia, many European countries were affected most along with other countries.

Most international carriers including flight and ships/cruises were cancelled except some lifting aircrafts to take citizens to their home countries. One of the worst hit sector due to the pandemic is tourism and its closely related industries like hotel industry.

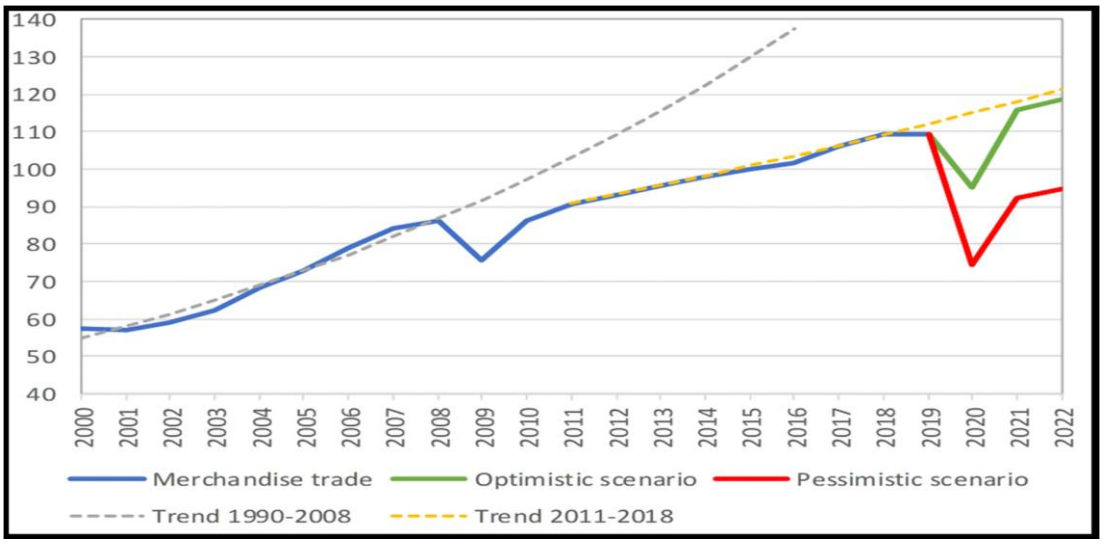

Figure 11.2: The state of merchandise trades around the globe in different years (source: WTO Secretariat). A sharp down is seen during this COVID-19 pandemic period.

11.3.4 Oil and Natural Gas:

Due to the fall in travel and global industrial activity, oil industry has been affected. Oil prices fell further to reach a negative value at some point of time as the transportation section, which accounts for 60% of the oil demand, was hit due to several countries imposing lockdowns.

Not only oil, early this year in China, due to COVID-19 related containment measures, the demand for natural gas fell, as a result of which many Chinese LNG buyers halted their imports as storage tanks filled.

11.3.5 Automobile and Other Manufacturing Industries:

Along with tourism, another tourism related industry is worse effected and that is automobile industry.

All kinds of manufacturing industries had to stop during this pandemic.

11.3.6 Industrial Metals:

Due to lockdowns in China, followed by in the US and Europe, the demand for industrial metals reduced as factories shut down. As per IMF, China accounts for roughly half of the global demand for industrial metals.

11.3.7 Food and Beverages:

IMF projects a decrease in food items by 2.6% in 2020, caused by supply chain disruptions, border delays, food security concerns in regions affected by COVID-19 and export restrictions. Further, all these have put an upward pressure on the prices of different food items.

11.3.8 Food Supply Chains and Taxi Services:

These two facilities came to a halt during this period and the drivers and delivery persons faced tremendous discomfort. After-effect is also going to affect many such persons related to these services due to the loss of their jobs. Apart from the above mentioned sectors, this COVID-19 pandemic has affected almost each and every sector including banking and finance. The information technology (IT) industry tried to cope up with the pandemic through work-from-home model to deliver its services. This economic slowdown is caused by a pandemic and not due to some other economic fault. Now, as some countries have lifted restrictions and gradually restarted their economic activities, so it is expected that economy will try to grow slowly. But for many countries it may require 1-3 years to attain its stable state as before.

How have countries tried to cope with the situation?

World trade is expected to fall by between 13% and 32% in 2020 as the COVID 19 pandemic disrupts normal economic activity and life around the world. According to an assessment by the World Economic Forum (WEF), supporting Small and Medium Enterprises (SME) and larger businesses is crucial for maintaining employment and financial stability. Many advanced economies in the world have rolled out support packages. While India's economic stimulus package is 10% of its GDP, Japan's is 21.1%, followed by the US (13%), Sweden (12%), Germany (10.7%), France (9.3%), Spain (7.3%) and Italy (5.7%).

In Asia, countries including India, China, Indonesia, Japan, Singapore and South Korea account for about 85% of all the COVID-19 cases on the continent. South Korea stands out, since business and economic activities were not completely stopped and therefore, their economy was not severely affected. China recently lifted its lockdown and has since then been gradually reopening its economy without an aggressive second wave of infections so far.

In India, Prime Minister has announced a package of 20 Lakh Crore to help Medium, Small and Micro Enterprises (MSMEs). He also asked citizens to help local industries to grow by becoming "vocal for local" to mark our country as "Atmanirbhar Bharat". The Finance Minister has announced some details of the "Atmanirbhar Bharat Abhiyan" package, to provide relief to MSMES in the form of an increase in credit guarantees.

Further, even as economic activity resumes gradually, the situation will take time to normalize, as consumer behaviours change as a result of continued social distancing and uncertainty about how the pandemic will evolve. For instance, in its World Economic Outlook report for 2020, the IMF mentions that firms may start hiring more people and expanding their payroll only a gap of period, as they may not be clear about the demand for their output.

11.3.9 Indian Economy and Its Efforts for Revival:

The economic impact of COVID-19 pandemic in India has been largely disruptive. The World Bank and rating agencies had initially downgraded India's growth for fiscal year 2020-21 with the lowest figures India has seen in three decades since India's economic liberalization in the 1990s. During the lockdown, an estimated 14 crore (140 million) people lost employment [6]. Within a month, unemployment rose from 6.7% on 15 March to 26% on 19 April [6].

More than 45% of households across the nation have reported an income drop as compared to the previous year. The Indian economy was expected to lose over 32,000 crore (US$4.5 billion) every day during the first 21-days of complete lockdown, which was declared following the coronavirus outbreak. In India up to 50% of businesses in each and every sectors including automobile, aviation and tourism, real-estate and construction, agriculture, manufacturing, e-commerce and stock-markets, have specified a certain amount of impact of shutdowns caused due to COVID-19 lockdown operation (FICCI survey).

The Government of India has announced a variety of measures to tackle the situation, from food security and extra funds for healthcare, to sector related incentives and tax deadline extensions. On 12 May, the Prime Minister, in an address to the nation, said that the coronavirus crisis should be seen as an opportunity, laying emphasis on domestic products and "economic self-reliance", an “Atmanirbhar Bharat”. India's overall economic package is worth 20 lakh crore (US$280 billion). This is 10% of India's GDP. The package, though announced on 12 May by the Prime Minister, included previous government actions, including the RBI announcements of 8 lakh crore liquidity [7].

The Government of India is also aiming to attract companies that wish to move out of China or are looking for an alternative to China. States like Karnataka and Gujarat are also following a "Compete with China" cluster strategy forecasting "large-scale manufacturing". More than 1000 US-based companies are willing to move their plants to India. In mid-May, the German footwear brand, Von Wellx, decided to shift its entire operations out of China and into India. While competing with China, India is also facing numerous difficulties including issues with China boarder as well as also trying to balance the economic situation in light of China–United States trade war.

During this lockdown period the Government of India faced another big challenge related to the migrant workers. Due to the lockdown, daily-wage workers (the urban poor and migrant labours) working in different parts of the country were left with no work. At the same time, the lockdown restrictions put a stop on the movement of buses and trains. Large numbers of migrant workers ended up walking back to their villages.

The decisions around how to respond to the COVID-19 are particularly complicated for these migrants as well as the families they leave behind. The lack of preparation for the corona virus pandemic, and the unknowns that surround COVID-19 become an existential threat to these migrants. Soon after a central government directive in late March, state governments set up 21,000 camps to house over 6,60,000 migrants and stop the exodus.

Over 500 hunger relief centres were set up by the Delhi government by the last week of March. By 5 April, 75 lakh people were being provided food across the country in food camps run by the government and NGOs. As of 12 April, 37,978 relief camps and 26,225 food camps had been set up. Migrants in such camps in Kerala, Karnataka and Maharashtra and other parts were provided with medical essentials such as masks, sanitizers, and medicines. Railways transported around 31 lakhs migrants back to their homes in the special trains allocated for them between 1 and 21 May. The central government paid some amount of the fare. Soon after the nationwide lockdown was announced in late March, Finance Minister announced a 1.7 lakh crore (US$24 billion) spending plan for the poor. This consisted of cash transfers directly to the migrant labours, steps to ensure food security and to help provide jobs and wages to workers through different schemes like MNREGA.

11.4 Political Impact and International Relations among Different Countries:

The COVID-19 pandemic has also affected international relations among countries. Two major power of the world, USA and China, were indulged in economic war game in pre-COVID time. As coronavirus originated in China, this war game was accelerated through "blame-game" between the two countries.

Many other countries are also offended and want to blame China for corona virus. This clearly shows deteriorating international relations among different countries, particularly rival countries.

Moreover, many countries have understood that every country has to try to be independent as much as possible by reducing dependencies in manufacturing super-hub like China. India has also supported this call by a "vocal for local" message by the Prime Minister.

Many US and European based industries have agreed to shift their plants to India and other Asian countries like Bangladesh and Vietnam where cheap labour is available.

This has also escalated a war game between India and China. During August-September China increased their boarder activity and troops near Ladakh territory in Indo-China boarder area. In response, India also deployed military troops in the region. All these created unnecessary tensions between the two neighboring countries.

Concerning the serious and worsening conditions all over the world, nations need cooperation and coordination among themselves including the help and mature as well as sensible behaviour of people to effectively fight against coronavirus. Otherwise, because of the globalized and connected world, wrong actions and policies taken by any state will leave a severe impact on other countries as well.

This is not the time of political point- scoring and fight with each other rather it is high time for states to cooperate, coordinate, and help each other to defeat this fatal pandemic first for saving the global economic and financial structure.

11.5 Vaccine Development:

The contagiousness of COVID-19 has transformed it into a pandemic within a very short period of two months. There was no vaccines available for the previously unknown virus and there was little evidence on the effectiveness of potential therapeutic agents for at least six months of the outbreak.

Understanding even the tiniest details of the pathogenesis of viral infections, like interactions between viral proteins and receptors on human target cells, the broad complexity of the immune responses and the functioning of the labyrinth of the coagulation system are very crucial for vaccine production.

If these pathogenic puzzles had been arranged earlier, the general scenario of this pandemic could have been completely different. Viral genomes can quite easily be manipulated which creates major obstacle in production of vaccine for new viral diseases.

But the quest of science to unveil these mysteries desperately and to bridge the lacking of understanding of virus mutation can change the affect in our lives in a broader perspective.

In February 2020, the World Health Organization (WHO) said that it did not expect a vaccine against severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), the causative virus, to become available in less than 18 months [8].

Organizations like WHO, Coalition for Epidemic Preparedness Innovations (CEPI), and the Gates Foundation are committing money and organizational resources to support rapid development of vaccines to prevent COVID-19 infections. Federal governments those are dedicating resources for national or international investments include Canada, China, European Union, Australia, United Kingdom and United States.

For large production, Gates Foundation has collaborated with large-scale vaccine manufacturing Indian entity Serum Institute of India (SII) situated in Pune. SII is also trying to develop its own vaccine by collaborating with different organization and universities all over the world.

Previous attempts to develop a vaccine against the coronavirus diseases like SARS and MERS, established considerable knowledge about the structure and function of coronaviruses – which accelerated rapid development for COVID-19 vaccine during middle and late 2020 with varied technology platforms.

With each passing day, the race towards finding an effective COVID-19 vaccine is intensifying. Companies have been racing to find a vaccine for the coronavirus, which has killed over 1.5 million people and infected more than 65 million since it emerged in China in December of last year.

With more than 200 coronavirus vaccine candidates in development around the world in early December, 2020, a few have emerged ahead of the others, and are already in final phase trials, or have filed for emergency use authorization. Three COVID-19 vaccine candidates are leading the race to become available to immunise populations.

Two of the vaccines that recently released results from phase III trials using new cutting edge technology. Both US pharmaceutical company Pfizer with Germany's BioNTech and US biotechnology company Modern’s vaccines, use messenger RNA (mRNA) technology, a technique that involves injecting genetic instructions into the body.

This stimulates the cells to produce a protein that will help create antibodies to prevent further infections. This new mRNA type vaccine uses a tiny fragment of genetic code from the pandemic virus to teach the body how to fight Covid-19 and build immunity. Though mRNA vaccine has never been approved for use in humans before, but both the mRNA vaccine candidates released results showing high efficacy. Both are around 95% effective, the companies said this month.

Experts say that this is much higher than expected but it remains to be seen for how long the immunity will last. The Pfizer vaccine was most recently authorized for emergency use in the United Kingdom, which will begin.

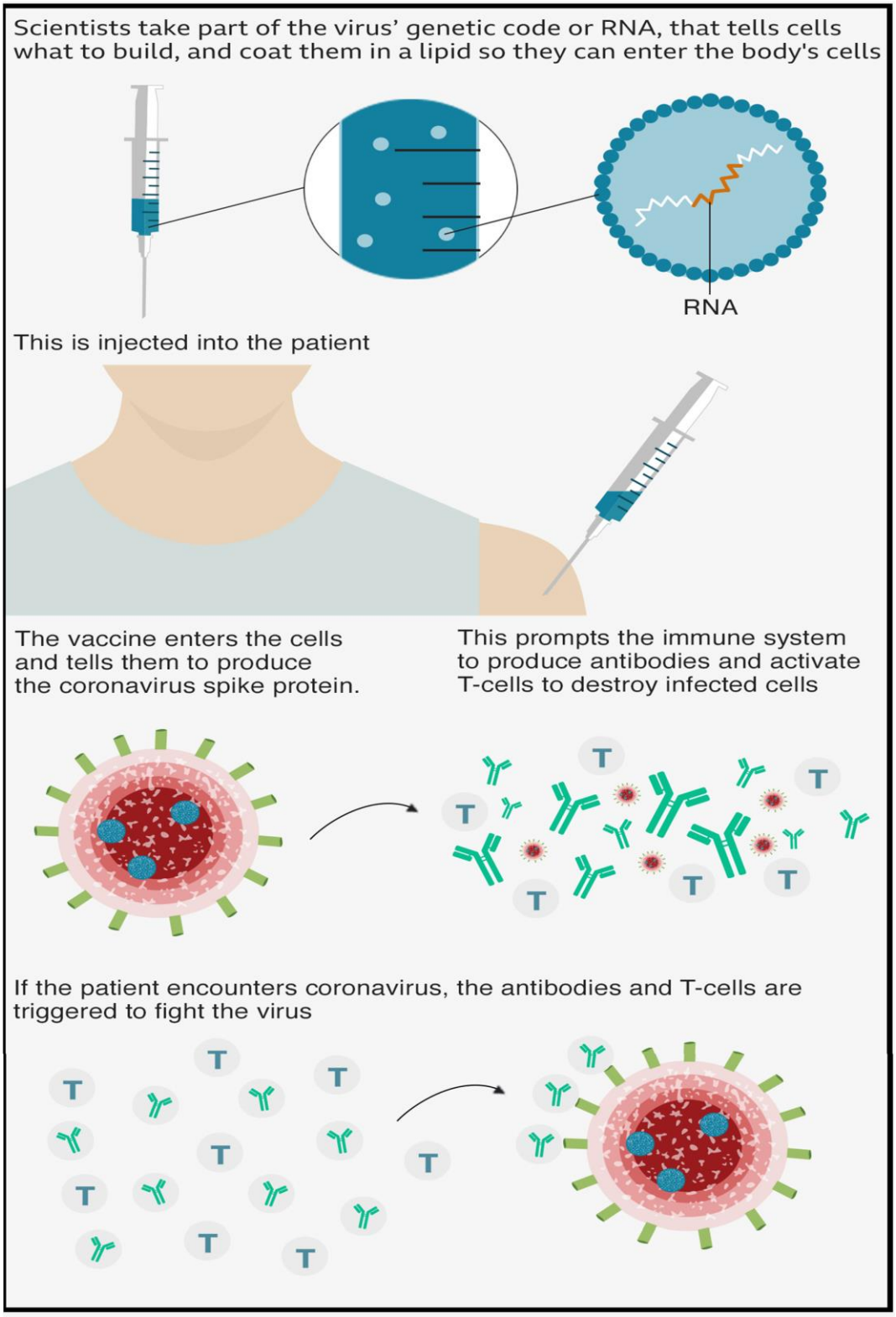

Figure 11.3: How an RNA vaccine would work (Image Courtesy: BBC).

Distributing the vaccine to vulnerable people next week. Bahrain also announced that it had approved the emergency use of the Pfizer-BioNTech coronavirus vaccine, becoming the second country after Britain to green-light the drug.

A third vaccine candidate that has released results is the Oxford University/AstraZeneca vaccine. AstraZeneca, the company that is producing the Oxford coronavirus vaccine candidate will likely get results of its U.S. COVID-19 vaccine trial in late-January, 2021 and could potentially file for an emergency authorization. This vaccine is expected to show efficacy between 62% and 90% depending on the dosing regimen. This vaccine is based on a modified version of an adenovirus that causes the common cold in chimpanzees. The weakened virus does not grow in humans. The Serum Institute of India (SII) is conducting trials for the vaccine in India. Recently, a Chennai-based participant sent a legal notice to the pharma company, alleging that he developed neurological and psychological symptoms due to the vaccine. The company has denied all claims citing the symptoms are incidental and have nothing to do with the vaccine and also filed a counter case.

Back in August, Russia first registered a COVID-19 vaccine called Sputnik-V for emergency use although it had only been tested on a few dozen people. But Sputnik V is still in the midst of trials to check that it's safe and actually works, making some Russians wary of receiving it yet. India's home-grown COVID-19 vaccine, Covaxin, is being developed and produced by Bharat Biotech, in partnership with the Indian Council of Medical Research (ICMR). Covaxin phase 3 trials are being conducted at multiple locations around the country like Kolkata, Ahmedabad and Karnataka etc.

A vaccine for an infectious disease has never before been produced in less than several years, and no vaccine exists for preventing a coronavirus infection. From an unknown virus at the start of the year to a vaccine development and approval by the regulator and ready to use in early December is an unprecedented timescale. The pace has been breath-taking. The WHO also mentioned that the vaccine would not replace the other measures "for a number of months, even a year, so we'll have to keep doing physical distancing, mask wearing, hygiene and isolating ourselves when we're sick".

How are these vaccines stored and distributed?

There are substantial differences among different vaccines, including their composition, price and distribution capacity. Here's a look at the three coronavirus vaccines for which we're received preliminary trial results. Oxford's vaccine is much cheaper, at just around €3 per dose. Pfizer is likely to cost around €16 per dose while Moderna's could cost up to €31 for each of the two doses a person needs.

The storage and transportation conditions also benefit the Oxford/AstraZeneca vaccine as it can survive for six months in a standard refrigerator. The Pfizer/BioNTech vaccine however is much more complicated to manage. It needs to be stored at ultra-cold temperatures around -70ºC. Because the vaccine must be stored at around -70C, it will be transported in special boxes of up to 5,000 doses, packed in dry ice. Once delivered, it can be kept for up to five days in a fridge. And once out of the fridge it needs to be used within six hours. The Moderna vaccine can remain stable for 30 days at between 2º C and 8º C. But over a longer period of time, it would need to be stored in standard freezers at -20°C.

Company	Type	Doses	How effective*	Storage	Cost per dose
Oxford Uni-AstraZeneca	Viral vector (genetically modified virus)	x2	62-90%	Regular fridge temperature	£3 ($4)
Moderna	RNA (part of virus genetic code)	x2	95%	-20C up to 6 months	£25 ($33)
Pfizer-BioNTech	RNA	x2	95%	-70C	£15 ($20)
Gamaleya (Sputnik V)	Viral vector	x2	92%	Regular fridge temperature (in dry form)	£7.50 ($10)

*preliminary phase three results, not yet peer-reviewed

Figure 11.4: Comparison of different COVID-19 vaccines (Image Courtesy: Respective companies, WHO).

11.6 Some Positive Effects:

But at the same time, some good signs were also noticed especially in environmental and climatic conditions. The global account of greenhouse gases has decreased to a noticeable amount due to the shut-down of industries globally. Major factory oriented countries like US, China has slowed down their factory productions which has positive effect on environment. Strict lockdown measures has also cleared skies as well as rivers. In India, the pollutants in rivers like the Ganges and the Yamuna has decreased significantly. The hole of the ozone layer got recovered to a great extent during this lockdown situation. Many wildlife and endangered species were able to roam around feely without any human intervention.

11.6.1 Impact on Education System:

Another major change that has been noticed is in the education system. COVID-19 has forced educational system to go online as much as possible since almost all the educational institutes has to close during this pandemic. Lots of institutes were adopting online classes along with Massive Open Online Courses (MOOCs).

So, people were seen adopting various online study methods like online classes, online study materials, webinars leaving behind traditional offline practices. Moreover, conferences and meetings were being held through video conferencing mode both in institutes as well as other organizations.

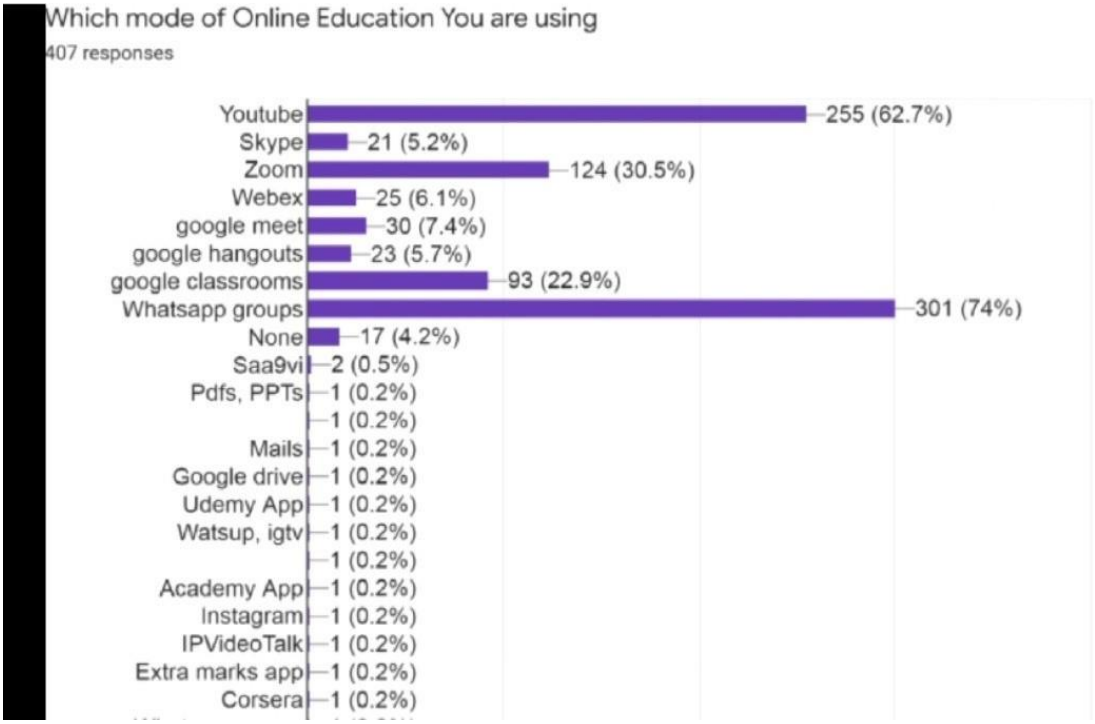

Figure 11.5: Mode of e-learning tools during the pandemic (Courtesy: Internet source).

In India also it is seen that numerous private as well as government institutes also adopted various online mode for teaching and learning. Again, with the introduction of information technology in higher education has shown a new paradigm change in philosophical and pedagogical approach. Thus the pandemic has transformed the countries' old chalk-talk teaching model to one driven by technology.

11.6.2 Lessons Learnt From The Pandemic:

Reflecting on 2020 one feels that COVID-19 is a lesson for life, that combined many learnings in one i.e. the fragility of life & uncertainty of future, the power of nature, what really matters and what does not in life and above all, the need to move on. The experience of this episode shall not only shape our social behavior going forward but will also impact how corporates and economies operate for years to come. It is well known that COVID-19 has not only been a public health crisis but has also severely impacted the economy in near term. However, the good news is that situation is improving. Here, we are going to list out some important lessons learnt in this pandemic from the perspective of India. More items can be added to the list from individual perspective which is most welcomed.

a. Health and education should be our first priority. Children, elderly and patients with comorbidity should be in place and in practice in proper health care system.
b. War like preparation is required on healthcare front. Future healthcare systems should be war-prepared to battle pandemics whenever they breakout.
c. We need to set 'early warning systems' in place in the society: Unlike in the past, viruses in the 21st century not only are 'hyperactive', but also leave their tales of devastation with 'viral speed' due to globalization.
d. Social distancing and hygiene should become a norm and part of our regular habits.

e. "Swachh Bharat" should become a norm for each and every Indian.
f. Need to promote original research and development (R&D) activities and strengthen our Drug & Vaccination Development Programme further.
g. Push our indigenous diagnostics manufacturing to make it sufficient for Indian needs.
h. Government need to make appropriate provisions for supporting the balance on payments among population in case of such calamities.
i. Try to be independent as much as possible as a country. This can be done by promoting local brands.
j. The bottom line is that India has to have a robust action plan when a pandemic strikes – a plan that is creative, disciplined and, above all, sensitive.

11.7 Conclusion:

The coronavirus (COVID-19) outbreak in late 2019 comprises a serious threat around the world. The severity of the epidemic was so huge that the World Health Organization (WHO) was compelled to declare it as a pandemic within a few months of its wide-scale expansion. It is seen that COVID-19 has some adverse effect on small kids, elderly people and people with less immune system caused by different illness like cancer, HIV, heart diseases and they have more mortality rate. Various measures has been mentioned here that are taken at individual as well as organizational levels to combat COVID-19. But due to the lack of proper pathological method, the suppression of social contact in workplaces, schools and other public spheres is the major one of such measures. Due to strong social distance measure, it is also noticed that mortality rate and infection rate is quite suppressed in many countries with huge population like India. We believe our brief overview will shed valuable light on the research of various domains of COVID-19 fighting as well as motivate interested researchers and stakeholders to put more efforts using promising technologies to combat future coronavirus-like epidemics.

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12. Academic Libraries in India amidst Covid-19 Pandemic: Influences and Strategies for Reopening

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Abstract:

Covid-19 pandemic came in the world with a great threat to disturb the human life during the whole year of 2020. It was emerged in China and from China it was spread to the whole world. In India, its outbreak occurred in March, 2020. For breaking the chain of Corona virus, a complete lockdown was imposed by the Union Government of India on March 22, 2020. The lockdown in India was imposed in four phases including with proper guidelines were given for red, orange and green zone. Various sectors like travel, business, agriculture, industries, educational institutions etc remained closed during lockdown. The academic libraries were also compelled to close. Due to closure of libraries, study of the students has got affected during Covid-19 pandemic. After the ending of fourth phase of Lockdown, the Unlock phases get started. During lockdown and unlock, it was challenge for the library professionals that how to resume the library services to satisfy their users and clients. In this chapter, the author emphasizes on the influences of Covid 19 pandemic on academic libraries, the consequences of lockdown and Unlock phase from time to time. The author also suggests the special measures and strategies that should be adopted by every academic institutions for reopening of their academic libraries that emerged as a challenge for the library staff that how to protect the users, clients and the library resources from the Covid-19 pandemic.

Keywords: Covid-19 pandemic, academic libraries, Lockdown, Unlock, Challenge. Measures and Strategies

12.1 Introduction:

The outbreak of Corona virus was first seen in China in late December, 2019. After that its outbreak had occurred in the other countries. It is a Severe Acute Respiratory Syndrome Corona Virus 2 (SARS-CoV-2). World Health Organization (WHO) has defined Covid as Corona Virus for Disease. On seeing the increasing rates of this infection, WHO (World Health Organization) has declared the health emergency. [1] On March 24, 2020, total shut down i.e. lockdown was imposed by the Union Government of India.

Everyone is affected by lockdown due to Covid 19 pandemic. Health, Education, Business, Agriculture, Airlines, Travel, industries and departments of government and non- government including libraries and museums etc. got affected as a result of this pandemic. Every walk of life and profession has undergone distortion and adjustment. Government authorities in India have implemented several safety measures for the public to prevent the spread of Corona virus.

Darcy Brixey, a library manager says "Libraries are one of the few places where anybody supposes to go without the willing of having to buy something." [2] Due to Covid -19, the academic institutions remained closed. As we know the libraries lie in the heart of every institution, so, libraries were also remained close during the whole lockdown imposition in India. It became difficult for the library users to use the library services and access the library resources. The lockdown imposition emerged as a challenging environment for the libraries and their professionals to combat with Covid-19 pandemic.

Libraries went beyond four walls. Only one major solution for the libraries was to provide online services to the clients. Since libraries are non-profit organizations. It was the duty of the library authorities to focus on the safety regarding health of the staff, students, users and clients of the libraries. Keeping in mind towards the safety of the library staff too, work from home was the suitable option for the institutions to provide library services to the users in need. Access to library resources provided off-campus by the library staff. [3] Accessing resources online, reading and learning virtually were the outcomes that were emerged as a solution for the study during the Covid-19 pandemic. Digital environment is playing very important role for the students and academic researchers. It supports teaching, reading and learning. Before the Lockdown, the libraries have different rules and regulations. But during Covid-19 pandemic, the scenario of the libraries got changed. So, after the uplifting of the lockdown and Unlock, the academic libraries has to make special measures for their proper working with keeping things in mind regarding the health of staffs and the patrons.

12.2 Objectives:

This book chapter focused on the following objectives:

a. To highlight various phases of Lockdown and Unlock.
b. To enlist the influences of Lockdown on academic libraries amidst Covid-19 pandemic.
c. To enlist the influences of Unlock on academic libraries.
d. To suggest the various measures and strategies for the reopening of libraries.

12.3 Lockdown and Unlock During Covid-19 in India:

For breaking the chain of Covid-19 pandemic, it was the period when no one was allowed to leave the home, total curfew imposed, banned on travelling, shops, cafes, gym, industries, educational institutions etc were closed. Various restrictions were imposed by Home Ministry. Social distancing was maintained and masks became compulsory to wear.

In India, nationwide lockdown was imposed by GOI (Government of India) on March 24, 2020 as a preventive measure. [4] The lockdown imposition led into four phases. Various state governments and central government recommended to extend the lockdown imposition as the Covid-19 cases were increasing day by day even after the end of first lockdown.[5] On seeing the spread of Corona virus region wise, Prime Minister Narendra Modi decided to extend the nationwide lockdown till May 3, 2020 with few relaxations.

That was phase 2 of lockdown in India that has been announced from April 15 to May 3, 2020. [6] The areas were classified into three zones: (a) Red zone, (b) Orange zone and (c) Green zone.

The red zone indicated as the dangerous zone with finding positive cases of Covid-19 and highly infectious hotspot. In this hotspot, total curfew like conditions was recommended. The Orange zone indicated as some infection and the Green zone with zero positive cases that area was free from infection.[7]

To allow inter-state movement of the stranded people, the Ministry of Home Affairs issued guidelines like screening and quarantine them and after periodic checkup allow them their movement on April 29.[8] [9]

After the four phases of lockdown, the MHA (Ministry of Home Affairs) focused on economy. So, fresh guidelines for reopening were stated on June 1, 2020. That was termed as "Unlock 1.0". In containment zones, the lockdown was imposed totally. Unlock 2.0, Unlock 3.0, Unlock 4.0, Unlock 5.0 and Unlock 6.0 were the different phases of Unlock i.e. reopening of lockdown. But in containment zones, lockdown remained strictly in force till 30 November.

During Unlock 5.0, partial reopening of school was announced by MHA and state authorities in which the school staff is allowed to join the school but the students can go to school for taking the guidelines from teachers regarding their studies with the written consent of their parents. Unlock 7.0, 8.0 and 9.0 have been also announced for the month of December, January and February respectively.

12.4 Influences of Lockdown on Academic Libraries:

12.4.1 Totally Closure of Libraries:

Libraries are the sanctuaries of silence that are far away from the home of users but Impact of lockdown triggered has felt by library staff and the users. Most of libraries in India have closed temporarily due to lockdown imposition. [10] It seems as a manifestation situation for library users as library doors are shut for them. Academic libraries lie inside the building of institutions such as school library, college library and university library. Due to closure of academic institutions, these libraries remained closed too to follow the SOPs.

12.4.2 Libraries Go Beyond Four Walls

Today's libraries are not confined to four walls of a room. Electronic library, Hybrid library and Digital library play very important role during lockdown imposition. Reading occurs outside the walls of academic institutions every day. Reading and accessing of the study material or documents were promoted beyond four walls. [11]

12.4.3 Increased Access of Electronic Resources:

Many academic libraries started to provide the electronic resources like e- books, e-journals and e- periodicals etc to their users and clients.

For example, National Digital Library of India (NDLI) is free of cost to use. It provides study materials from primary to postgraduate. Various video lectures are also provided on the website. During Covid 19 pandemic, NDLI took step to provide the study material free of cost. [12]

12.4.4 Arrangement of Virtual Conferences, Webinars and Faculty Development Programmes:

For up skilling the library professionals, various institutions started to organize virtual conferences, webinars and faculty development programmes. It was great opportunity for the library professionals to come close to one another and transfer their new ideas and skills which are helpful in librarianship during Covid 19 pandemic and in the future too.

12.4.5 Increased Use of Electronic Gadgets:

The demand of electronic gadgets such as mobile phones, laptops, computer and tablets get increased for the study purpose and for attending the online classes and for obtaining the reading material online. The sale of such gadgets has increased during the lockdown.

12.5 Influences Over Academic Libraries During Unlock:

Now it is the challenging time for the library staff that how to re-channel their jobs and library services during Unlock period. The following points and main agendas should be taken by the library staff before the reopening of the library:

12.5.1 Health Concern of Staff and Patron:

The health concern of library staff and the patron should be considered on priority basis by the higher authorities of the educational institutions or the libraries. Special safety measures should be taken out for it. Proper guidelines should be traced or announced for running the libraries services. Ensure the mental health of the staff to cope with the stress of the pandemic. Any type of support they need must be provided.

12.5.2 Sanitization of Collections and Spaces:

The question arises how to sanitize all types of library collections and the spaces. The best answer for this is Quarantine of the library collection rather than using any type of disinfectant or radiations. No special training is required for the quarantine and it is not expansive too. There is no risk of damage of library collections. For sanitizing spaces, disinfectant can be used. [13] [14]

12.5.3 Social Distancing:

The SOPs given by the MHA and state authorities should be followed. Social distance is the preventive measure that should be considered during providing the library services to the clients.

12.5.4 Update and Up Skill Library Professionals:

It is great time for library professionals to update themselves, enhance their skills and coordinate with other staff all over the world. It is happened by attending various online conferences, seminars and faculty Development Programs.

There is no boundary to attend such events virtually. During Covid 19 pandemic, the traditional library remained closed. It was the time to access the digital library while sitting at your terminal around the world. So, it is the challenge for the library professionals to combat with the digital world and digital repositories.

12.5.5 Support for the Library Staff during the Pandemic

The library staff undergone various type of constraints such as stress, health, mentally, financially and socially. All type of support should be given to library professionals for upcoming time of reopening of libraries.

12.5.6 Strategies and Planning for Reopening of Libraries:

During Unlock 6.0, special measures and strategies are made by the higher authorities for reopening of academic libraries. The college and university libraries are opened for the students and the researchers during Unlock 6.0. But the school libraries are closed yet, as schools are not opened for the students. In the next sections, various measures and strategies for reopening of academic libraries are discussed.

12.6 Special Measures/Strategies for Reopening of Academic Libraries in India:

- **Temperature Record at the Entrance of Patron and Staff:** A responsible personnel for screening purpose should be placed at the entrance to check the temperature of the library staffs and the patrons. The personnel should be trained regarding thermometer handling, wearing masks, gloves and PPE kit and able to make decision for allowing the clients and staff to enter one by one with social distancing.
- **Installation of Sanitation Tunnel: likewise** the other government departments, Sanitation tunnel should be installed at the entry gate to sanitize all the persons. All the library staff and users and clients should be compelled to pass through the disinfectant chamber of the Sanitizer tunnel.
- **Hand Wash/ Liquid Soap:** Hand hygiene prevent the spread of infections. It is a simple effective way to prevent the spread of Corona Virus and its infection.[15] [16] [17] soap for washing hand should be provided.
- Use of Hand Sanitizer, mask and gloves- It should make mandatory to use hand sanitizer, mask and gloves for the library staffs and the users to prevent them from the Covid-19.
- **Queue Marks At 4-5 Feet Distance:** To minimize the physical interaction and maintain social distance, Queue marks should be made at four to five feet distance at entrance. It will help in reducing social interactions and the close contact.
- **Quarantine of Returned Books Before Re-Shelving/ New Arrivals for a Week before Shelving:** Using of any type of disinfectant for the library collection is harmful. So, it is mandatory to quarantine the returned books for a week before re-shelving them. But in this case next reader has to wait for that book. The new arrivals should also quarantine for a week to avoid the infection. After that they must be entered in library collections.
- **Fifty Percent Staff's Presence/ Roaster Duty:** To avoid crowd in the library, only 50 percent staff should be allowed to carry on their duties. Roaster duty should be employed during Covid 19 pandemic.

- **Cleaning of Reading Room Before and After Library Hours:** The reading room should be properly cleaned before and after library hours. If any positive person entered in the library then there is risk of infection will increased for the other ones.
- **Cleaning of Offices, Door Knobs, Counters, and Circulation Desk etc.:** The library offices, door knobs, counters and circulation desks should be cleaned and disinfected properly every day.
- **Reduce Student Study Space/ Social Distancing:** Number of users in the reading room and reading space should be decreased for maintain social distance.
- **Provide Scanning and Photocopying Service:** To avoid crowd in the library, better to provide scanning and photocopying services to the clients. The clients can use that material at their home for reading purpose.
- **Washroom at Every Storey:** There should be washroom at every storey of the library building so that the users can feel convenient and hygienic while availing the library services. Washroom should be fully hygienic.
- **Close the Library If Any Staff or Patron Is Infected:** If any person whether staff or user will find Covid positive then the library should be closed for at least a week.
- **Flexibility in Overdue:** No hard and fast rule is there mentioned for returning the books. Flexibility must be given to the users in the overdue reading material.

12.7 Conclusion:

The Covid-19 pandemic has brought unusual changes in the way of working of academic library all over the India. During Lockdown, the paradigm of the academic libraries is totally shifted toward the digitalization. The students and academic researchers have started to depend on the e-contents that are available on the internet for their study and research purpose. Upto secondary level, DIKSHA, E-PATHSHALA, National Repository of Open Educational Resources (NROER) portal provide e- contents like e-books, audios, videos etc. for study purpose.

For higher education, E- PG Pathshala, Gyandhara, Swayam and Swayam Prabha are playing very important role for pursuing online study, reading and learning. [18] These platforms also provide online courses across the country. National Digital library of India (NDLI) is a project under Ministry of HRD (Human Resource Development), GOI (Government of India) that has a great repository of over 50 million e-books in all disciplines.

It provides free of cost access. It has emerged as a suitable remark in the challenging world during Covid 19 pandemic. [19] [20] [21] New guidelines and norms have to be made for the reopening of the libraries. With proper planning and following SOPs by the Home Ministry time to time, the library staff must have to welcome their patrons with full confidence in the changing scenario during Covid 19 pandemic. ArogyaSetu App can be downloaded by everyone to know the status of the health of the library staff and the patrons. It is a great initiative taken by the Government of India.

The whole India seems as Digital India where the student's from primary to higher standard started to access the e-resources instead of using libraries physically. Library professionals have to update themselves and upgrade their skills to work in the digital work. The role of the library professionals get totally changed into information disseminator, reference librarian, information provider and knowledge organizer.

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13. Impact of Covid-19 on Social Life

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13.1 Introduction:

The coronavirus outbreak came to be known to the whole world when China informed the World Health Organisation on December 31, 2019 of a cluster of cases reported of pneumonia of an unknown cause in Wuhan City in Hubei Province. Consequently, the disease spread to more Provinces in China, and later to the rest of the world. The virus has been named SARS-CoV-2 which means Severe Acute Respiratory Syndrome Coronavirus 2 (Rutakirwa, 2020, p. 13).and the disease was called COVID-19, the name that was taken from Coronavirus Disease -2019. The World Health Organization (WHO) on March 11, 2020, declared the novel coronavirus COVID-19 outbreak a global pandemic. At a news briefing, WHO Director-General, Dr. Tedros Adhanom Ghebreyesus, noted that over the past 2 weeks, the number of cases outside China increased 13-fold and the number of countries with cases increased threefold. Thus, WHO then declared it a pandemic Not only that but because of its rampant spread countries were forced to stop international travelling as well as locked up themselves. Also, the lockdown has been recognised as the only method to control the spread of the pandemic and almost every country has adopted this method.

13.2 Where Did the Coronavirus Come From?

Experts say SARS-CoV-2 originated in bats. That's also how the coronaviruses behind Middle East respiratory syndrome (MERS) and severe acute respiratory syndrome (SARS) got started. SARS-CoV-2 made the jump to humans at one of Wuhan's open-air "wet markets." They're where customers buy fresh meat and fish, including animals that are killed on the spot. Some wet markets sell wild or banned species like cobras, wild boars, and raccoon dogs. Crowded conditions can let viruses from different animals swap genes. Sometimes the virus changes so much it can start to infect and spread among people.

As SARS-CoV-2 spread both inside and outside China, it infected people who have had no direct contact with animals. That meant the virus is transmitted from one human to another. It was then spreading in the U.S. and around the globe, meaning that people were unwittingly catching and passing on the coronavirus. This growing worldwide transmission is what later turned pandemic.

13.3 Coronavirus Evolution:

Scientists first identified a human coronavirus in 1965. It caused a common cold. Later that decade, researchers found a group of similar human and animal viruses and named them after their crown-like appearance.

Seven coronaviruses can infect humans. The one that causes SARS emerged in southern China in 2002 and quickly spread to 28 other countries. More than 8,000 people were infected by July 2003, and 774 died. A small outbreak in 2004 involved only four more cases. This coronavirus causes fever, headache, and respiratory problems such as cough and shortness of breath.

MERS started in Saudi Arabia in 2012. Almost all of the nearly 2,500 cases have been in people who live in or travel to the Middle East. This coronavirus is less contagious than its SARS cousin but more deadly, killing 858 people. It has the same respiratory symptoms but can also cause kidney failure.

13.4 Social Life with Covid-19:

The COVID-19 pandemic has led to a dramatic loss of human life worldwide and presents an unprecedented challenge to Public health, food systems and education. The economic and social disruption caused by the pandemic is devastating as millions of people came at risk of falling into extreme poverty, while the number of undernourished people, estimated in 2020 beginning at nearly 690 million, could increase by up to 132 million by the end of the year.

Millions of enterprises face an existential threat. Nearly half of the global work force is at risk of losing their livelihoods. Informal economy workers are particularly vulnerable because the majority lack social protection and access to quality health care and have lost access to productive assets. Without the means to earn an income during lockdown around the world, many are unable to feed themselves and their families. For most, no income means no food, or, at best, less food and less nutritious food.

The pandemic has been affecting the entire food system and has laid bare its fragility. Border closures, trade restrictions and confinement measures have been preventing farmers from accessing markets, including for buying inputs and selling their produce, and agricultural workers from harvesting crops, thus disrupting domestic and international food supply chains and reducing access to healthy, safe and diverse diets. The pandemic has decimated jobs and placed millions of livelihoods at risk. As breadwinners lose jobs, fall ill and die, the food security and nutrition of millions of women and men are under threat, with those in low-income countries, particularly the most marginalized populations, which include small-scale farmers and indigenous peoples, being hardest hit.

Millions of agricultural workers – waged and self-employed – while feeding the world, regularly face high levels of working poverty, malnutrition and poor health, and suffer from a lack of safety and labour protection as well as other types of abuse. With low and irregular incomes and a lack of social support, many of them are spurred to continue working, often in unsafe conditions, thus exposing themselves and their families to additional risks. Further, when experiencing income losses, they may resort to negative coping strategies, such as distress sale of assets, predatory loans or child labour. Migrant agricultural workers are particularly vulnerable, because they face risks in their transport, working and living conditions and struggle to access support measures put in place by governments. Guaranteeing the safety and health of all agri-food workers – from primary producers to those involved in food processing, transport and retail, including street food vendors – as well as better incomes and protection, will be critical to saving lives and protecting public health, people's livelihoods and food security.

In the COVID-19 crisis food security, public health, and employment and labour issues, in particular workers' health and safety, converge. Adhering to workplace safety and health practices and ensuring access to decent work and the protection of labour rights in all industries will be crucial in addressing the human dimension of the crisis. Immediate and purposeful action to save lives and livelihoods should include extending social protection towards universal health coverage and income support for those most affected. These include workers in the informal economy and in poorly protected and low-paid jobs, including youth, older workers, and migrants. Particular attention must be paid to the situation of women, who are over-represented in low-paid jobs and care roles. Different forms of support are key, including cash transfers, child allowances and healthy school meals, shelter and food relief initiatives, support for employment retention and recovery, and financial relief for businesses, including micro, small and medium-sized enterprises. In designing and implementing such measures it is essential that governments work closely with employers and workers.

Countries dealing with existing humanitarian crises or emergencies are particularly exposed to the effects of COVID-19. Responding swiftly to the pandemic, while ensuring that humanitarian and recovery assistance reaches those most in need, is critical. Now is the time for global solidarity and support, especially with the most vulnerable in our societies, particularly in the emerging and developing world. Only together can we overcome the intertwined health and social and economic impacts of the pandemic and prevent its escalation into a protracted humanitarian and food security catastrophe, with the potential loss of already achieved development gains. We must recognize this opportunity to build back better, as noted in the Policy Brief issued by the United Nations Secretary-General. We are committed to pooling our expertise and experience to support countries in their crisis response measures and efforts to achieve the Sustainable Development Goals.

We need to develop long-term sustainable strategies to address the challenges facing the health and agri-food sectors. Priority should be given to addressing underlying food security and malnutrition challenges, tackling rural poverty, in particular through more and better jobs in the rural economy, extending social protection to all, facilitating safe migration pathways and promoting the formalization of the informal economy. We must rethink the future of our environment and tackle climate change and environmental degradation with ambition and urgency. Only then can we protect the health, livelihoods, food security and nutrition of all people, and ensure that our 'new normal' is a better one.

13.5 Impact of Coronavirus around the Globe:

Many countries have declared restrictive measures, such as lockdown, shelter in place, or stay at home orders, to control the pandemic at a local level.

13.5.1 China:

China appeared to manage the coronavirus outbreak effectively, putting in place early travel bans within the country itself. As early as January 23, Chinese authorities declared a nationwide travel ban, which, some experts suggest, may have averted over 700,000 COVID-19 cases within the country. Earlier in April, China eased the lockdown measures in Wuhan, the original epicenter of the new coronavirus outbreak, amid celebrations that the nation had beaten the virus.

13.5.2 Europe:

Some European countries have reacted sooner to the steep rise in COVID-19 cases than others. On March 10, Italy ordered a strict nationwide lockdown, becoming the first country in Europe to do so. The government banned all travel in the country, and people could only leave their homes for essential reasons — such as to buy food. When going out, people had to carry declaration forms and wear face masks and disposable gloves. Despite a slowdown in the growth of new COVID-19 cases, the Italian government took all necessary lockdown measures to keep the growth of cases in control. Only one family was allowed to go out at once and only for valid reasons, such as doing the groceries, going to the pharmacy, or the post office for urgent matters.

Spain, another one of the European countries hit badly by the coronavirus, also announced strict lockdown measures from mid- March. Spain's Prime Minister Pedro Sanchez announced that Spain reached the peak of the pandemic in early April.

13.5.3 Sweden: 'Not a True Form of Self-Isolation':

Other European countries have put in place less stringent measures. For instance, in the United Kingdom, Prime Minister Boris Johnson announced a lockdown on March 23, though the measures have been less stringent than in other countries. Unlike in Italy, for instance, in the U.K., people may go out without a declaration form. The acceptable reasons for leaving one's home — "for food, health reasons or work" — has received criticism for being confusing and lacking clarity. Some, however, relish the relative freedom that Britain's more relaxed pandemic advice has afforded.

Other European countries, such as Sweden, which had reported fewer cases of COVID-19 overall, had fewer and much less restrictive measures in place. Yet, some experts worry that the authorities have underestimated the incidence of COVID-19 in Sweden. Others suggest that the guidelines have left older citizens one of the high-risk categories unnecessarily exposed to the virus.

The one country that has received consistent kudos for its approach to the pandemic appears to be Finland, where Prime Minister Sanna Marin announced, on April 22, a "composite strategy." This strategy would involve a gradual easing of lockdown measures while increasing COVID-19 testing. Testing would ensure that anyone exposed to the coronavirus receives the care they need, while those who have not had exposure may return to their normal life, little by little.

13.5.4 United States:

The U.S. strategy in dealing with the pandemic has been the target of an increased amount of criticism since different states have adopted wildly different measures. There was a lack of consensus since beginning between the authorities and various public health organizations. As of March 30, U.S. states including New York, California, Texas, and Washington directed their citizens to shelter in place or stay at home, though some have opted for less restrictive measures. Since March 31, the Department of State was advising all U.S. citizens "to avoid all international travel."

Although measures in the U.S. have been, overall, less stringent than elsewhere, groups of people in 18 states started protesting against the lockdown claiming that the measures have been harming them financially and otherwise. Even then President Donald Trump spoke in favor of easing the current measures, saying that the pandemic has already peaked in the U.S. However, some medical professionals had spoken out against the protests, stressing that the protesters may well be putting other people's lives and health in danger.

13.5.5 Canada:

In Canada, only two provinces Ontario and Alberta declared a state of emergency in the first half of March, following an increase in the number of COVID-19 cases. One reported worry among experts and the public was that Canadian authorities have not managed to capture important health data and that testing efforts for COVID-19 were falling short.

13.6 Covid-19 and Its Impact on India:

The first case of COVID-19 in India was reported on January 30, 2020 and after almost a year, 2020, confirmed cases stand at 107 lakhs with more than 157 thousand deaths. The impact of the pandemic is visible across the sectors globally, but its impact on marginalized sections, women and children has been immense in India. This crisis has affected economy as never before leading to massive psycho-social impacts as well.

Women were at greater risk during the pandemic from the health perspective. Homes which were already unsafe along with families living in poor and substandard conditions have added on to the social inequities like gender-based violence and child abuse, lack of security, money and health. Various unplanned lockdown extensions in the country made it more difficult for them to seek help for such concerns.

Resource limitations for women has brought in a situation where women tend to neglect their own requirements while prioritizing life and budgets of others in the family and issues like menstrual hygiene, mental health and her nutrition do not feature in the list of priority.

Amidst the lockdown in Indian society, multiple issues related to social, educational, economic, political, agricultural, psychological levels and many more have been noticed that has created the devastating impact on the lives of the people.

Social-distancing is the only measure to control the influence of Covid-19 and it should be promoted but we need to see the impact of this pandemic on the society how it has revived the social discriminatory practices.

Impact of Covid-19 has been multiple and not only limited to society at large. From the perspective of the economy, both rural and urban have been impacted adversely. Everyone has seen the issues being faced by migrant workers who depend on daily earnings, they barely had savings which they could spend during any emergency.

Many of them who didn't have many resources left with had started to move to their villages because of the unavailability of jobs and money in the cities. Walking thousands of miles barefoot with their children and families.

Apart from migrant workers, gig workers have been gone through a similar issue though it has not got much attention in the news. These workers e.g., delivery boys, cab driver etc. Because of Covid-19, the world came to stagnant position, so the online platform which leads to the economic hardship of this section of the urban economy.

Moving from the economy, the impact of Covid-19 on education has been cruel and its repercussions will be seen in the upcoming future. As per the report of World Bank titled "Beaten or broken: Informality and Covid", WB has warned that there will be the lifelong impact of school closures on the productivity of this generation of students.

Children being out of school for about eight months might forget some facts as well as impact their learning capacity.

So, what is the benefit of nearly 100% enrolment ratio at primary level education? Despite one of the greatest achievements in enrolling the students at primary level Covid-19 is stopping us to reap its benefits in the coming future.

With any pandemic or any situation which impact the society at large comes the problem of psychological trauma? The lockdown has proved that "man is a social being" because continuous lockdown for about four months have impacted people psychologically and the burden has been faced by women and children in the form of domestic violence.

In the lockdown period, multiple calls have been received on the helpline number made for the people going through domestic violence.

As India is recognised as land of diversity, the impact of Covid-19 was diverse and countless. But, if we see the other side of reality, COVID-19 has impacted our society and that is for sure, but only adversely? That is the thing we need to analyse carefully and can't be left without a brief discussion.

It has been truly said that "crisis gives birth to the changes which were pending for many years", same has happened during the time of Covid-19. Things have been changed to meet the needs of the society what the government were trying hard to implement from past many years.

13.7 Social Life with Covid-19 after One Year:

Focus has mostly been on testing, treatment and prevention of COVID-19 but people and communities are going through various social problems as well in adjusting to the current lifestyles and fear of the disease across nations. Conditions have all the more affected the other half of the population globally and particularly in India where abrupt lockdown has brought millions below the poverty line struggling for basic needs like food and shelter which then leads to unequal share in domestic responsibilities, to violence against the vulnerable members of the household.

Social stress caused by lockdown has many faces and reasons resulting from travelling restrictions and disruption of cultural celebrations, limited healthcare facilities and interruption in regular immunisations in hospitals leading to anxiety and fear among the

population, social distancing with friends and family, closure of places of entertainment and leisure, unplanned closure of schools and colleges affecting both students and parents regarding the academic year and the loss of quality education. Inadequate infrastructures, leading to ill-equipped healthcare employees who were fighting endlessly to treat patients and protect themselves from infection at the same time are all quite visible. This major loss and unpreparedness is an aftermath of the negligence of healthcare sector since years. Incapacitated hospitals and distressed primary healthcare are significant reasons behind so much distress among the people for a disease which could be prevented with a little care and precaution.

The issue of migrant workers was one of the most cruel and highlighted issue in this pandemic where millions were rendered unemployed and stranded without money, food and shelter, crisscrossing the country's highways to return to their villages and several meeting with accidents and deaths on their way. Unemployment has rendered a large section as directionless, leaving the social health as well as economy in shambles.

Several forms of racism triggered the division among the people of India and other global counterparts. The stigma of religious hatred, caste based discrimination and stigmatisation of people from the North East is equally dangerous to humanity where the less informed and biased media as well as people with vested interests tried to damage the social fabric of the country and left a big social impact in the fight against coronavirus. Reports of racism against the Chinese and other Asians elsewhere around the world and calling it a Chinese virus due to its origin, showed the deteriorated levels of sensitivity among the world population. Realizing that viruses such as COVID-19 do not have race, nationality, or boundary is very important.

The COVID-19 pandemic has changed the world in many ways. Of the several implications on humanity, the issues of health, the rapid decline of economy, shortage of medicines, sanitizers, masks, and other essentials, poverty, unemployment has undoubtedly taken centre stage and each has left a mark on the lives of people.

Long term planning and collective efforts of individuals, communities, governments, national and international organisations to fight against this invisible deadly virus are needed. Policy response to the pandemic as well as health and contracted economy is the need of the hour. Health interventions to those who are in need as well as prioritising the focus on the social setbacks in the country for a healthy start are of utmost importance.

Reducing the psychological and social distress among people and promoting strategies to deal with the situation are required. Considering other health issues by the policy makers as well as strengthening of public healthcare with large investments and robust infrastructure and providing sufficient care to the patients suffering from other diseases as well are also very important. While the nationwide lockdown has resulted in financial losses and has affected all segments of society, the domino effect on health, healthcare and nutrition could possibly pose major setbacks to previously gained successes of National health programs.

At this stage, we should ask a genuine question: What kind of society we'll see post-Covid-19? Fragmented? Unequal? We don't know but we'll have to stand up again support each other. We'll have to adopt values enshrined in our Preamble of the Constitution i.e. "Equality, Fraternity, Integrity" as well as DPSP to make India a better place on earth for its citizens and the world.

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14. Lockdown and College Fees: A Covid19 Challenge of Economic Downturn

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14.1 Introduction:

As Tuition and college fees continue to rise, the online platforms of education in this pandemic needs to be discussed threadbare. Since cost of college education in India has been rapidly rising, students feel that they are getting a raw deal by taking online classes. Several colleges and Universities are now conducting online classes for the rest of the semester. Students are demanding a partial fee refund. While applying for admissions there are many clauses that the students sign, the question of legal backing to such demand will remain unanswered.

14.2 Not for Profit Organization:

Colleges run under not-for-profit basis. According to Supreme Court, education is a fundamental right, and it is a public good. The UGC as a regulatory body according to the act of 1956, does not give a provision of fees refund or reduction. In some way the students' rights have not been protected. So, the regulatory body defies the very basic outline of Supreme Court where it considers education as charity and not a business.

14.3 First Argument:

The above contradictory statements of the court and UGC gives us a valid point that during this pandemic, shifting of offline classes to online mode changes the basic infrastructure cost of running an institute. Since students are not availing the basic facilities such as clean classrooms, electricity, lodging or boarding, so there has to be a provision where this cost reduction can lead to cost cutting from the tution fees. If these costs are not deducted from fees, the very motive of Supreme Court order runs out of law.

14.4 Lack of Opportunities:

During normal routine classroom, the students make use of the library, the playground, the canteen, the music room, the yoga room etc. During online mode all these usages cease. An amount for utilizing these services are taken in addition to the tution fees during beginning of semester. So as access to these opportunities cease, the students have to be compensated.

14.5 Extra Cost of Online Classes

The diversity of Indian population is yet another important and very exclusive factor which is one of the major challenges of conducting online classes.

The diversity is so unique, and our pride as a culture, but it becomes ironically a hinderance to a vast section of population, which are deprived of the digital platforms in remote areas. I am taking the case of my own state of **Jharkhand,** where villages still lack proper electricity and internet. Students who have left their hostels in city and are currently based in their village hometown, are facing difficulty in resuming their studies in digital mode. Some semester exams are being conducted online, these students are neither availing the classes and are also missing their exams, inspite of fully paid semester fees. Even if they are able to take online classes and examinations, the cost of internet is disrupting their goal. Parents are unable to support the rising cost of their Ward's mobile. So it is very practical to cut fees cost, or adjust it according to the already paid semester fees.

14.6 Surfeit and Cross:

Subsidies - UGC should regulate the surplus amount that constitutes running of a college. Whenever a budget of an institute comes into force there is always a proposal of cross-subsidies. Many colleges follow this budgetary method. Departments, faculties, or even single courses with deficits can be subsidized by departments, facilities or courses with more reserves but in most of the colleges, the existence of cross- subsidiary mode goes largely unquestioned. Pressures on higher education funding combined with increasing emphasis on accountibility and performance measurements changes the attitude of cross- funding. The Idea of cross-subsidization is not tolerated by senior- level University Officials. Looking at all these paradigms the UGC sent out an official announcement quote - " It is requested that in view of the prevailing extraordinary difficult circumstances, universities and colleges may consider the matter regarding the payment of annual/ semester fee, tuition fee, examination fee, etc sympathetically and if feasible they may consider offering alternative payment options to students till the situation returns to normal. If need be the universities and colleges may also consider individual requests from students received if any, concerning payment of fee, in a considerate manner, keeping in view the present Covid-19 Pandemic."

Solutions An equilibrium has to be reached where in a diverse country like India, students may not be well equipped with technology tools to avail remote learning. For college students, democratization of technology is an important issue, comprising internet connectivity, and telecom infrastructures, and affordability of online system, availability of laptop / desktops and online assessment tools. Students are facing many challenges like uncertainty about their exams, results, admission process, entrance exams, reopening of campuses and the huge impact of this pandemic had on their education and careers. The economic downturn of this crisis is beyond words. The plight of migrants, the sick, the Doctors and health workers have been in discussion forum and their problems are being highlighted. But the economic downturn due to Covid-19 on student is not getting sufficient response. There are many students whose parents have lost their jobs, or whose businesses have been affected resulting in financial burden. Parents are not being able to pay fees. So there has to urgent solutions, so that in the coming months the students do not suffer academically. Some basic and relevant solutions are:

a. Government should immediately provide grants similar to migrant’s grants.
b. The educational institutions should annouce reduction of fees immediately
c. They can charge only tuition fees and waive other form of fees immediately.
d. Flexibility of pass marks so that students are free from mental anxiety.

e. Educational institutions must develop a growth mindset and develop strategies to do justice to academic commitments.
f. Academic quality and rigour should not be affected.
g. Requirement of a well-structured plan that covers all aspects of academics and student life.
h. Students must get the best possible online learning experience at minimum cost.
i. Blended learning should be encouraged where transition from online to offline can be done in blended form, digital as well as face to face.
j. A very unique program of Mentor - Mentee system must be followed, where each student can choose his or her mentor teacher. The Guru- Shishya mode can encourage students to discuss all their problems from academic to financial with their mentor. The Mentor teacher can take up their problems through proper channels.

14.7 Inference:

In a draft regulation of 27th November 2019, UGC came to a decision of formation of fee committees to regulate fees in colleges. The fee structure will be decided according to socio - economic conditions of that particular geographical area irrespective of caste. This is a very good initiative, where the student category according to economic status comes into forefront. All institutions have to submit their budget six months in advance. Operative costs of institutions should be factored in. These measures will lead to preparation for reduction of fees in these pandemic conditions.

Covid 19 pandemic has given us opportunities to gear up our regulatory bodies and fill the gaps. These difficult times should pave a path for assurance of a balance between student's right to access education and the college's right to provide education based on our constitution.

The lockdown situation has given rise to a "new" normal in the field of education where rights of all stakeholders need to be addressed. It will lead to inclusiveness and aid in holistic development of students. This will be a win -win situation for all.

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15. Impact of Pandemic Covid-19 on Education and Social Life

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Abstract:

The impact of pandemic COVID-19 is observed in every sector around the world. The education sectors of India as well as world are badly affected by this. It has enforced the world wide lock down creating v e r y bad effect on the students' life. Around 32 c r o r e l e a r n e r s stopped to move schools/colleges and all educational activities halted in India. The outbreak of COVID-19 has taught us that change is inevitable. It has worked as a catalyst for the educational institutions to grow and opt for platforms with technologies, which have not been used before. The education sector has been fighting to survive the crises with a different approach and digitizing the challenges to wash away the threat of the pandemic. This paper highlights some measures taken by Govt. of India to provide seamless education in the country. Both the positive and negative impacts of COVID-19 on education are discussed and some fruitful suggestions are also pointed to carry out educational activities during the pandemic situation.

15.1 Introduction:

The pandemic Covid-19 has spread over whole world and compelled the human society to maintain social distancing. It has significantly disrupted the education sector which is a critical determinant of a country's economic future. On February 11, 2020, the World Health Organisation (WHO) proposed an official name of the virus as COVID-19, an acronym for Coronavirus disease 2019. It was first identified in Wuhan, China on December 31, 2019. First death by COVID- 19 was the 61-year old man in Wuhan, China on January 11, 2020. WHO declared COVID-19 as a pandemic on March 11, 2020? The first case of the COVID-19 pandemic in India was reported on 30 January 2020 in the state of Kerala and the affected had a travel history from Wuhan, china (Wikipedia).

The first death due to COVID-19 was reported in India on March 12, 2020. It has affected more than 4.5 million peoples worldwide (WHO). According to the UNESCO report, it had affected more than 90% of total world's student population during mid April 2020 which is now reduced to nearly 67% during June 2020. Outbreak of COVI-19 has impacted more than 120 crores of students and youths across the planet. In India, more than 32 crores of students have been affected by the various restrictions and the nationwide lockdown for COVI-19. As per the UNESCO report, about 14 crores of primary and 13 crores of secondary students are affected which are two mostly affected levels in India.

After observing the corona virus pandemic situation the WHO advised to maintain social distancing as the first prevention step. So, every country started the action of lockdown to Separate the contaminated people. The education sectors including schools, colleges and universities became closed.

Classes suspended and all examinations of schools, colleges and universities including entrance tests were postponed indefinitely. Thus, the lockdown destroyed the schedules of every student. Though it is an exceptional situation in the history of education, COVID-19 has created many opportunities to come out of the rigorous classroom teaching model to a new era of digital model. The lockdown has compelled many educational institutions to cancel their classes, examinations, internships etc. and to choose the online modes. Initially, the educators and the students were quite confused and didn't understand how to cope up with the situation of this sudden crisis that compelled closure of the educational activities. But latter on all realized that the lockdown has taught so many lessons to manage with the emergence of such pandemics. Thus, COVID-19 has created many challenges and opportunities for the educational institutes to strengthen their technological knowledge and infrastructure (Pravat, 2020a). The lockdown has given them a ray of hope for teachers and students to continue their educational activities through online. The teachers assigned work to students via internet, delivered lectures through live video conferencing using different Apps like Zoom, Google meet, Facebook, YouTube, and Skype etc. There are WhatsApp groups of guardians, teachers, students and parents for affective communication through which they are always in touch to share their difficulties through this e-medium. In a nation like China that practices a considerably more centralization system, a change to digital learning may be simpler. Even in a nation like the U.S.A, there are some low- pay students who don't approach broad bands and unable to use computerized learning arrangement (Study Abroad Life). The same is the situation that happens with India where not every student is well equipped with the high-speed internet and digital gadgets and are along these lines of suffer. Numerous advanced educational institutions in India are not also equipped with digital facilities right now to cope up with sudden change from traditional education set up to the online education system.

15.2 Objectives:

The present research paper focused on the following objectives:

- To enlighten various measures taken by Govt. of India for education sector during this pandemic.
- To highlight various positive impact of COVID-19 on education.
- To enlist some negative impacts of COVID-19 and to put some effective suggestions for continuing education during the pandemic situation.

15.3 Methodology:

Data and information presented in current study are collected from various reports prepared by national and international agencies on COVID-19 pandemic. Information are collected from various authentic websites. Some journals and e-contents relating to impact of COVID-19 on educational system are referred. Initiatives of Govt. of India on education during Covid-19 to prevent spread of pandemic COVID-19, the Government of India has taken number of preventive measures.

The union government declared a countrywide lock-down of all educational institutions on 16 March 2020. Central Board of Secondary Education (CBSE) postponed all examinations of secondary and higher secondary schools on March 18, 2020 throughout India. CBSE released revised guidelines for examination centres to conduct examinations by maintaining a distance of at least 1 meter between the students taking the exam with a class not having more than 24 students. If the rooms of the examination centres are small then the students should be divided into different rooms accordingly. The Union Public Service Commission (UPSC) postponed the interview for the Civil Services Examination 2019 (Wikipedia). Similarly, the most of the state Governments and other educational boards postponed examinations due to outbreak of COVID-19. Govt. of India has observed one day nationwide Janta-curfew on March 22 and implement lockdown from March 25, 2020 onwards in different phases. Govt. of India has been extending lockdown periods from time to time adopting different strategies to fight with the pandemic but educational institutions remained closed continuously. The lockdown 6.0 was declared on June 29, which is effective from 1st July to 31st July 2020 with some less restriction in other sectors except education. Almost all state government ministries have taken measures to ensure that the academic activities of schools and colleges do not hamper during the lockdown period. They have instructed the schools to hold all their classes online. The lockdown has accelerated adoption of digital technology. It has provided a chance to develop new and improved professional skills/knowledge through online learning in more efficient and productive way. Online learning is the best solution during this pandemic Covid-19 situation (Pravat, 2020b). So, the digital India vision of the government is emerging as a vital tool for solving the present crisis due to Covid-19. It is a fact that technology-based education is more transparent with all respect. Looking at this challenge of colleges and schools being shut, government of India, as well as state governments and private players have undertaken proper initiatives.

The Ministry of Human Resource Development (MHRD) has made several arrangements, including online portals and educational channels through Direct to Home TV, Radios for students to continue learning. During lockdown, students are using popular social media tools like WhatsApp, Zoom, Google meet, Telegram, YouTube live, Facebook live etc. for online teaching learning system. ICT initiative of MHRD (e- Broucher- https://mhrd.gov.in/ict-initiatives) is a unique platform which combines all digital resources for online education. The digital initiatives of MHRD for secondary as well as higher education during COVID-19 are listed as below: Secondary education.

- **Diksha** portal contains e-Learning content for students, teachers, and parents aligned to the curriculum, including video lessons, worksheets, textbooks and assessments. Under the guidance of its national boards of education (CBSE) and NCERT, the content has been created by more than 250 teachers who teach in multiple languages. The app is available to use offline. It has more than 80,000 e-Books for classes 1 to 12 created by CBSE, NCERT in multiple languages. The contents can also be viewed through QR codes on textbooks. The app can be downloaded from IOS and Google Play Store. Website: https://diksha.qov.in or https://seshaqun.qov.in/shaqun
- **E-Pathshala** is an e-Learning app by NCERT for classes 1 to 12 in multiple languages. The app houses books, videos, audio, etc. aimed at students, educators and parents in multiple languages including Hindi, Urdu, and English. In this web portal NCERT has deployed 1886 audios, 2000 videos, 696 e-Books and 504 Flip Books for classes 1 to 12 in different languages. Mobile Apps is available. Website: http://epathshala.nic.in or http://epathshala.qov.in.

- **National Repository of Open Educational Resources (NROER)** portal provides a host of resources for students and teachers in multiple languages including books, interactive modules and videos including a host of STEM-based games. Content is mapped to the curriculum for classes 1-12, including aligned resources for teachers. It has a total of 14527 files including 401 collections, 2779 documents, 1345 interactive, 1664 audios, 2586 images and 6153 videos on different languages. Website: http://nroer.qov.in/welcome

15.4 Higher Education:

- **Swayam** is the national online education platform hosting 1900 courses covering both school (classes 9 to 12) and higher education (under graduate, post graduate programs) in all subjects including engineering, humanities and social sciences, law and management courses. The unique feature is that, it is integrated with the conventional education. Credit transfers are possible for SWAYAM courses (max. 20%). Website: https://swayam.gov.in/

a. **Swayam Prabha** has 32 DTH TV channels transmitting educational contents on 24 x 7 basis. These channels are available for viewing all across the country using DD Free Dish Set Top Box and Antenna. The channel schedule and other details are available in the portal. The channels cover both school education (classes 9 to 12) and higher education (undergraduate, postgraduate, engineering Out-of-school children, vocational courses and teacher training) in arts, science, commerce, performing arts, social sciences and humanities subjects, engineering, technology, law, medicine, agriculture.
Website: https://swayamprabha.gov.in/

b. **E-PG Pathshala** is for postgraduate students. Postgraduate students can access this platform for e- books, online courses and study materials during this lockdown period. The importance of this platform is that students can access these facilities without having internet for the whole day. Website: https://epgp.inflibnet.ac.in/

15.5 Positive Impact of COVID-19 on Education:

Though the outbreak of COVID-19 has created many negative impacts on education, educational institutions of India have accepted the challenges and trying their best to provide seamless support services to the students during the pandemic.

Indian education system got the opportunity for transformation from traditional system to a new era. The following points may be considered as the positive impacts.

- **Move towards Blended Learning:** COVID-19 has accelerated adoption of digital technologies to deliver education. Educational institutions moved towards blended mode of learning. It encouraged all teachers and students to become more technology savvy. New ways of delivery and assessments of learning opened immense opportunities for a major transformation in the area of curriculum development and pedagogy. It also gives access to large pools of learners at a time.
- **Rise in Use of Learning Management Systems:** Use of learning management systems by educational institutions became a great demand. It opened a great opportunity for the companies those have been developing and strengthening learning management systems for use educational institutions (Misra, 2020).

- **Enhance the Use of Soft Copy of Learning Material:** In lockdown situation students were not able to collect the hard copies of study materials and hence most of the students used of soft copies materials for reference.
- **Improvement in Collaborative Work-** There is a new opportunity where collaborative teaching and learning can take on new forms. Collaborations can also happen among faculty/teachers across the world to benefit from each other (Misra, 2020).
- **Rise in Online Meetings-** The pandemic has created a massive rise in teleconferencing, virtual meetings, and webinars and e-conferencing opportunities.
- **Enhanced Digital Literacy:** The pandemic situation induced people to learn and use digital technology and resulted in increasing the digital literacy.
- **Improved the Use of Electronic Media for Sharing Information:** Learning materials are shared among the students easily and the related queries are resolved through e-mail, SMS, phone calls and using different social Medias like WhatsApp or Facebook.
- **Worldwide Exposure:** Educators and learners are getting opportunities to interact with peers from around the world. Learners adapted to an international community.
- **Better Time Management:** Students are able to manage their time more efficiently in online education during pandemics.
- **Demand for Open and Distance Learning (ODL):** During the pandemic situation most of the students preferred ODL mode as it encourages self-learning providing opportunities to learn from diverse resources and customized learning as per their needs.

15.6 Negative Impact of COVID-19 on Education:

Education sector has suffered a lot due to the outbreak of COVID-19. It has created many negative impacts on education and some of them are as pointed below:

- **Educational Activity Hampered:** Classes have been suspended and exams at different levels postponed. Different boards have already postponed the annual examinations and entrance tests. Admission process got delayed.
  Due to continuity in lockdown, student suffered a loss of nearly 3 months of the full academic year of 2020- 21 which is going to further deteriorate the situation of continuity in education and the as students would face much difficulty in resuming schooling again after a huge gap.
- **Impact on Employment:** Most of the recruitment got postponed due to COVID-19 Placements for students may also be affected with companies delaying the on board of students.
  Unemployment rate is expected to be increased due to this pandemic. In India, there is no recruitment in Govt. sector and fresh graduates fear withdrawal of their job offers from private sectors because of the current situation.
  The Centre for Monitoring Indian Economy's estimates on unemployment shot up from 8.4% in mid- March to 23% in early April and the urban unemployment rate to 30.9% (Educationasia.in). When the unemployment increases then the education gradually decreases as people struggle for food rather than education.
- **Unprepared Teachers/Students for Online Education:** Not all teachers/students are good at it or at least not all of them were ready for this sudden transition from face to face learning to online learning. Most of the teachers are just conducting lectures on video platforms such as Zoom, Google meet etc. which may not be real online learning without any dedicated online learning platform.

- **Reduced Global Employment Opportunity:** Some may lose their jobs from other countries and the pass out students may not get their job outside India due to restrictions caused by COVID-19. Many Indians might have returned home after losing their jobs overseas due to COVID-19. Hence, the fresh students who are likely to enter the job market shortly may face difficulty in getting suitable employment. Many students who have already got jobs through campus interviews may not be able to join their jobs due to lockdown. The Indians who have been doing their jobs abroad may lose their jobs. Recent graduates in India are of also fearing for withdrawal of job offers from corporate sectors because of movement restriction in the current pandemic situation.
- **Increased Responsibility of Parents to Educate Their Wards:** Some educated parents are able to guide but some may not have the adequate level of education needed to teach children in the house.
- **Loss of Nutrition Due To School Closure:** Mid-day meals is a school meal programme of the Government of India which is designed to provide better the nutritional food to school-age children nationwide. The closure of schools has serious implications on the daily nutrition of students as the mid-day meal schemes have temporarily been shut. Various studies have pointed out that mid-day meals are also an important contributing factor for increased enrolment in the schools
- **Access to Digital World:** As many students have limited or no internet access and many students may not be able to afford computer, laptop or supporting mobile phones in their homes, online teaching-learning may create a digital divide among students. The lockdown has hit the poor students very hard in India as most of them are unable to explore online learning according to various reports. Thus the online teaching-learning method during pandemic COVID-19 may enhance the gap between rich/poor and urban/rural.
- **Access to Global Education:** The pandemic has significantly disrupted the higher education sector. A large number of Indian students who are enrolled in many Universities abroad, especially in worst affected countries are now leaving those countries and if the situation persists, in the long run, a there will be a significant decline in the demand for international higher education.
- **Payment of Schools, Colleges Fee Got Delayed:** During this lockdown most of the parents will be facing the unemployment situation so they may not be able to pay the fee for that particular time periods which may affect the private institutes.

15.7 Suggestions:

- India should develop creative strategies to ensure that all children must have sustainable access to learning during pandemic COVID-19. The Indian policies must include various individuals from diverse backgrounds including remote regions, marginalized and minority groups for effective delivery.
- Immediate measures are required to lessen the effects of the pandemic on job offers, internship programs, and research projects.
- Many online learning platforms offer multiple programmes on the same subjects with different levels of certifications, methodology and assessment parameters. So, the quality of programmes may differ across different online learning platforms. Therefore, establishment of quality assurance mechanisms and quality benchmark for online learning programmes must be developed and offered by Higher Education Institutions (HEIs) in India keeping in view of rapid growth of the online learning platforms.
- Integrated with a present-day mainstream higher education system.

- Govt and educational institutes should plan to continue the educational activities maintaining social distancing. 30- 40% students and teachers may attend schools/colleges in two shifts per day to carry on educational activities by obeying guidelines for COVID-19.
- At current times, access to technology and internet is an urgent requirement. So, the digital capabilities and the required infrastructure must reach to the remotest and poorest communities to facilitate the students to continue their education during the pandemics. There is a need to deploy public funds to fix the internet gap and ensure that students continue to learn digitally. The state governments/private organisations should come up with ideas to address this issue of digital education.
- Some significant issues associated with distance learning strategies like the availability and access to digital devices with internet connectivity, the need for safe learning spaces, creating capabilities for teachers, families and students to operate and navigate digital devices, and engaging lesson plans for disabled students and other marginalized groups should be addressed by Govt. and the stakeholders.

15.8 Review:

COVID-19 and its Impact on Education System in India. The petrifying and the extreme impact of COVID-19 has shaken the world to its core. Additional, the higher a part of the Governments across the globe have quickly closed academic establishments making an attempt to comprise the unfold of the COVID-19 pandemic. In India as effectively, the federal government as a facet of the nationwide lockdown has closed each academic institution, as a consequence of which, learners going from school-going kids to postgraduate college students, are affected.

Therefore, the government has provide you with e-learning program. Quite a few end-tech companies have tried to leverage the occasion by providing free on-line lessons or engaging limits on e-learning modules. These measures have been met with overwhelming response by college students with some new companies witnessing as excessive as 25% uptick in e-learning. Distant studying appears a viable reply for college kids throughout this time as they provide handy, on – the-go and reasonably priced entry to classes. E-learning additionally comes as an attention-grabbing and interactive various as in comparison with classroom educating.

However, Covid-19 has prompted specialists to rethink the traditional mode of training. Digital training seems to be a viable reply for make up for within the shortfall for classroom training for a interval of three to 4 months whereas limiting the probabilities of any an infection to college students until courses resume. Extra considerably, it has additionally introduced the hitherto peripheral problem of digital training in India to the middle stage. Going forward, digital training is more likely to be built-in into mainstream training.

This may allow inclusive training by encouraging studying throughout various geographies in India. Furthermore, it's going to present an open door for educators to provide you with custom-made studying solutions for each pupil. Digital learning has quite a few benefits in itself like digital learning has no physical boundaries, it has more learning engagement expertise relatively than the traditional studying, additionally it is savvy and college students get to be taught within the confines of their normal vary of familiarity.

However, digital learning is not without its restrictions and challenges, since face-to-face interplay is mostly perceived as the perfect sort of correspondence as in comparison with the relatively impersonalized nature of remote learning.

Around the globe, on-line training has met with some success. On account of India, we even have far to go earlier than digital studying is seen as mainstream training, as a result of college students residing in metropolitan space have the amenities to resolve on digital training, nevertheless, rustic space college students do not have the required infrastructure nor are monetarily strong to profit the sources required for digital training.

The construction of the digital education infrastructure by the Government of India presently seems to be troublesome as a consequence of absence of price range. Additional, even when the digital infrastructure is fabricated, making ready have to be given to the lecturers to make use of the digital system to offer genuine and correct, uninterrupted and seamless training to the scholars.

Remote learning more and more depends on the dependable energy flexibly and common Web connectivity which can be a fantastical factor for Tier 2 and Tier 3 cities in India.

15.9 What Are the Advantages of Online Learning?

15.9.1 Efficiency:

Online learning offers teachers an efficient way to deliver lessons to students. Online learning has a number of tools such as videos, PDFs, podcasts, and teachers can use all these tools as part of their lesson plans. By extending the lesson plan beyond traditional textbooks to include online resources, teachers are able to become more efficient educators.

15.9.2 Accessibility of Time and Place:

Another advantage of online education is that it allows students to attend classes from any location of their choice. It also allows schools to reach out to a more extensive network of students, instead of being restricted by geographical boundaries.

Additionally, online lectures can be recorded, archived, and shared for future reference. This allows students to access the learning material at a time of their comfort.

Thus, online learning offers students the accessibility of time and place in education.

15.9.3 Affordability

Another advantage of online learning is reduced financial costs. Online education is far more affordable as compared to physical learning.

This is because online learning eliminates the cost points of student transportation, student meals, and most importantly, real estate. Additionally, all the course or study materials are available online, thus creating a paperless learning environment which is more affordable, while also being beneficial to the environment.

15.9.4 Improved Student Attendance:

Since online classes can be taken from home or location of choice, there are fewer chances of students missing out on lessons.

15.9.5 Suits A Variety of Learning Styles:

Every student has a different learning journey and a different learning style. Some students are visual learners, while some students prefer to learn through audio.

Similarly, some students thrive in the classroom, and other students are solo learners who get distracted by large groups.

The online learning system, with its range of options and resources, can be personalized in many ways. It is the best way to create a perfect learning environment suited to the needs of each student.

15.10.1 What Are the Disadvantages of Online Learning?

a. **Inability to Focus on Screens:** For many students, one of the biggest challenges of online learning is the struggle with focusing on the screen for long periods of time. With online learning, there is also a greater chance for students to be easily distracted by social media or other sites. Therefore, it is imperative for the teachers to keep their online classes crisp, engaging, and interactive to help students stay focused on the lesson.
b. **Technology Issues:** Another key challenge of online classes is internet connectivity. While internet penetration has grown in leaps and bounds over the past few years, in smaller cities and towns, a consistent connection with decent speed is a problem. Without a consistent internet connection for students or teachers, there can be a lack of continuity in learning for the child. This is detrimental to the education process.
c. **Sense of Isolation:** Students can learn a lot from being in the company of their peers. However, in an online class, there are minimal physical interactions between students and teachers. This often results in a sense of isolation for the students. In this situation, it is imperative that the school allow for other forms of communication between the students, peers, and teachers. This can include online messages, emails and video conferencing that will allow for face-to-face interaction and reduce the sense of isolation.
d. **Teacher Training:** Online learning requires teachers to have a basic understanding of using digital forms of learning. However, this is not the case always. Very often, teachers have a very basic understanding of technology. Sometimes, they don't even have the necessary resources and tools to conducts online classes. To combat this, it is important for schools to invest in training teachers with the latest technology updates so that they can conduct their online classes seamlessly.
e. **Manage Screen Time:** Many parents are concerned about the health hazards of having their children spend so many hours staring at a screen.
   This increase in screen time is one of the biggest concerns and disadvantages of online learning. Sometimes students also develop bad posture and other physical problems due to staying hunched in front of a screen.
   A good solution to this would be to give the students plenty of breaks from the screen to refresh their mind and their body.

15.11 The Psychological Effects of COVID-19 on Children:

Children are likely to be experiencing worry, anxiety and fear, and this can include the types of fears that are very similar to those experienced by adults, such as a fear of dying, a fear of their relatives dying, or a fear of what it means to receive medical treatment.

If schools have closed as part of necessary measures, then children may no longer have that sense of structure and stimulation that is provided by that environment, and now they have less opportunity to be with their friends and get that social support that is essential for good mental well-being.

15.12 Differences Between Online and Classroom Teaching:

For online teachers, the working space is determined mostly by the teacher, rather than the school or language institution, as in classroom-based teaching. The online work environment also involves using interactive teaching tools and software to engage your students as needed.

In some ways, live online lessons are similar to traditional face-to-face classes — a teacher can present information and interact with a group of people in real time — in other ways, there are some important differences. Let's take some time to explore them. The first essential difference is in classroom management.

Why online schooling is bad:

While logistically sound, taking too many online courses or having poor online instruction can be harmful to a student's future. One of the most glaring issues with online education is the lack of interpersonal communication many at-risk students are behind in reading and math.

Which Online Teaching is best?

VIP Kid. Beijing-based VIPKID is one of the best paid online teaching jobs if you are interested in teaching English online. All lesson planning, grading, and curriculum development are taken care of so you can concentrate on what you do best: inspiring your students.

Online Classes Help Students:

- Flexibility. Students have the freedom to juggle their careers and school because they aren't tied down to a fixed schedule. ...
- Reduced Costs. Online education can cost less due to a variety of reasons. ...
- Networking Opportunities. ...
- Documentation. ...
- Increased Instructor - Student Time. ...
- Access to Expertise.

Face-to-face learning can take many forms, as can **online learning**. For the purpose of this post, face-to-face learning means a live, two-way interaction.

Online learning, then, will mean anything that doesn't include a live instructor There might be content delivered through video, but it's a one-way interaction a few important clarifications to note:

- Face-to-face learning can take many forms, as can online learning.
- For the purpose of this post, face-to-face learning means a live, two-way interaction.
- Online learning, then, will mean anything that doesn't include a live instructor.
- So, online learning here is where a student sits down and learns through a self-paced system completely on their own. There might be content delivered through video, but it's a one-way interaction.
- And with that definition, face-to-face learning can actually take place online (a Face Time tutoring session, or live instructor leading an online classroom or individual where there is two-way interaction) but isn't categorized as online learning in this context.

a. **Advantages of Face-to-Face Communication:**

- Promotes constructive discussion between parties: 2-way communication enabling productive dialogue,
- Body Language: Facial expression & demeanour visualized,
- Relationship building & promotion of trust: Forges relationships & message transparency.
- Clarity of message: reduced ambiguity.

b. Disadvantages of Face-to-Face communication:

- Logistical constraints: geographical challenges,
- Set up costs: venue hire & travel,
- Ineffectiveness on larger scale lacks engagement and participation,
- responding on Impulse: ineffective response.

15.13 Advantages and Disadvantages of Online and Classroom Learning:

Online Learning Advantages:

- No need to travel, saving both time and money.
- Whenever and wherever you like: early morning, while commuting or eating, during work breaks or in the evening. At home, in coffee shops, or on the train. Take a break anytime to give your mind a short rest.
- Online learning usually includes pre-recorded videos. Sometimes these are simple recordings of lectures with or without accompanying slides. Other courses and MOOCs are dynamic learning experiences when videos are recorded in different locations or produced with green screen technology, sound effects, music and advanced graphics. Sometimes videos include embedded questions that students have to answer before continuing the video.
- MOOCs are self-contained. No need to buy textbooks although some MOOCs have optional texts.
- You can speed up videos during easy parts and slow them down to understand more difficult concepts.

- This facility is particularly useful if you are not a native speaker of the language, or if your instructor has an unfamiliar accent that you have difficulty understanding.
- You can pause videos while writing notes or re-watch them as often as necessary. Many courses also provide transcripts for their videos. If an interactive transcript is provided, you can click on a relevant section of the transcript to watch that part of the video.
- If videos or transcripts can be downloaded to your device you will then have unlimited access to them.
- Many MOOCs provide recommended and optional reading materials and extra resources. These can include useful websites or papers freely available online.
- You can take free MOOCs over and over again without losing money if you need more time to succeed.
- In courses with dynamic discussion forums you can discuss issues with fellow students from all around the world.

a. Online Learning Disadvantages:

- No face-to-face contact with fellow students or course staff.
- No student facilities such as laboratories or libraries, although some MOOCs incorporate practical activities to be done at home, virtual laboratory experiments, reading lists of freely-available papers or temporary subscriptions to journals.
- It can be hard to find answers to questions or resolve difficulties, especially when discussion forum participation is low.
- You need effective self-motivation.

b. Classroom Learning Advantages:

- You can ask questions (assuming the instructor welcomes questions).
- You can discuss issues with fellow students.
- There is ample opportunity for social interaction and support.
- You have access to on-campus student facilities.

c. Classroom Learning Disadvantages:

- Travel time and cost.
- Attendance times can be restrictive or inconvenient.
- Shy students may have trouble approaching the instructor with questions.
- You usually have to sit through each lecture even if you already know most of the material.
- You may be required to buy compulsory textbooks.

15.14 Conclusion:

COVID-19 has impacted immensely to the education sector of India. Though it has created many challenges, various opportunities are also evolved. The Indian Govt. and different stakeholders of education have explored the possibility of Open and Distance learning (ODL) by adopting different digital technologies to cope up with the present crisis of COVID-19. India is not fully equipped to make education reach all corners of the nation via digital platforms.

The students who aren't privileged like the others will suffer due to the present choice of digital platforms. But universities and the government of India are relentlessly trying to come up with a solution to resolve this problem. The priority should be to utilise digital technology to create an advantageous position for millions of young students in India. It is need of the hour for the educational institutions to strengthen their knowledge and Information Technology infrastructure to be ready for facing COVID-19 like situations.

Even if the COVID-19 crisis stretches longer, there is an urgent need to take efforts on maximum utilization of online platforms so that students not only complete their degree in this academic year but also to get ready for the future digital oriented environment. The concept of "work from home" has greater relevance in such pandemic situation to reduce spread of COVID-19. India should develop creative strategies to ensure that all children must have sustainable access to learning during pandemic COVID-19. The Indian policies must include various individuals from diverse backgrounds including remote regions, marginalized and minority groups for effective delivery of education.

As online practice is benefitting the students immensely, it should be continued after the lockdown. Further detailed statistical study may be undertaken to explore the impact of COVID-19 on education system of India.

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16. "COVID-19 and My Concrete Cognizance"

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Abstract:

With so many fables going around about the Corona virus, it can be tough to know which information to trust. The COVID-19 pandemic has led to a histrionic loss of human life worldwide and presents an extraordinary challenge to public health, food systems and the world of work. The Coronavirus disease (COVID-19) has squeezed every fragment of life like commercial establishment, education, economy, religion, transport, tourism, employment, entertainment, food security, sports, and of course, human life etc. The outbreak is a major destabilizing threat to the entire world. This Research article delineate a pragmatic experience of a daughter who had witnessed her entire family members such as, her parents, only brother when suffered from COVID-19 how the social atmosphere changed instantaneously and so easily. As a social human being, the last ray of hope which is normally expected from the medical practitioners a minimum care and comfort that also, not received at that crucial moment of life and death. They also turned unsympathetic and acted like a butcher. The medical staffs who were supposed to provide all sorts of reprieves instead of that, they took her father, patient of COVID-19 as a burden on their shoulder and treated him like a guinea pig applying all sorts of steroids and high dosage medicines without even bothering his necessities and severe situation.

The role of a Doctor in all circumstances it is expected to be caring, compassionate and generous. But how a Doctor converts his responsibilities into a liability and simply accepted the entire case in a silly manner about that, it is mentioned by the author as her "Concrete Cognizance". The Doctors being a doctor, not even touched her father to check him meticulously. They were also not aware about the diurnal sufferings of him which we went through so critically because these Doctors are appointed in a Covid Multispeciality Hospital just to mark their presence in different shifts and to show they are "On duty". So, the loopholes and dark sides of maltreatment in COVID-19 cases which so long no one ventured to articulate or demonstrate the researcher tried her best to figure out the bitter truth of it.

Key-Words: Covid-19, Doctor, challenge, outbreak, maltreatment.

16.1 Introduction:

COVID-19 – the name is adequate enough to make people scared, much ferocious than a venomous snake or other wild animals. But this deadly virus someday will hit my family and will break the exquisitely adorned family tree I have never imagined not even in rarest of rare nightmare of mine.

Covid-19 when started in India the mortality rate of death was high gradually, with the special care and assistance of medical practitioners and Government initiative it was somehow under control as per news channels, articles and reviews. So like other human being am also in a notion that this virus like chicken pox and measles once will attack everyone but, our doctors are capable and skilled enough to cure the same.

On 4th December, 2020 my father suddenly suffered from breathing issue and he was admitted into a Covid Multi-speciality hospital at West Bengal. Reaching there it was checked his oxygen level was 77 not that much low in a general sense, that he can be counted in the list of "severe" condition. He was pretty fine as I had a video call with him with the help of a lady in charge of that hospital who might have felt pity after hearing that, for the first time, after returning from Delhi I have not seen my father's joyous face. My father was so confident and enthused after seeing me in video call he tried to remove his oxygen mask but after my screaming he left such daring attempt and consoled me that he was absolutely fine.

On 6th December, 2020 suddenly early in the morning we received a call from Hospital that my father was shifted in ICU as his oxygen mask got removed while sleeping and no one was there to trace when it was removed . May be for whole night or for long hours. We being a patient's part simply listened such spicy story like an illiterate, rustic people as if, education is far away from us. And that's the starting of doom's day as if, Polestar has suddenly stopped guiding and darkness spreaded all through. Similarly, our "Titanic" got hit by iceberg and drowned our family voyage within a second of life.

As life cannot be glum so for a better days, with greater hope, we started awaiting as may some miracle happens and bestowed us with the same joy and fun as we are used to since birth under my father's shelter and support. On 17th December, 2020 suddenly in the afternoon I received a call from the Hospital (from the same lady who did video calls and in charge of my father's admission) that my father's report is Covid negative so we have to shift our father immediately in some other Hospital. We were so surprised that a patient who was in ICU and in BIPAP support how to shift him so casually and instantly? Being non-medical persons me and my brother tried our best to contact in some reputed private nursing homes as well as hospitals but all our efforts were in vain as no one gave us a green signal for shifting a patient in such serious condition. So we requested to the Doctor in charge of that day during afternoon please consider my father's critical situation, the moment he will be little stable we will not think twice and will shift. But that Doctor who, though a Doctor by profession for whom we lit diyas and rang the bell once, was so cruel and unkind that am really lack of words to articulate. A Doctor whose primary objective is to act as a savior and protector how can be so rude and rough? That Doctor easily commanded us to shift our father and stated clearly we are not going to take any further responsibilities. Some how we managed to keep him in the same hospital on that day ignorant of the fact, that we simply beaconed few calculating days for my father. On 17th December, 2020 on the same day, in the evening I received a call from the same lady that my father was put in ventilation and we were informed after ventilation process was over. The Doctor in charge in the evening did the same and reproached me over phone (from same lady's mobile phone as no doctors were ready to share their personal contact numbers not even ready to disclose their identity since beginning) that in afternoon it was already intimated to you that your father's condition was critical but still you people were apathetic so I have to take such attempt. I simply said "Sir, the only words communicated to us was my father is now Covid negative hence to shift him as early as possible" and also I added, "Please ask the lady from whose phone you are calling she had called".

The Doctor was bit confused and unable to retort for a second and very explicitly said in professional way “then it’s a miscommunication”.

Respected all, if for a Doctor it’s so easy to state a medical process and procedure is miscommunication and taking up a case so casually and lightly then what’s about their social, moral and professional responsibilities? I think, we all are shielded with some sort of professional ethics. Even if, the daily wagers too, are committed and imbibed with ethics.

I lost my father on 21st December, 2020 and I lost everything for my entire life. He is such a backbone of our family, a strong mental support for me. Now am in a state either to survive or to sink. But for whose negligence this mishap happened they are relaxing as for them, it is simply like to do a data entry in their so called medical register and to stay peaceful as salary will be credited on time. Last but not the least, their peaceful staying killing me in pieces and hence I thought to jot down my devastating and deadly experience with the citizens of the country. A reputed and renowned person like my father if suffered and died from medical negligence then just ponder about the ailment of general and non-famous people!!!

Best Regards,

Dr. Sulakshana

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17. How India Tackles with an Epidemic: Covid-19

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Abstract:

Around 100 years ago in the year 1918, world faced the first pandemic situation caused by virus named Influenza, which was not even destroying the public health but also put a strong effect on the economy as well. Now in 20th century human antiquity is observing a very astonishing time by fighting with an invisible enemy known as novel COVID-19 coronavirus epidemic condition caused by a novel SARS-CoV-2 virus, identified in the year 2019 in China. Initially, it was observed in the local food market of Wuhan city, China and soon spreading across the World. COVID-19 virus having more than 80 % similarity to previously identified virus in 2002 named SARS (Severe Acute Respiratory Syndrome). COVID-19 having a very high transmission rate, which make it more deadly as compared to SARS and MERS, due to which it spreads very soon in every continent on earth, forcing us to live with this virus for perhaps a long time. As per the International Health Regulations (IHR) 2005, WHO declared a Public Health Emergency of International Concern (PHEIC) in order to alert all countries regarding COVID-19. However, now we are more equipped, but as on 27 April 2020, around 2.97 M confirmed cases with 206 K deaths and 863 K recovered cases have been reported which affects the social and economic values globally. This article aims to review the potential preventive measures taken by large populated Asian countries (India) that could reduce the viral transmission among the community in the present context of time.

Key words: SARS, COVID 19, Worldwide Scenario, Asian countries, Preventive measures, MERS

17.1 Introduction:

Around four centuries ago, humanity firstly encountered with a novel strain of virus named Influenza, caused widespread illness, deaths, and disruption globally. Word Influenza derived from latin words “Influentia”, and it belongs to family Orthomyxoviridae, having eight genomic segments together make around ten proteins and based on their strains it is classified into types A, B, and C [1,2]. Strain A, is the only pandemic and zoonotic in nature, having aquatic birds and swine are the reservoirs and responsible for the majority of morbidity and

mortality globally [3]. According to the Lancet report in year 2008, around 28,000 cases and 111,500 deaths of children of age less than five occurred globally caused due to Influenza infection [4]. As per the report of the United States Centre for Disease Control and Prevention, Influenza virus divided into its subtypes based on the surface antigenic and identified 18 H subtypes (hemagglutinin) and 11 N (neuraminidase) subtypes. Although, out of these only three sub types named H1, H2, and H3 are responsible for human to human transmission [5, 6]. The first pandemic was observed in 1729 (spring) in Russia [7], spreading across Europe within six months and globally in next three years. The second pandemic appeared in China [8] in 1781, spread through Russia and Europe affected mostly young adults [9]. Despite the high illness, and low mortality rate, pandemic outbreak in Russia killed about one million people globally in 1889 [10].

Around more than 50 % of the world population live in Asian countries, China is the world largest populous country followed by India having population around more than 130 crores, and faced so many pandemic situations since 1871 (Cholera), in 1896 (Bombay Plague), 1918 (Influenza), 1970 (Polio), 1974 (Small Pox), 2003 (Dengue and SARS), 2006 (Chikungunya), 209 (H1N1 Flu), 2015 (Indian Swine Flu), 2020 (COVID-19) and several others have been recorded throughout history, in some case we succeed eradicate and some are still present [11]. Now a day's human race is facing a life threatening new pandemic disease caused by novel corona viruses named SARS-CoV-2, causing disease called COVID-19. On December 31, 2019 first case was reported to World Health Organization (WHO) office in China, with unexplained low respiratory tract infections.

After the intensive outbreak investigation program, Chinese Centre for Disease Control and Prevention (CDC), reported a novel virus belonging to the coronavirus (CoV) having *Coronaviridae* family and order *Nidovirales* [12]. In the beginning, the virus was named by the scientists as 2019-nCoV and later on the International Committee on Taxonomy of Viruses (ICTV) coined it as a SARS-CoV-2 virus because its symptoms being very similar to SARS. On 26 Feb 2020, first case of COVID-19 was reported in the United States, and informed that this infection was highly contagious and spreads quickly via human-to-human transmission [13]. The cases due to COVID-19 soon became prevalent wherein involving around more than 200 countries with 3.97 M cases and approximately 276 K deaths globally (table 17.1).

Table 17.1: Worldwide COVID-19 Cases Reported

Continents	Major victim counties	No of Cases	Deaths
Africa	Egypt, South Africa, Morocco, Algeria, Ghana	23,267	1,155
Asia	Turkey, china, Iran, India, Israel	391,644	15012
America	United states, Brazil, Canada, Peru, Chile	934,355	49605
Europe	Spain, Italy, Germany, United Kingdom, France	1,073,947	103,989
Oceania	Australia, New Zealand, Guam, French Polynesia, Fiji	7,981	91
Other	Japan	696	7

17.2 Novel Corona Virus, SARS-CoV-2:

After the investigation of around 137 genomes belongs to coronavirus strains, scientist reported that the current epidemic outbreak caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) and extensively phylogenetic analysis of glycoprotein alignment and comparison sequences (spike) with different animals, researchers concluded that novel SARS-CoV-2 was more similar to the yak and bats beta coronavirus and suggested that yak could act as an intermediate host which brings this infection to humans. However, the genome of SARS-CoV-2 contains open reading frames (ORFs 1 & 2). Theses Open Reading Frames encodes the two polyproteins (S and N), responsible for virus genome maintenance after cleavage and interacts with ACE-2 receptors and gain entry in to the cell. Apart from this it also has set of spike glycoprotein, an envelope protein, membrane protein and nucleocapsid [14].

Literature reports stated that the novel corona virus has single strand RNA, crown-like appearance, having N S proteins, and has 80 % similar to SARS-CoV and 50 % identical to MERS-CoV, 90 % to bat-SL-CoVZC45 and 88 % of bat-SL-CoVZXC21. The most common symptoms of COVID-19 are fever, cough, myalgia or fatigue, pneumonia, loss of taste and complicated dyspnea, whereas less common are headache, diarrhea, hemoptysis, runny nose, and phlegm-producing cough. Although, mild symptoms were reported after 1 week and recovered soon, while severe symptoms like, respiratory failure (alveolar damage) which may lead to death especially in elderly and pre-existing disease patients [13]. After the reported of first case of Corona virus on 31 December 2019 in WHO Country Office China, it diffused across boundary and became a pandemic. As per WHO, till 07 May 2020, around with 3.97 M cases and approximately 276 K deaths worldwide were identified and reported. Currently, we are enough prominent equipped to curb the new pandemics as compared with previous encountered epidemics. However, it is well known facts that china is the host of the new pandemic situation and it also have the huge number of cases of COVID 19 than the rest of the world and the number of cases rising rapidly around the world and to overcome this World Health Organization (WHO) issued guidelines contains several preventive measures against COVID-19 through which countries have contained the outbreak with some success like South Korea and Taiwan.

17.3 How India Tackled Covid-19?

India has oldest civilizations, spanning a period of more than 4000 years, witnessing of the fusion of several customs and traditions and have the rich culture and heritage in the world. Apart from this, India has encountered many epidemics and pandemic situation such as Influenza, cholera, polio, dengue, smallpox etc.

There were 189,955 cholera deaths were reported in India and between 1905 and 1908, there was an average of about 526,000 deaths each year were recorded; nearly 150,000 deaths in the 1906 were reported in Kumbh Mela, Allahabad [15], India. In year 1918 a new pandemic situation was faced by Indiana named, around 20-50 million deaths were recorded worldwide, caused by the H1N1 strain of Influenza. In year 1970, a new health emergency occurred in India, named polio, which soon get spared all the cities; however, Uttar Pradesh was the most infected state. In 1964 and 1965, Bombay and Vellore received the vaccine against respectively [16] and in January 2011 India was declared polio-free country.

However, we have eradicated most of them and others are disappear with time. Currently India facing sudden and rapid outbreaks named COVID-19, which was originated from China, on November 2019. According to data obtained from Ministry Health Affair, govt of India and WHO database dashboard, the total number of confirmed [17] cases in India are 59662 (77 foreign nationals) in 32 states/union territories) and 1981 deaths from reported till 07 May 2020 from all over India. However, in Delhi around 6318 people and in Mumbai approximately 19063, although in India it infects younger people unlike others countries. First case of COVID-19 was reported by Indian Government on 30 January 2020 to a university students came from Wuhan, China in Kerala [17]. After words in consideration of consequences faced by the other countries prime minister of India firstly ordered public curfew on 22 March 2020 and declared 21 days lockdown on 24 March 2020 followed by a series of regulations against COVID-19 [18]. During the lockdown people were restricted to their home, all kinds of transport (water, air and road) were stopped with the exception of essential goods, fire, police and emergency services. All public gathering places, including temples, Market, schools, universities, industries, banks, etc. were closed except daily routine item shop like food shops, banks ATMs, petrol pumps etc. after observing the condition the prime minister of India discussed with state governments and other advisory committees, announced the extension of the national lockdown in India till 3rd May 2020. Apart from this Indian government also implemented, others preventive measures like staying at home, obey social distancing, avoid going outside unnecessary, wash hands with soaps or alcohol based sanitizers for at least 20 seconds after touching any thin unhygienic, avoid unnecessary touch and wearing protective masks when move in public etc.

17.4 Challenges in COVID-19 Scenario:

The major challenges of addressing the COVID-19 are briefly described as follows.

A limited number of test and treatment facilities: Diagnosis and treatment facilities of COVID-19 in developing countries are very limited and currently there is no effective treatment against COVID-19 available; hence testing is the only weapon by which we can tackle this highly contagious disease; ensured by isolation and quarantine of the person(s). However, lack of a sufficient number of ICU beds, ventilator machines, hospitals are also limited to us against COVID-19 outbreak.

Lack of safety equipment: COVID-19 infected large amount of population globally, for this equal number of health care professionals will required and their protection is another challenge which can be ensure by adequate supply of safety equipment but unfortunately, inadequate supply of PPE, masks, hand gloves to the health service providers, leading to major constraints in providing treatment facilities. A significant lack of safety equipment is fuelling the concern for frontline health service providers like doctors and nurses.

Lack of skilled human resources and health service provider: The use of real-time RT-PCR assay used for the diagnosis COVID-19 infection requires skilled persons to handle such sophisticated equipment and avoid contamination, false-negative results and risks of biological hazards etc.

Large number of vulnerable and disadvantaged people: It is another major challenges face by each country because special attention has to be paid to protect the vulnerable groups or individuals such as the elder people, day-laborers, patients with comorbidities etc.

The elder people are more susceptible because of their low immunity to fight against the disease and therefore, they need more intensive care-based treatment which would require an increased number of ventilators.

17.5 Conclusion:

Currently, humanities is under the grip of novel viral SARS-CoV-2 that causes coronavirus disease COVID-19 and worldwide researchers are working tirelessly for coming up with the prevention and therapeutic strategies against COVID-19 in order to protect the human race. Healthcare leaders around the world learned various lesions from past pandemic situations and make several strategies including early interventions, tracing of infected people, makes quarantines centers, and implement social distancing etc. together contributed significantly to control the spread the COVID-19 infection. Another common preventive measure taking by all countries and cities is clinical laboratory tests for SARS-CoV-2, which providing support to thousands of people to detect the earliest stages of the outbreaks in their communities. However, till date information has been gathered from the two-way communication network named Information Network for Epidemics (EPI-WIN) developed by WHO regarding transmission mechanisms and clinical spectrum, that is emphasizing the fact that social distancing and isolation are the best weapons in reducing the viral transmission among the community. Apart from this, unfortunately no clinical treatment available for this, and we only hope for the best, that at earliest we will recover from this deadly situation and rise again.

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