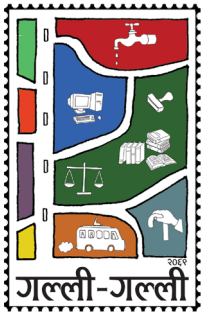


# A HANDBOOK ON DIGITIZATION, COVID-19 AND HUMAN RIGHTS IN NEPAL

GALLI GALLI
SANEPA, LALITPUR

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**A Handbook on**
**"Digitization, Covid-19 and Human Rights in Nepal"**

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- Galli Galli Team

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## Context

With the upgrade in technology in recent days, our daily life is becoming easier. The information and news flow through digital media have become rapidly accessible to the public, even more so by the increase in mobile phones these days. Nepal Telecom Authority's June 2021 situation report shows mobile access, and 75 % internet penetration in Nepal (Nepal Telecommunication Authority, 2020). According to DataReportal,2020, till January 2020 only there were 42.85 million mobile connections in Nepal, this is equivalent to 148% of the total population. It also says that till within the same time period, internet users have reached 10.21 million in Nepal. Between 2019 to 2020 only the internet users increased by 315 thousand. The DataReportal (2020) mentions that 10 million social media users exist in Nepal until January 2020 which makes 35% social media penetration. The success of digitalization in Nepal can be seen below as per the oversight report of Nepal Rastra Bank which entails bank card users and other instruments used by the customers, Debit card users increased by 9.25 percent in 2020 as compared to 2019. Credit card users increased by 30.17 percent in 2020 as compared to 2019. Prepaid card users decreased by 5.36 percent in 2020 as compared to 2019. The total number of ATMs increased by 23.82 percent in 2020 as compared to 2019. In the Year 2019/20, the number of mobile banking users increased by 35.46 percent and reached 11,306,797. Similarly, the number of internet banking users increased by 12.41 percent and reached a staggering 1,031,227. All these figures represent the readiness of the population to shift to new online methods and adapt to the digitization process.

The spread of COVID-19 and lockdown period even triggered the digitization of the various public services such as banking, online shopping, advertising and marketing. Therefore, it is evident that the mobile phone connections, use of the internet and use of social media is playing a crucial role in our life. So does the flow of information being shared on social media. With relation to covid-19 pandemic time, Out of many, three fundamental democratic values are found hardly hit in case of Nepal which are worth mentioning here: authentic information flow, accountable government, and effective public service delivery.

First, authentic information flows. Democracy sustains on the flow of authentic information. When the Covid pandemic started and people were forced to stay in lockdown within their households, the flow of information took a different route. The reach of the print media became very limited. People started depending on social media for the news these days. The increasing dependency on social media for information not necessarily always from authentic sources. Unlike the mainstream media houses and established organizations, most of the people can easily transmit the information. For example, we saw a flow of several different pieces of information on social media regarding medicines, vaccines, COVID transmissions, deaths and other issues. This information was not uniform, very fluctuating and having multiple meanings. People were sharing them as soon as they saw the headline, not considering the truthfulness of the information and authenticity of the sources. That led to unnecessary fear, anxiety and paranoia among people. Similarly, even the government bodies and officials were found supplying fluctuating versions of information. One recent example includes the information shared in Indian news channels and reactions in Nepali social media. The memes, unreliable information, and fictional stories somehow affected the fundamental values of democracy, sovereignty, and international relations.

Second, the accountable government. The accountable government is a very important feature of the democratic governance where the ruler becomes responsible towards its citizens. One feature of the accountable government could be the civic spaces where the public can speak about their concerns, and the responses from the concerned authority in the proper way. Observing the government tendencies since March 24 till now, it shows that the rulers do not want to hear the concerns from the people, and address them genuinely. The responses of the authorities were a bit rude and unresponsive. We observed more than 15 different protests between May-June 2020 in Maitighar Mandala area itself. This is the proof that the concerned authorities are not listening to the citizen's voices from the proper channel. The incidents do not show the good news for a democratic and responsible government.

Third, effective public service delivery. Numerous small-scale innovations have shown their effectiveness in disaster situations, in preventing human trafficking and even in reducing corruption in public service delivery. However, large scale deployment of social media and ICT in information flow, governance and development required being cognizant of how real-world hierarchies and power dynamics impact the ability to access and utilize such technologies. Making sure that the basic and fundamental public services are at the reach of the general public is very crucial for effective democracy. The

ongoing Covid pandemic all of the sudden broke the supply chain and rapidly transferred most of the services through digital spaces or just halted. While increasing numbers of households have access to internet-enabled mobile phones, who in the household gets to use them? And who has sufficient skills to use them effectively? There are several questions coming in front of us who care about the democratic, open and just society. While increasing numbers of people live within the range of affordable internet services, are we providing the poor and marginalized sufficient services to motivate them to invest in going online? And when they decide to go online do we understand their digital literacy sufficiently well to design user interfaces that suit their needs? Credible evidence to answer the questions posed above are critical to bridging the digital divide, and ensuring that the benefits of innovation and technology are widely distributed. In this context, this project aims to facilitate wider public conversations as citizen dialogues on two broad areas: disinformation and how to tackle it; and hierarchies and power dynamics in the use of digital platforms and what sorts of evidence as well as intervention help address them. The democratic values and covid-19 issues will be cross-cutting themes for both the areas.

Galli Galli organizes various activities to create dialogues and conversations among citizens, media people, authorities and stakeholders in order to understand the existing real-world hierarchies and power dynamics on digital space, the ability to access and utilize such technologies of citizens, digital divide across the poor, less educated and marginalized population, and what intervention models or evidence might support minimizing the existing divides.

From November 2020 to October 2021, Galli Galli organized a series of public conversation and publication activities:

- To trigger a public debate on the use and consequences of disinformation and digital divide.
- To inform the public about the impact of disinformation in day to day life socially and psychologically.
- To facilitate conversation among media, policy people and stakeholders on what we need and how we can address the existing hierarchies and power dynamics in digital space.
- To think about the ways to strengthen democratic culture and also tackling the challenges brought by covid-19





# 1. Digitization in Education Sector

Education is a human right and a foundation to understand other rights. It is also an important basis for citizens' duties and fundamental awareness. Historically education has always been envisioned and even practiced in the physical mode, starting with the ancient times under a tree to the pre-pandemic times in a physical classroom on a black/green board. Although concepts and technologies like LearnSmart and projectors were adopted by many schools and colleges, they all were merely used as a supplement to the theory teaching and not as a replacement.

Going by the definition, digitalization in education refers to the use of components like computers, laptops, the internet, software, etc. to teach the students.

The advice to adopt such a method i.e. the digital medium of education has been in the system for a long time but was actually implemented from the past year due to the lockdown and shutdown of physical classes given the spread of life-threatening viruses. Although this was not the best method to adopt the technology never-the-less it resulted in a spike of virtual classes leading to the adoption of newer techniques of imparting knowledge among the students.

This sudden shift from renowned classroom teaching to digital classes with virtual logins and greater software learning curves, resistance was bound to happen among the faculty group. All this led to an array of challenges faced by the students as well as the teachers which acted as speed bumps in the adoption of the method.

## Challenges to digital adoption

The biggest challenge from the student's perspective was to ensure a stable electricity connection, internet access, and a separate desktop or laptop device to attend the classes. As the data suggests that 10-12% of the population in Nepal does not have access to electricity, ensuring a stable internet connection seems to be a far-fetched problem. Moving to the faculty side, adoption and use of technology such as MS Teams, google meet, classrooms,

etc. proved to be a mammoth task for the teachers as their years of offline teaching have no aspect to be present on such websites. Other challenges such as lack of similar grasping power in the virtual mode as compared to classroom teachings, lack of personal touch, and the sudden dissatisfaction among the students to sit in front of a screen and study caused issues.

Despite such challenges, various colleges and universities like Kathmandu University adopted such methods proficiently and did and are still trying their best to make the class as interactive for the students as possible which brings us to the advantages of this method.

### Advantages of digitalization

With businesses rapidly adopting the online mode of business, there has been a spike in online transactions resulting in a significant improvement in adoption rates of virtual transactions as compared to the past. A free environment not restricted to the time of operations of a bank or financial institution provides the freedom to transact as and when required by the people. An overall improvement in customer satisfaction as the online world is free from human errors and delays that may be faced due to an array of factors in physical facilities.

### Challenges in digital adoption

The biggest challenge faced by people was the lack of proper infrastructure with the financial institutions as such a massive shift wasn't expected all of a sudden, this led to server downtimes and transactions failures. Security risks such as hacking, fraud, and personal information thefts were faced leading to trust erosion from the institution's capabilities. Overall, the pioneering costs for the businesses to spread awareness, build trust and sync the trust with actual performance was high.

Other than banks, digitalization in other domains such as investment banking, investments, real estate, mortgage lending all have reaped the benefit of this shift in the form of increased customer base, better operations handling, future predictions, and advanced analytics for better business services.

E.g. Recently, there has been an introduction of 'Automated Wealth managers' that are capable of investing your money on your behalf in the best of the schemes based on rigorous calculations, all thanks to AI (artificial intelligence) software.





# 2. Digitization in Finance Sector

With the rise in the technology used and the shift of the demographics from offline to the online methods of life, there has been a significant push for digitalization in everyday life such as ordering groceries, shopping, education, etc. With this push affecting all the industries equally, significant measures have been taken to comply with the infrastructure and regulatory requirements to make it all possible and ensure no loose ends that could end up harming the system.
Keeping up with the change in trends and ways of doing business, the financial sector has been active in adopting the digital technologies before the pandemic too but the crisis has brought digital banking into a sharp focus due to the inability of physically visiting the bank in the lockdown.

Digitalization and digital technologies are leading the fundamental changes in society and finance is the major sector influenced by it. The emergence of online banking, digital media, ATM cards, digital payments, and wallets has reconstructed the general way of performing business and supplemented the existence of traditional businesses. According to the American Scientific Research Journal for Engineering, Technology, and Sciences (ASRJETS) (2018) "Digitalization is the phenomenon of transforming analog data into the digital language (i.e. digiti-zation), which, in turn, can improve business relationships between customers and
companies, bringing added value to the whole economy and society".

With a mindset of visiting the bank for transactions like balance update, opening a fixed deposit, applications, etc. the pandemic has resulted in all the people shifting towards the online means of banking and transactions. Such a drastic shift from the traditional means of business and transactions to the new and modern ways brings along a range of positive and negative outcomes.

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### Future Scope

The future of digitization in the finance sector looks quite bright with events and activities already set in motion to advance to a greater degree of machine dependency as compared to humans. The use of python etc. in FinTech solutions depicts automation of an array of processes leading to efficiency and effectiveness in operations. With the onset of various new technologies such as Artificial Intelligence, Machine learning, etc. The finance industry is all set to change in the near future for the general good.

Talking specifically about Nepal, the government 1-8-80 scheme, introduction of digital wallets as well as a year-on-year increase in the card users and online transactions portrays the acceptance of such modern methods of undertaking transactions in the countrywide setup.





# 3. Digitization in Health Sector

The ability of technology to bring a change in the world is no longer a dream, with the onset of the 21st century, numerous instances can be seen where technology has helped better the overall process and improved efficiency, be it in finance, education, banking, etc. Initiating with the banking and finance sector digitization has now left no stone unturned and no industry unconquered. Given the speed of the process and the rate at which technology is being adopted, there are very few industries still working at the traditional norms.

One such industry is Healthcare. Following the old traditional norms, the healthcare industry until very recently was all based upon physical visits to the doctors, physical purchase of medicines, diagnosis, etc. But the efforts of a lot of factors combined with the extra push by the global pandemic, the healthcare industry has successfully adopted digitalization although to limited means but the change has started on a positive note.

### Major factors accelerating digital transformation in the industry -

The first and the foremost factor that has contributed significantly towards digital adoption is the Entrepreneur environment of the country. Even before the pandemic, there were multiple startups aimed at improving the convenience of the people and started companies like Swasthya, ClincOne, NepMeds, etc. which delivered prescription medicines to the homes of the patients eradicating the need to visit a pharmacy.

Covid-19 is yet another major factor that helped in the overall adoption. With lockdowns in place due to the spread of the deadly virus, it was not possible to visit the doctor even for general consultations regarding non-covid symptoms or even for the virus checkup. Sites like iClinic, HamroDoctor, etc. filled the gap and

connected the doctors and the patients virtually without any physical risk which was further supplemented by the online pharmacies.

The overall ecosystem created by these applications in the time of need not only helped the nation but also led to the growth of digitization in the healthcare sector.

Benefits to the General Public/Advantages of Digitized Healthcare - Digitized Healthcare provides a myriad of advantages to the people. Starting with the reduction in inefficiencies in terms of time wasted by waiting for the doctor at their clinic or hospital. Booking an online consultation has not only saved time but also reduced the turn-around time as the sooner the diagnostics the sooner the treatment starts.

Wider access of doctors to choose from is another benefit that is in sync with digitized care. Now patients are in no need to travel far distances to consult a particular doctor etc. resulting in better access also known as expanding the reach with a touch of personalization for the ill.

## Benefits to the Doctors/Healthcare Professionals

Bringing an overall positive to the industry as a whole and not just for the patients, digitization has the following benefits for healthcare professionals.

An improved system of tracking, storing, and viewing the patients' past data, medical history, test results, etc. results in better management and quicker response rates on behalf of the professional. The increase in capacity to consult patients due to the time limitation in virtual mode has provided the professionals a chance to take care of more people along with increasing their revenues. Not to mention the rise in inconvenience of sharing the patients' data across platforms for cases involving expert opinions etc. results in greater efficiency of operations and quicker diagnostics.

## Future scope

With new trends in terms of technology entering the industry every now and then such as blockchain, artificial intelligence, robotics, etc. the future of digitization in healthcare is definitely to look out for. Changes in the traditional ways of operations like diagnostics, surgery, vaccinations, etc. soon will be transformed and there would exist harmonious sync between doctors and specifically programmed software and machines capable of aiding in the whole process i.e. diagnostics to recovery to storage and analysis of the patient data.

In compliance with the unique nature of the industry, the peak of digitalization in healthcare is limited to a Hybrid model of care provided to the people i.e. the maximum one can do is book an online consultation, order medicines online, etc. but surgery's, patients with serious conditions, blood tests patients are still required to visit a doctor physically or get a doctor to visit their homes and provide their services. A greater degree of penetration in the overall industry of these technological changes is what the future holds for healthcare.

Overall, the healthcare industry is among the last few to adopt digitization which was accelerated due to the global pandemic and the restrictions on public movements but the acceptance of these new technologies at such a rapid pace by the general public depicts a positive attitude among the people to adopt and practice such changes without much resistance even post the pandemic.

# 4. Summary and Conclusion

Galli Galli has been working to accelerate public debate and dialogue on digitization and its impact on human rights during the COVID- 19 pandemic. The activities and events from November 2020 to October 2021 focused on the three sectors of Digital Nepal Framework: Finance, Education and Health. Galli Galli has produced 3 position papers, conducted virtual dialogue events and discussions. The discussion events were participatory, inclusive and diverse from various perspectives, for example, we balanced the panellists and participants from gender, geographical and different academic sectoral perspectives.

Digitization in Nepal has been on the GoN's radar since 1996 when a national learning center was established 1996 to train the government staff (Khanal 2015). However the center was dismantled because it was not used effectively. By 2000 an Information Technology policy was introduced, however, it would be 2010 before government agencies started implementation. By 2014, there had been significant progress with more than 7000 government offices digitizing many day-to-day operations. Alongside the increased digitization in state services, internet use in the public domain was also rapidly increasing. Starting from a low base of 7.3% in 2010 (The World Bank, 2020). This impressive growth rate has persisted with penetration standing at almost 75 % internet penetration rate and mobile penetration stands at 148%, with 42.85 million mobile connections. Furthermore, it is unclear how much the ability to use digital tools i.e. digital literacy is prevalent in the population and which factors of exclusion impact it.

The 2018 "Digital Nepal Framework- Unlocking Nepal's Growth Potential" provides a roadmap for digitization to contribute to the socio-economic development of Nepal. This framework identifies 8 sectors - digital foundation, agriculture, health, education, energy, tourism, finance and urban infrastructures - where digitization can be socioeconomically transformational. All 8 of these areas - to various degrees - touch on the fundamental rights of citizens that both the constitution and international conventions that Nepal is party to guarantee. Thus, it is appropriate and important to use a rights-based lens to analyse digitization efforts.





## Key Outcomes from Galli Galli's Discussions Events

Several rounds of discussions were conducted by the Galli Galli related to the impact of COVID 19 on finance, education and health sectors. The major focus was on the digitization process and the human rights perspectives.

COVID 19 gave us a great opportunity to digitize multiple service sectors including education, financial and health sectors. We have seen that government authorities as well as private sectors are trying to increase the population that have access to banking, health services, education services through the use of the internet, telephone and other communication channels. Digitization has contributed to make our lives easier, and it has made life even more easier during the COVID-19 related lockdowns and restriction periods. The COVID pandemic has pushed people towards using e-commerce platforms for buying and selling necessity goods. Now those who have access, knowledge and skills have better privileges to buy daily necessities easily through e-commerce sites and sell their products. Nepal Rastra Bank (NRB) claimed it is promoting digital literacy and awareness in the banking sector in collaboration with its partners to understand digitization.

At the same time, after the COVID outbreak and government-imposed restrictions, thousands of families from urban areas migrated to rural areas which increased more challenges such as lack of access to broadband internet, availability of electronic devices and electricity.

The characteristics of digital citizenship or digital process needs huge efforts in our country. Because we need to reimagine the system, curriculum, reading materials, and preparation of teachers. Therefore, without prior thoughts and planning on these issues the digitization project might be incomplete or that might create problematic situations in later phases.
Major questions or concerns collected during the discussion programs are:

- At first, many people might have access to mobile phones, but all mobile phones are not digital tool friendly. And the vast areas of Nepal do not have stable internet connections. Most of the marginalized community has not been a part of the digitization process whether it is in education, finance or health sector. People who do not have access to gadgets and the internet, cannot be a part of digitization.'

- Even though people have access to digital devices and the internet, the process and platforms in Nepal are promoted in English language, not everybody can use the online and digital platforms due to language barrier. The people who do not have access to devices or technology and people who could not understand the language are at a risk of being left out. For example, families where parents are less educated and children are quite young, connecting to the internet is very difficult for online education because of lack of digital literacy for parents. The children in secondary level education are somewhat technology friendly in the places where access to digitization is more convenient, however it is stressful for children in the basic level.

- Most of the contents being used in digital platforms are not locally made. The teaching learning materials are usually coming from global social media giants or crowdsourced sites. The local contexts and user-friendly ness are difficult aspects in publicly available contents.

- The cyber security issue is another major concern. Data Protection law is a very weak and often ignored part in Nepal. The existing legal arrangements can't protect human rights properly in this rapidly changing and digitized world. Bankers in Nepal often state that it is not an easy task to convince customers to use online banking services. Many customers feel uncomfortable or express their inability in using the e-payment system securely. Even though people are comfortably using digital platforms, people are unaware what kind of data is stored until when and how their data will be used. For example, departmental stores collect customers' data. Are those data and information stored safely? What if the database of these companies are hacked or misused?

- Awareness on digitization and payment applications still lacks in the rural as well as urban areas. In recent days, literacy rate has increased, and many people can use social sites like Facebook and Viber. There is an expectation that people will gradually learn to use the applications, but the most serious concern is how they will learn about digital rights. Is it safer to know how to use social media or digital platforms without their rights?

- During the discussions around digitization in the education sector, almost all speakers and participants shared their concerns that the COVID pandemic and government efforts are pushing our society towards digitization while all the teaching learning methodologies are based on traditional education systems. If digitization is not able to meet the challenges of inclusion, the people who are left behind will never get uplifted. Most of the government school teachers shared that online teaching-learning and using ICT is difficult for them.

- The local government is not prepared enough to deal with such an emergency. And the local governments are not properly communicating. There are hundreds of efforts ongoing in different parts without proper coordination which is leading to repetition of several already failed initiatives in other parts. There's no information and communication about the contingency budget allocated for emergency time for local government.

- The central government is lobbying for the increasing tele-medicine facilities and increasing digital health services from hospitals. People expressed their concerns about how it is difficult for them to reach out to health centres and get even consultations services.

- There are not enough programs in order to increase digital literacy and digital awareness.

The discussions, events and position papers raised various issues and concerns about the digitization process in Nepal in education, finance and health sectors. The concluding takeaways from the events focused on the suggestion that the government of Nepal should issue and upgrade the necessary guidelines, law and body to secure consumer rights, digital rights, monitor e-commerce platforms and overall digitization process. Similarly, it was suggested that the government should pay attention to creating infrastructures, supervise digitization and needed policies in order to monitor issues like data protection and privacy. All organizations such as the government, private sector, civil society and media have to pay attention towards making old aged and less educated people a part of digitization in Nepal. The most important task is to create content about the existing government policies regarding digitization, promote the awareness of the public about their digital rights, and also increase awareness about safety and security when taking part in digital activities.

5. Annexes

# प्रविधि विस्तारसँगै चाहिएको सुरक्षा र विश्वसनीयता

Kabi Adhikari/ कवि अधिकारी

https://ekantipur.com/opinion/2021/11/14/163685542358292251.html

सरकारले दुरसञ्चार सेवाप्रदायक डेटामा आधारित कम्पनीलाई नियमन गर्न पनि उत्तिकै आवश्यक छ । उनीहरूले दाबी गरेजस्तो एमबीपीएस उपलब्ध गराउन सकेका हुदैनन् ।

कोभिड-१९ ले विश्वलाई शिथिल बनाइरहेकै छ । यसले विश्वभर स्वास्थ्य क्षेत्रमा भएका अन्वेषण, खोज र तयारीलाई ठिग्याउने काम मात्र गरेको छैन, मानवजातिलाई नै एक पटक स्वास्थ्यका क्षेत्रबारे सोच्न बाध्य पारिदिएको छ । सबैजसो क्षेत्रलाई असर पुऱ्याएको कोभिड हरेक बहसमा जोडिएकै हुन्छ ।

कोभिडले जनस्वास्थ्यमा मात्र होइन, सबै मुलुकको आर्थिक-भौतिक विकास अनि अन्तर्राष्ट्रिय व्यापार, विश्वव्यापीकरण, विश्व उत्पादन शृंखला र वितरण प्रणालीको मर्ममा प्रहार गरेको छ । बलजषती प्रविधिको उपयोग गर्नैपर्ने अवस्था आएको छ । धेरैजसो क्षेत्रको काम मानिसको भौतिक उपस्थितिबिना नै भइरहेका छन् । त्यो गर्न हामी बाध्य छौं, अर्को विकल्प पनि छैन ।

## विगतको स्मरण र कोभिडको “देन”

दुई दशकअघि मात्रै, विदेशमा बसोबास गर्ने साथीभाइ वा आफन्तले अनलाइन कक्षा लिएको अनि परीक्षा दिएको भनेको सुन्दा “अहो, यस्तो पनि सम्भव छ र” भन्ने लाग्थ्यो । अझ विदेशमा त घरै बसेर पनि किनमेल गर्छन् रे भन्दा कस्तो प्रविधि आएछ भनेर आश्चर्य मानिन्थ्यो । तर अहिले यो विश्वव्यापी महामारीले सबैलाई यसमा अभ्यस्त पार्दै लगेको छ । हुन त यहाँ पनि इन्टरनेटको प्रयोग सुरु भएसँगै धेरैतिरको पहुँच केही सहज हुँदै गएको अनुभूति भएको थियो ।

हाम्रो मुलुकमा अझै सुरु नभए पनि विकसित र विकासशील मूलुकहरूमा निषेधित क्षेत्रमा पार्किङ गर्दा होस् या तोकिएको भन्दा बढी गतिमा गाडि गुडाउँदा, जरिवानाको रसिद चालकको निवासमै आइपुग्छ । अनि जरिवाना तिर्नेले पनि घरबाटै हर्जाना बुझाउँछ । यस्ता कुरा केही समयअघिसम्म पनि हामीजस्ता अल्पविकसित मुलुकका नागरिकलाई अनौठै लाग्थ्यो । अझ मजस्ता कैयौं नेपालीलाई स्मरण नै होला, एटीएम कार्ड लिएर त्यसबाटै पहिलो पटक किनमेल गर्दाको क्षण । अहिले नेपालमै यसको प्रयोग धेरै हुन थालेको छ । मभन्दा अघिल्लो पुस्ताले समेत फलफूल र तरकारी किन्दासमेत मोबाइलबाट क्यूआर कोड स्क्यान गरेर पैसा तिर्ने गर्छ ।

हाम्रो देशमा ८३ प्रतिशतभन्दा बढी जनसंख्यामा इन्टरनेटको पहुँच विस्तार भैसकेको छ । कोभिडले झन् धेरै नेपालीको इन्टरनेट पहुँच र डिजिटल माध्यम/ई-सेवामा निर्भरता बढाइदियो । जनजीवन अस्तव्यस्त भयो । अर्बौं नागरिक घरमै थुनिएर बसे । रोगले भन्दा भोकले मर्ने स्थितिसम्म आउँदा पनि घरभित्रै बसिरहनुको विकल्प रहेन । यसले गर्दा विगतमा नगरिएका अभ्यास गर्नुपर्ने भयो ।

कोभिडकै कारण हामी भर्चुअल शिक्षा, ई-बैंकिङ, घरबाटै कामलगायतमा अभ्यस्त भइरहेका छौं । गुणस्तरीय शिक्षाका लागि सरकारले सूचना तथा सञ्चार प्रविधि (आईसीटी) डिजिटल उपकरणहरू एकीकृत गर्ने प्रयास थालेको छ । राष्ट्रिय आईसीटी नीति-२०१५ र डिजिटल नेपाल फ्रेमवर्क-२०१८ जस्ता नीति र कार्यक्रममार्फत गुणस्तरीय शिक्षाका लागि अनुकूल वातावरण बनाउने र नवीन आविष्कारहरूलाई अपनाउने कामहरू पनि भएका छन् ।

छिमेकी भारत नै पनि प्रविधिमा निकै अगाडि बढिसक्दा हामी भने कछुवा गतिमै थियौं । अहिले पनि अवस्था त्यति भिन्न भइसकेको त छैन तर बालबालिकाहरू डिजिटाइजेसनमा अभ्यस्त हुँदै छन् । यसले इन्टरनेटको प्रयोगलाई प्रभावकारी बनाउँदै लैजानेछ । यो अवस्था आउनुलाई कतिपयले कोभिडको देन पनि भनिरहेका छन्। पहिले विकसित मुलुकमा उपयोगहीन भएका प्रविधिहरू यहाँ आउँथे भने अब यहीँ नयाँ प्रयोग हुन सक्ने परिस्थिति बन्दै गएको छ । जब केही जानिन्छ अनि न थप खोजी हुन्छ, अहिले त्यही हुन थालेको छ । यस अर्थमा कोभिडले सृजना गरेको चुनौती हाम्रा लागि अवसरमा रूपान्तरण हुन सक्छ । अर्कातिर, सूचना तथा सञ्चार, वित्तीय वा अन्य क्षेत्रमा जस्तै स्वास्थ्य क्षेत्रमा अनुसन्धान, विकास र समान रूपमा प्रविधिको उपयोग नहुनु विडम्बनापूर्ण छ ।

## डिजिटल सुरक्षाको चुनौती

हामी अहिले पनि बाहिर उपयोगहीन भैसकेका सफ्टवेयरहरु प्रयोग गरिरहेका छौं । बैंक तथा वित्तीय संस्थाहरुले समेत यस्ता सफ्टवेयर प्रयोग गरेको देखिन्छ । त्यसै कारण नेपालीको पैसा सुरक्षित हुन नसक्ने, एटीएम मेसिनबाट अन्यले नै पैसा झिकेर लैजानेजस्ता घटनाहरु भएका छन् । यसमा सुधार आवश्यक छ ।
डिजिटल नेपाल फ्रेमवर्कअन्तर्गत आठ क्षेत्र र असी सेवाहरुमा डिजिटल पहलको आवश्यकता औंल्याइएको छ । इन्टरनेट पहुँचलाई मौलिक हकको रुपमा मान्यता दिएर विस्तार गर्ने र सबै नागरिकको पहुँचमा पुऱ्याउने आधारभूत काम सरकारले अघि बढाएमा मात्र यो सम्भव हुनेछ ।

फाइभजी अवलम्बन, फाइबर उपयोग गर्नेजस्ता सुझावहरु त्यही फ्रेमवर्कभित्र छन् । नेपालजस्तो अल्पविकसित मुलुकले प्रविधिको एजेन्डा र उपयोग गलाई सँगै लैजानुपर्ने हुन्छ । यसमा केही हदसम्म काम भइरहे पनि नतिजा खासै आएको छैन । डिजिटल संसाधनलाई ध्यानमा लिएर शिक्षा र प्रविधिमा अघि बढ्न अत्यावश्यक छ । मुलुक डिजिटाइजेसनमा त गयो, सबै क्षेत्र डिजिटाइज हुँदै पनि छ । टेक्नोलोजी, नियामक निकाय र सरकारले संरचनागत पाठोको अडिट गरेर आवश्यक कानुनी व्यवस्था नगरेसम्म डिजिटाइजेसनमा पुग्यौं भन्न सकिन्न । यो सुरक्षित र विश्वसनीय हुनुका साथै सबैमा पहुँच पनि पुऱ्याउनुपर्छ । त्यहाँ भएका एप्सहरु नेपाली भाषामै हुन सके जनमानसले सरल ढंगले उपयोग गर्न सक्छ । निश्चित योजना र कार्यान्वयनको पाठोमा दक्ष र इमानदार हुन सकेमा यस्ता विषय अघि बढाउन सकिनेछ ।

अन्तमा, इन्टरनेटको पहुँच र यसको गुणस्तरलाई नै डिजिटाइजेसनका लागि आधारभूत पूर्वाधारका रुपमा लिइनुपर्छ । हामी ७७ जिल्लामै इन्टरनेट पुगेको छ त भन्छौं तर सहर छोडेर गाउँ पुगेका बालबालिकाका लागि सेवा गुणस्तरीय नभएकै कारण विद्यालय शिक्षा हासिल गर्न कठिन भएको छ । सरकारले टेलिकम सेवाप्रदायक डेटामा आधारित कम्पनीलाई नियमन गर्न पनि उत्तिकै आवश्यक छ । उनीहरुले दाबी गरेजस्तो एमबीपीएस उपलब्ध गराउन सकेका हुँदैनन्। सबै जिल्लामा पुगेको भन्ने तर त्यहाँ सबैमा गुणस्तरीय पहुँच नपुऱ्याउने गर्नु भएन । विश्वभर ५१ लाखभन्दा बढी मानिसको ज्यान लिइसकेको कोभिडले डिजिटाइजेसन, वर्क फ्रम होमजस्ता संस्कारको विकास गरे पनि यसलाई ध्वंसबाट सृजित प्रविधि उपयोगको व्यावहारिक अभ्यासका रुपमा लिनुपर्छ ।





# कोभिड-१९ महामारी र राज्यको दायित्व

Roshan Pokharel / रोशन पोखरेल

https://ekagaj.com/article/thought/28889/

पुराना मूल्य-मान्यता धुलोमा गए । फलामे बारहरु हल्लिए । धेरै कुरा आफसे-आफ परिवर्तन भए, अर्थशास्त्रीय सिद्धान्तदेखि भूराजनीतिक सन्तुलन, जीवन जिउने तरिका र सामाजिक सम्बन्धहरुमा । तर यो रुपान्तरणले हामीमाझ एकप्रकारको उदासी ल्यायो । हिजोसम्म एक प्रकारको सोचिन्थ्यो, काम गरि न्थ्यो भने आज एउटा भाइरसका कारणले हाम्रो सोचमा पनि परिवर्तन ल्याएको छ । हामी हिजोको जस्तै उस्तै रहेनौं । भाइरस आफैंमा एउटा रुपान्तरकारी शक्ति भएर आयो ।

सन् २०१७ मै विश्व स्वास्थ्य संगठनले केही समयको अन्तरालमा महामारी आउनेछ भनेर सचेत गराएको थियो । त्यसैगरी २०१९ सेप्टेम्बरमा पनि ग्लोबल प्रिपेडनेस फर मोनिटरिङ बोर्ड डब्ल'एचओ र वर्ल्ड बैंकका विज्ञहरुको समूहले "हामी सम्पूर्ण विश्व महामारीको नजिक छौं र यसको "थ्रेट" छ है र यो रोगजनक भाइरसले धेरै मानिसको ज्यान लिन सक्छ, अर्थतन्त्रमा बृहत्तर प्रभाव पार्न सक्छ र राष्ट्रिय सुरक्षालाई खतम गरेर अस्थिरता ल्याउँछ" भनेर सूचित गरेका थिए । शनै :शनै, कसरी यी महामारीबारे खतराको सूचनाहरुलाई सम्पूर्ण विश्व जगत्बाट अनदेखा गरियो भन्ने प्रश्न उठ्छ ।

तथापि, हामी कोभिड महामारिको बीचमा रहँदै गर्दा विश्वमा सम्पूर्ण समाजलाई एकै किसिमको समस्याले पिरोलेको पाइन्छ, अर्थात् यसको प्रभावबाट कसरी जोखिमरहित भएर बस्ने ? यससँग जुध्नका लागि कसरी राज्य नागरिकहरु सरकार र निजी क्षेत्रले हातेमालो गरेर जाने ? खास गरीकन यो सबैका लागि एउटा ठूलो परीक्षा पनि हो ।

संसारका विभिन्न मुलुकहरुले कोभिडसँग आ-आफनो किसिमले प्रतिरक्षा (जुधेका छन्) पछिल्लो दिनहरुमा हार्ड इम्युनिटी खोप, मास्क, अक्सिजन, भिसा (बन्देज)/

लिमिटेड) क्वारेन्टाइन, लकडाउन, राहत वितरण इत्यादि उपाय अपनाएर राष्ट्रहरुले यसको निदान तथा जोखिमको मात्रा कम गरेको पाइन्छ ।

त्यसैगरी विभिन्न साना/ठूला मुलुकहरुले एकेडेमिया, सैन्यबल, निजीक्षेत्र, सिभिन्न सोसाइटी परिचालन गरेर कसरी क्षति न्यूनीकरण गर्ने तथा यसलाई सामूहिक रूपमा कसरी लैजाने भन्ने रणनीति बनाएका छन् । यो कोभिड एउटा भाइरसका कारण निम्तिएको महामारी भए तापनि यसले समाजका विभिन्न क्षेत्रहरुमा (उदाहरणका लागि आर्थिक, शैक्षिक, स्वास्थ्य, राजनैतिक भौगोलिक प्रविधिगत) यसको दह्रो प्रभाव पारेको छ जसले गर्दा विश्वका सम्पूर्ण नागरिक जनहरु, समाज र हाम्रो म'ल'क पनि नराम्रोसँग गाँजिएको छ ।

चीनले १ मार्च २०२० मा सरकारी स्तरकै तथ्याँमा ८ लाख केस र ३ हजार मृत्य' भएको देखाएको छ । तत्पश्चात यसको फैलावट कोरिया र इरानमा देखियो । हुदाहुँदै सन् २०२० को मार्चको अन्त्यतिर यसको केन्द्रविन्दु युरोपतिर पुग्यो । विशेष गरी इटालीमा ठूलो क्षति भयो र स्पेन र फ्रान्समा पनि । २०२० को जुन महिनामा संयुक्त अधिराज्यमा युरोपकै सबैभन्दा बढी मानवीय क्षति भएको पाइयो । यसरी २०२० मध्य मार्चमा युरोपमा फैलिएको महामारी मे २०२० को अन्तिमतिर (उत्तरी) अमेरिकामा गएर भयानक रुप लियो जसमा १ लाखभन्दा बढी मानिसको ज्यान गएको थियो । तत्पश्चात् पनि सन् २०२१ सम्म आइपुग्दा विश्वका धेरै मुलकहरुमा "दोस्रो लहर" फैलिएको र यसबाट पनि धेरै मानवीय क्षति भएको पाइन्छ ।

## मानव अधिकारको पाठो

अन्तर्राष्ट्रिय आर्थिक, सामाजिक तथा सांस्कृतिक अधिकारको धारा १२(२) अन्तर्गत राज्यको दायित्व कोभिड १९ लाई (१) रोकथाम (२) नियन्त्रण र (३) उपचार गर्नुपर्ने हुन्छ । यी तीनै उपाय मानव अधिकारको संरक्षण-संवर्द्धनका लागि गरिनुपर्दछ भन्ने विश्वव्यापी मान्यता पाइन्छ । यसअनुसार राज्यले बन्दाबन्दीको उपाय अपनाएको थियो भने नियन्त्रणमुखी उपायका लागि क्वारेन्टाइन, पीसीआरआरडीटी टेस्ट र उपचारात्मक उपायका लागि विभिन्न अस्पताल तथा अस्पतालभित्रका एकाइहरुलाई "कोभिड" स्पेसल उपचार कक्ष बनाएको थियो ।

आर्थिक, सामाजिक तथा सांस्कृतिक अधिकारको प्रतिज्ञापत्रको धारा १२(१) अनुसार" प्रस्तुत प्रतिज्ञापत्र पक्ष राष्ट्रहरु प्रत्येक व्यक्तिको शारीरिक र मानसिक स्वास्थ्यको उच्चतम प्राप्य स्तरको उपयोग गर्ने अधिकार स्वीकार गर्दछन् । १२(२) यस अधिकारको पूर्ण प्राप्ति हासिल गर्न प्रस्तुत प्रतिज्ञापत्रका पक्ष राष्ट्रहरुले चाल्ने कदमहरुमा निम्न कुराका लागि आवश्यक कदमसमेत समावेश हुनेछन् ;धारा १२(२) ग' प्रकोप, महामारी पेसागत र अन्य रोगहरुको रोकथाम उपचार तथा नियन्त्रण पनि हुँदाहुँदै पनि हामीले के बिर्सनु हुँदैन भने अन्तर्राष्ट्रिय सन्धि-सम्झौता तथा प्रतिज्ञापत्रको आषनै सीमा छ र सोहीअन्तर्गत आर्थिक, सामाजिक तथा सांस्कृतिक अधिकारको धारा २(१) अनुसार "प्रस्तुत प्रतिज्ञापत्रका प्रत्येक पक्ष राष्ट्रले व्यक्तिगत रूपमा तथा अन्तर्राष्ट्रिय सहयोग र सहायता विशेष गरी आर्थिक तथा प्राविधिक सहयोगमार्फत आषना उपलब्ध स्रोतहरुको अधिकतम मात्रामा उपयोग गरी मूलत: कानुनी उपायहरुको अवलम्बनसमेत सम्पूर्ण समुचित उपायहरुबाट प्रस्तुत प्रतिज्ञापत्रमा स्वीकृत अधिकारहरु प्रगतिशील रूपमा प्राप्त गर्दै जाने उद्देश्यहरुले कदमहरु चाल्ने प्रतिज्ञा गर्दछ ।

सरसर्ती हेर्दा यस प्रतिज्ञापत्रको अब्लिगेसन राज्यको उपलब्ध स्रोत-साधनमा भर पर्ने देखिन्छ । जसले गर्दा आर्थिक रूपमा पछि परेका राष्ट्रहरुले महामारीका बेला पनि आर्थिक रूपले सबल राष्ट्रहरुसँग आशा गर्नपर्ने देखियो । नेपालको सन्दर्भमा पनि हामीले कोभिड महामारीमा विभिन्न छिमेकी लगायत ईयू र अन्य मुलकसँग विभिन्न प्रकारले (खोप, पीपीई, अनलाइन लर्निङ सफ्टवेयर/हार्डवेयर मास्क, अक्सिजन सिलिन्डर लगायत अन्य सामग्रीमा) भर पर्नपरेको, सहयोग मागेको पाइन्छ । यसै प्रसूमा उल्लेखनीय त दक्षिण एसियाली मुलुक भुटान आर्थिक रूपले न त पिछडिएको, न सबल तर उसको आषनै पहिचान ग्राथ नेसनल हयाप्पिनेस भएको मुलुकले समेत संकटको बेला अर्थात् "दोस्रो लहरको" कोभिड १९ का बेला खोप दिएर नेपाललाई ठूलो गुन लगाएको थियो ।

## नेपालको सन्दर्भ

१. नागरिक अधिकारको सन्दर्भमा हाम्रो सर्वोच्च अदालतले कोभिड-१९ को दोस्रो महामारीको समयमा निषेधाज्ञा वा बन्दाबन्दी लागू भएको अवधिमा कर र जरिवाना नलिन सरकारको नाममा आदेश तथा बन्दाबन्दीको समयमा घरेलु हिंसा सन्दर्भमा अदालतको सन्देश सराहनीय देखिन्छ ।

२. शिक्षाको अधिकारको सन्दर्भमा विश्वका धेरैजसो देशलगायत हामीकहाँ पनि विद्यालय, कलेज, विश्वविद्यालयहरु बन्द भएका थिए । त्यसलाई सुचारु गर्न नागरिक/निजी रोगाको ठूलो सहयोग थियो । विशेषगरी प्रविधिगत रूपमा ।

यसका बाबजुद ग्याजेट हुने र नहुने बीचको कनेक्टिभिटी टिप्ने र नटिप्ने ठाउँ बीचको, बिजुली आउने र नआउने ठाउँको फरक, टीभी सिग्नल पुग्रेको र नपुग्रेको बीचको तथा रेडियोबाट पठाई पुग्ने/नपुग्नेमयध्ये यसको प्रभावकारिता मापन हुनु जरुरी छ ।

३. हेल्थ केयर सिस्टमको सन्दर्भमा स्थान, सुविधा, पहुँच, अस्पताल (निजी/सरकारी/सामुदायिक), बिरामीको चाप र महामारीको अवस्थाले गर्दा हामीकहाँ पनि "दोस्रो लहर"को बेलामसा सरकारी अस्पतालका डाक्टरहरूले सार्वजनिक रुपमै पब्लिक (जनस्वास्थ्य) हेल्थ केयर सिस्टम फेल भएको अवस्था ।

४. कोभिड-१९ को लैंगिक असमानताको सन्दर्भमा गाहिरो गरी प्रभाव छोडेको पाइन्छ । बालबालिका तथा बिरामी, वृद्धवृद्धाको स्याहारसुसार खास गरीकन महिलाहरुकै भागमा प ी अझ बढी कामको रोलले गाजेको देखिन्छ ।

५. सूचनाको सन्दर्भमा सही सूचनाको अभाव थियो । अझ महामारीको समयमा कुसूचनाले झन् त्रास तथा भाइरसको फैलावट बढाउन भूमिका बढाएको छ ।

६. त्यसैगरी कोभिड-१९ मा देखिएको अर्को समस्या पारदर्शिताको ठूलो अभाव देखिएको थियो । विशेष गरी फास्ट ट्र्याकको नाममा, सार्वजनिक खरिद ऐन प्रभावित गरी सामान झिकाएर र नझिकाएर दुवै प्रकारले नीतिगत भ्रष्टाचार भएको पाइन्छ ।

७. अर्को, विदेशबाट रेस्क्यू गर्ने विषयमा पनि सरकारी उदासीनता देखियो । अमूक देशबाट मात्रै सुरुमा उद्धार गरेर ल्याउने काम भयो ।

अन्त्यमा, कोभिड-१९ तथा भविष्यमा आउने महामारीसँग जुध्न निजी क्षेत्र, एकेडेमिया/सरकार तथा छिमेकी राष्ट्रहरुको सहयोग र (असाधारण) असाधारण मो बिलाइजेसनविना असम्भव देखिन्छ । कोभिड-१९ विश्वव्यापी एउटा जनस्वास्थ्य, फाइनान्सियल इकोनोमिक इमर्जेन्सी तथा विश्वव्यापी मानव अधिकार संकट नै हो । यसको महत्वपूर्ण रोकथाम गर्ने भनेकै मानव जातिलाई बचाउन र तत्पश्चात् राज्यका सम्पूर्ण सेक्टरमा पोस्ट कोभिड एन्जाइटी कसरी दूर गर्ने भन्ने नै हो । र, अहिलेको डेमोक्र्याटिक एन्जाइटीको युगमा हामीले लोकतन्त्रलाई कसरी सुदृढ र समुन्नत बनाउने भनेर सोच्न जरुरी छ ।





# भ्याक्सिनेसनपछि भर्चुअल भलाकुसारीको भविष्य के ?

Chandra Sekhar Adhikari / चन्द्रशेखर अधिकारी

https://ekagaj.com/article/thought/19483/?fbclid=IwAR2qjVn5pqWYw2BZeDfykUZFxjp1GOEl2953ZSg_OdNN8CK-JloW8RZFPuQ

विश्वका अधिकांश नेताहरु "भर्चुअल" संवादमा छन् । विश्वभर फैलिएको कोभिड-१९ को प्रकोपसँगै उनीहरु प्रविधिमैत्री हुन अभ्यस्त छन् । चिनियाँ राष्ट्रपति सी चिनफिङले गत मंगलबार साँझ विश्वका १ सय ६० नेतालाई "भर्चुअल" सम्बोधन गरे । सँगै अरु नेताहरुबाट पनि "भर्चुअल" सम्बोधन भयो । कुनै सामाजिक सञ्जालको "एक रुम"मा विश्वकै नेता अटाउने र आलोपालो बोल्ने मात्र होइन, बहस पनि गर्न सक्ने अवस्था प्रविधिबाट सम्भव भएको छ । हाम्रा पुराना दिग्गज नेताहरुलाई केही वर्ष अघिसम्म सामाजिक सञ्जालमा सक्रिय हुन सुझाउँदा जवाफ आएकै हो, "मेसिन किन्न बजेट व्यवस्थापन गर्छु ।"

यतिखेर तिनै नेताहरु मोबाइल फोनमार्फत "भर्चुअल" बैठकमा अभ्यस्त हुँदैछन् । त्यतिमात्र होइन, मोबाइलमा सिधा फोन गर्दा रेकर्ड हुन्छ भन्ने समेत बुझिसकेका छन् । उनीहरु सुरक्षित "एप"को समेत उपयोग गर्न थालेका छन् । यो कोभिड प्रकोप प्रविधिसँग अभ्यस्त पार्ने सकारात्मक पाटो हो ।

शक्ति मुलुकहरुका समूह संवाददेखि सबै मुलुक अटेको फोरम राष्ट्र संघ समेत "भर्चुअल" पद्धतिमा चलिरहेको छ । भर्चुअलसँगै गरिब मुलुकका जम्बो टोली न्यूयोर्क घुम्ने प्रथा रोकिएको छ । भौतिक उपस्थितिको मान्यता बिस्तारै हराउँदै जाँदै छ । ठूला-ठूला राष्ट्र नेताहरु यतिबेला "भर्चुअल" सञ्जालमा अभ्यस्त छन् । "ट्विटर स्पेस"मा नेताहरुका स्वर सुन्न थालिएको छ । पसलमा चिया गफ गरेझैं गफिन "क्लब हाउस"मा समेत प्रवेश गरेको भेटिन्छ ।

राष्ट्रसंघको महासभा र त्यसपछिका सेसन डिजिटल माध्यमबाट चलेका छन् । कोभिड संक्रमण जस्तो विषम परिस्थितिसँग जुध्न डिजिटल रुपान्तरणमा अभ्यस्त हुँदै गएको छ, विश्व-दुनियाँ । भौतिक उपस्थितिका निम्ति आग्रह गर्ने

कैयन् कार्यक्रम त्यही प्रविधितिरै जाँदैछन् ।
यद्यपि हामीकहाँ चाहिँ अभ्यस्त भनिएका केही युवा नेता आषनो सरकारी "म्याकबुक" सरकारी सञ्चारमा "कनेक्ट" गरी मन्त्रिपरिषद्को बैठकका "इस्यु" खोज्नसमेत सक्दैन थिए । हरेक पटक प्राविधिक सहयोग माग्दिहँदा प्रधानमन्त्री केपी शर्मा ओलीले युवालाई उडाइरहेका हुन्थे । उनी उडाउने शैलीमा भन्थे, "स्याउ पनि दिने, खान पनि सधैं सिकाउनुपर्ने ?"

सरकारी कोषबाट हरेक मन्त्रीलाई एप्पलको "म्याक बुक प्रो" उपलब्ध छ । एक पूर्वमन्त्रीले अनुभव सुनाए, "तर त्यसमा अभ्यस्त हुन नसकेका जोसिला युवा मन्त्री हरेक पटक पासवर्ड माग्दिहँदा ओलीले उडाउनु स्वाभाविक मानिन्थ्यो ।" तर, पनि युवा मन्त्री अर्को दिन फेरि पासवर्ड माग्दिहेका हुन्थे । एक दिनको मन्त्रिपरिषद् डिजिटलीकरणका विषयमा ओलीको भाषणमा आधा बढी बितेको पनि पनि तिनैले सुनाए ।

## चुनौतीपूर्ण छ, डिजिटलीकरण

चुनौतीपूर्ण समयमा नेपाल डिजिटल रूपान्तरण गएको छ । तर अझ पनि महँगो इन्टरनेट शुल्क र भनेको जति एमबीपीएस नदिने जस्ता कार्यले नागरिक हैरानीमा छन् । चुनौतीपूर्ण समयमा नेपालको डिजिटल रूपान्तरणका मुख्य "ट्रेन्ड" देखापरेको छ । नेपालमा डिजिटल रूपान्तरणका निम्ति योजना बने पनि अझै स्पष्टता भई नसकेको स्थिति छ ।

विश्वव्यापी महामारीले जन्माएको शब्द हो, खोप कूटनीति । त्यो पनि भर्चुअल माध्यमबाट नै सफल भएको छ । महामारी फैलिँदा यसलाई रोक्न सहकार्य नभए पनि प्रतिस्पर्धाले गर्दा भ्याक्सिन बने, तर वितरणमा चाहिँ विश्व नै अलमलियो । यहाँसम्म कि गरिब मुलुकले पहिले भ्याक्सिन नपाउने अवस्था आयो । अझै भ्याक्सिन समान रूपमा वितरण हुन नसकेकामा राष्ट्रसंघमा धनी मुलुकको आलोचना भइरहेकै छ ।

विश्व यतिबेला शक्ति महादेश एसियातिर फर्कन सक्छ भन्ने आँकलनमा रहिरहँदा कतै यो डिजटलीकरणले त्यसमा जोड दिने त होइन भन्ने देखिएको छ । सुरुवाती आशंका नकारात्मक हुन्छ, तर महामारी फैलिएपछि दुई-पक्षीय र बहुपक्षीय अन्तर्क्रिया हुन्छ नै । अन्तक्रिया हुनु भनेको सामान्य होइन । यही अन्तक्रियाले मानिसलाई सामूहिक प्रयत्नमा प्रेरित गर्छ र सफल पनि हुन्छ ।

कोभिड महामारी चीनको वुहानबाट फैलिएको हो । तर चीन प्राय: संक्रमणमुक्त भइसकेको छ । तर त्यसले मानिसमा भौतिक दूरी कायम गर्न आवश्यक देखायो । जसले मानिसदेखि मानिस डराउने अवस्था आयो । त्यसैले "भर्चुअल" माध्यममा घन्टौं संवाद हुन थाले । नेताहरू भिडियो कन्फरेन्स गर्न थाले । सुरुवाती चरणमा अलमल भए पनि पछि नेतृत्वले भर्चुअल छलफल गर्ने र भिडियो कन्फरेन्समा जोड दिन थालेपछि विश्व डिजिटल वार्ताको नयाँ चरणमा प्रवेश गरेको हो ।

## विश्व नै भर्चुअल

यद्यपि अझै सकेसम्म प्रत्यक्ष सहभागी हुन खोज्ने हाम्रा कूटनीतिक अधिकारीको सोच छ । त्यहीकारण हाम्रा केही अधिकारीहरू यतिबेला उज्वेकिस्तान पुगेका छन् । विगतमा नेपाल जस्ता गरिब मुलुकहरूले तुरुन्तै जानेभन्दा पनि पत्र कूटनीति, फोन कूटनीति अवलम्बन गरेको भए पनि "भर्चुअल" कूटनीतिको अवसर देखापरेको छ । अस्ट्रेलियाका प्रधानमन्त्री कोभिडकै समयमा जापान भ्रमणमा रहनु सामान्य विषय थिएन । खोप लगाइसकेका धनी मुलुक बेलायतमा भेला भए, जी-सेभेनको बैठकमा ।

पहिले राष्ट्रसंघबाहेक अन्य फोरम निकै कम थिए । असंलग्न आन्दोलन र राष्ट्रसंघ अनि अलि पछि "रिजनल" समूह बने । अहिले त "प्लस वान" अनि "टु प्लस वान" जस्ता सहकार्य अघि बढेको छ । एक मुलुकमा लन्च खाएर अर्को मुलुकमा डिनर खान जाने अवस्था पनि छ । त्यो सबै धनी मुलुकका लागि हुन् । नेपाल जस्ता मुलुकले सुरक्षित ढंगले भर्चुअल सहकार्य अघि बढाउनु पर्छ ।

राष्ट्रसंघ होस् या जी-७ का बैठक भौतिक उपस्थितिविना सञ्चालन भए । फेरि भ्याक्सिन लगाएपछि बिस्तारै भौतिक विगतमै फर्कन खोज्दैछन् । अन्तर्राष्ट्रिय मुद्राकोष र विश्व बैंक सबले वर्षैनि आयोजना गर्ने संयुक्त वसन्त बैठक "भर्चुअल" माध्यममै भए । अनि अमेरिका, इटाली, फ्रान्स, जापान, बेलायत, क्यानाडा, जर्मनी "जी-७"का नेताले अघिल्लो वर्ष "भिडियो कन्फरेन्स"बाट सम्मेलनमा सहभागिता जनाए । तर, भ्याक्सिन खोपसँगै यसपालि बेलायतमा भौतिक रूपमा भेटे ।

## सबैको आँखा प्रविधिमा

विकासोन्मुख नेपालदेखि विकसित "जी-सेभेन" राष्ट्रसम्मले एकैपटक कूटनीतिमा प्रविधिको प्रयोग गर्न अग्रसरता देखाएका छन् । यी सबै बाध्यात्मक

हुन् । कूटनीतिक कार्यलाई सूचना-प्रविधिको विकासले गएको दशकदेखि फरक कोणबाट प्रविधिमा लैजान खोजिरहेको थियो । त्यसमा महामारीले एकैचोटि घचेटेको हो । अब राष्ट्रहरूबीच पारस्परिक विश्वास कायम राख्न साक्षात्कारको यो शृंखलाले आधुनिक कूटनीतिको जग निर्माण गरेको छ ।

आमने-सामने र धेरै भेटपछि विश्वासपूर्वक संवाद हुनु मानवीय स्वभाव मानिन्छ । सँगै स्वाद फेर्ने "लन्च-डिनर"को अवसर कटौती हुने भए । यात्रासँगै प्राप्त हुने लाभहरण हुने नै भयो । नत्र, "भर्चुअल" बाटै सबै सहकार्य सम्भव हुन्छ भन्ने देखाएको छ । राष्ट्र संघ पनि भर्चुअल माध्यमबाटै कार्यक्रम गर्ने पक्षमा छ । अन्य अन्तर्राष्ट्रिय निकायको ध्यान पनि त्यही छ । प्रक्रियामुखी सरकारी काम-काजसमेत "भर्चुअल" हुन थालेको छ । प्रविधियुक्त कूटनीतिमा सूचनाको सुरक्षा ठूलो चुनौती मानिए पनि यसलाई विकसित र सुरक्षित बनाइनुपर्छ । यस्तै संकटले मुलुकलाई सहकार्यको खाँचो महसुस गराउँछ । यसैबाट सबै कुरा हुन सक्छ, तर सहकार्यका कतिपय विषयमा भौतिक उपस्थिति अपरिहार्य हुन सक्छ ।

अन्त्यमा,
नेपाल-नेपाली पनि प्रविधिमैत्री हुन बाध्य भएको भए, कोभिडसँगै । नेपाल सरकारले नागरिकलाई प्रदान गर्ने धेरैजसो सेवा/सुविधा अनलाइन/इन्टरनेटमार्फत प्रवाह भइरहेका छन् । यहाँसम्म कि शिक्षालाई अनलाइनतिरै घचेटेको छ ।

अब "भर्चुअल" कूटनीति अधिक प्रयोग गरिनुपर्छ । भौतिक उपस्थिति त यसो कहिलेकाहीं अनौपचारिक छलफल र "रिफ्रेस"का लागि मात्र उपयोग गर्दा हुन्छ । तर "भर्चुअल" कूटनीतिलाई सुरक्षित र अब्बल बनाउन भने राष्ट्रसंघ र ठूला मुलुकले अध्ययन गर्न आवश्यक छ ।

अन्यथा, नेपालमा भनिएको ई-बैंकिङ सेवा, ई-गभर्नेन्स, पेपरलेस कार्यालय भने को जस्तो अवस्था हुन्छ । त्यो भनिन्छ तर कतैबाट त्यसको व्यवस्थापन भएको हुँदैन । त्रिभुवन विश्वविद्यालयमा भर्ना हुन बैंकको अगाडि लाइन लाग्नुपर्ने अवस्था छ । आईपीएस, ई-बैंकिङ अनेकन् छन् र पनि भौचर बुझाउनुपर्ने हुनाले जानुपर्ने अवस्था छ । त्यस्ता विषयमा ध्यान दिएर अघि बढ्न आवश्यक छ ।





# डिजिटलीकरणमा पहुँचको असमानता

Rajib Timalsina / राजिब तिमल्सिना

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तथ्यांकहरूको समग्रतामा मूल्यांकन गर्ने हो भने डिजिटलीकरणको असमानता र विभेद छर्लंग हुन्छ । जनसंख्याभन्दा बढी मोबाइल सिम बिक्री भएको आधारमा नै सबै जनसंख्या टेलिफोनको पहुँचमा छन् भन्न सकिने अवस्था छैन ।

डिजिटल टेक्नोलोजीको द्रुत विकासले हाम्रो समाज एवं हाम्रा मानवीय व्यवहार मा संरचनात्मक परिवर्तन ल्याएको छ । भर्चुअल रूपमा डाटाको भण्डारण र डिजिटल उपकरणहरूमार्फत हुने सम्पर्क वर्तमान समाजको अपरिहार्य आवश्यकता बनेको छ । अहिलेको समाजको संरचना हेर्दा अब लिखित किताबको साक्षरता मात्र होइन, डिजिटल ज्ञानको नेभिगेसन र प्रविधि प्रयोगको सीप सबैका लागि आवश्यक भएको छ । जानी-नजानी हामी सूचना प्रविधिसँग समाहित हुँदै अघि बढ्नुको विकल्प छैन ।

नेपालमा पनि डिजिटल नागरिक परिचयपत्रको बारेमा बहस सुरु भएको छ । सार्वजनिक सेवा प्रवाह तथा सरकारी सेवाहरू प्रविधिको प्रयोग गरी सहज रूपमा नागरिकको पहुँचमा पुऱ्याउन अनेकन् प्रयास सुरु भएका छन्। प्रविधि परिचालन गरी सामाजिक आर्थिक क्षेत्र विस्तारको सम्भावनालाई अधिकतम उपयोग गर्न डिजिटल नेपाल फ्रेमवर्क (२०१९) अन्तर्गत विभिन्न क्षेत्र र उपक्षेत्रमा डिजिटलीकरणका सम्भावनाहरू पहिचान गरिएका छन् । यस फ्रेमवर्कको उद्देश्य वित्तीय, शिक्षा, स्वास्थ्यलगायतका आधारभूत मानवअधिकार एवं सार्वजनिक सेवाको सहज पहुँचबाहिर रहेका ठूलो संख्याका मानिसहरूसमक्ष प्रविधिमार्फत ती सेवाको पहुँच पुऱ्याउनु हो ।

विगत दुई आर्थिक वर्षदेखि कोभिड-१९ ले अर्थतन्त्रका हरेकजसो क्षेत्रमा नकारात्मक प्रभाव पारेको छ । डिजिटल प्रविधि र अनलाइन सेवाको प्रयोगले केही

हदसम्म सामाजिक सम्पर्क र कैयन् सेवा प्रवाहमा राहत प्रदान गरेको छ । हामीले कोभिड-१९ महामारीकै अवधिमा सयौँ डिजिटल प्लेटफर्महरुको पनि बढोत्तरी भएको देखेका छौं। धेरै साना र मझौला उद्यमहरुले भुक्तानी लिन र दिन पहिलेजस्तो नगदमा आधारित कारोबारको स । मोबाइल बैंकिङ प्रयोग गर्न थालिसकेका छन् । विशेषगरी, सहरी क्षेत्रका अधिकांश विद्यालयहरुले अनलाइन माध्यमबाट अध्यापन गरिरहेका छन । कनेक्ट आइपिएस तथा  ई-सेवाजस्ता डिजिटल भुक्तानी माध्यममा लाखौँ मानिस आबद्ध भएर कारोबार गरिरहेका छन । होम डेलिभरीका एपहरुबाट सामान खरिद-बिक्री भइरहेका दृश्य व्यापक र सामान्य बन्दै गएका छन् । यसरी प्रविधिको प्रयोग बढिरहेको अवस्थामा डिजिटल पहुँच र यसको प्रयोग गर्ने सीपको बारेमा बहस गर्न' आवश्यक हुन्छ ।

नेपाल दूरसञ्चार प्राधिकरणको नियमित प्रकाशन हुने प्रतिवेदनअनुसार ०७८ असार मसान्तसम्ममा मोबाइल फोन प्रयोगकर्ता तीन करोड ८१ लाख ३१ हजार दुई सय २७ रहेको देखिन्छ । मोबाइलमा इन्टरनेट सेवा लिने संख्या दुई करोड २८ लाख ४८ हजार चार सय तथा तारसहितको फाइबर ब्रोडब्यान्ड इन्टरनेट प्रयोगकर्ता ७१ लाख ५७ हजार दुई सय रहेको छ । जबकि, केन्द्रीय तथ्यांक विभागका अनुसार हाल नेपालको जनसंख्या तीन करोड दुई लाख २९ हजार नौ सय रहेको आकलन छ । यी तथ्यांकलाई हेर्दा मोबाइलको पहुँच शतप्रतिशतभन्दा बढी र इन्टरनेटको पहुँच करिब ७५ प्रतिशत जनसंख्यामा पुगेको देखिन्छ । यद्यपि, यसले वास्तविक पहुँच हो कि होइन, सबै प्रयोगकर्ताले इन्टरनेट नियमित चलाउँछन् या चलाउँदैनन्, प्रयोगकर्ताहरुले के-के सीप क्षमता जानेका छन् जस्ता कुराहरु भने थाहा दिँदैन ।

नेपालमा सूचना प्रविधि र इन्टरनेट पूर्वाधारको विकाससँगै डिजिटलीकरणका लागि स्मार्ट मोबाइल फोन, टेलिफोन नेटवर्क, ब्रोडब्यान्ड इन्टरनेट, विद्युत्को उपलब्धता र इन्टरनेट चलाउन सक्ने सीप क्षमता प्रमुख आवश्यकता हुन् । यी विषयमा हामीसँग वास्तविक तथ्यांकहरु उपलब्ध छैनन् । टेलिफोन नेटवर्क र विद्युत् उपलब्धताको स्थिति हेर्ने हो भने देशको करिब ८० प्रतिशतभन्दा बढी भूभागमा पहुँच पुगेको दाबी नेपालका टेलिफोन सेवा प्रदायकहरु तथा नेपाल विद्युत् प्राधिकरणको छ । टेलिफोन सेवाको पहुँच धेरै स्थानमा पुगेको भए पनि गुणस्तरीय ब्रोडब्यान्ड इन्टरनेट देशको लगभग आधा भूभागमा मात्रै पुगेको देखिन्छ । मोबाइल डाटामा आधारित ब्रोडब्यान्ड इन्टरनेटको पहुँच धेरै स्थानमा पुगे पनि गुणस्तरीय भिडियो कल नै गर्न सक्ने क्षमताको इन्टरनेट सीमित सहरी क्षेत्रमा मात्र उपलब्ध छ ।

०७६ सालमा असर नामक शैक्षिक अवस्थाको मूल्यांकन गर्ने एउटा सार्वजनिक सर्वेक्षणअन्तर्गत नेपालको प्रदेश २ मा रहेका १३६ पालिका, १२७१ वडामा रहेका ४५,६०० घरधुरी, १,३७,६९७ व्यक्ति तथा उनीहरुको घरपरिवारमा रहेका सबै सदस्यका बारेमा जानकारी संकलन गरिएको थियो । भूगोलको हिसाबले नेपालको सुगम तथा समतल क्षेत्र रहेको प्रदेश २ का आठ जिल्लाको सर्वेक्षणमा सामेल ९०.४ प्रतिशत घरधुरीमा मात्र विद्युत् जडान रहेको र विद्युत् जडान भएका घरहरुमा पनि सर्वेक्षण भएको दिन बिजुलीको अवस्था जाँच्दा १० मध्ये नौ घरमा मात्र विद्युत् चालू हालतमा रहेको पाइएको थियो । हामीले सर्वेक्षण गरेका घरमध्ये ५८ प्रतिशत घरधुरीमा चालू हालतको टेलिभिजन सेट र १४ प्रतिशत घरधुरीमा कम्प्युटर सेट वा ल्यापटपमध्ये कम्तीमा एक रहेको पाइएको थियो ।

"टेलिफोन सेवाको पहुँच धेरै स्थानमा पुगेको भए पनि गुणस्तरीय ब्रोडब्यान्ड इन्टरनेट देशको लगभग आधा भूभागमा मात्रै पुगेको देखिन्छ । मोबाइल डाटामा आधारित ब्रोडब्यान्ड इन्टरनेट धेरै स्थानमा पुगे पनि गुणस्तरीय भिडियो कल नै गर्न सक्ने क्षमताको इन्टरनेट सीमित सहरी क्षेत्रमा मात्र उपलब्ध छ ।"

घरधुरी सर्वेक्षणका क्रममा हामी गएका घरपरिवारमा रहेका १८ वर्षभन्दा माथिका वयस्क मानिसहरुमध्ये ७२ प्रतिशतसँग चालू हालतको सिमसहितको मोबाइल रहेको थियो । सर्वेक्षणबाट प्राप्त तथ्यांकमा सम्पूर्ण पुरुष जनसंख्याको ८६ प्रतिशत र सम्पूर्ण महिला जनसंख्याको ५७ प्रतिशतसँग मात्र चालू हालतको सिमसहितको मोबाइल रहेको पाइएको थियो । उनीहरुसँग रहेका ती मोबाइलहरुमध्ये पनि झन्डै ६५ प्रतिशत मात्र इन्टरनेट जोइन मिल्ने स्मार्ट मोबाइल सेट थिए । इन्टरनेटको पहुँचको कुरा गर्दा जम्मा ४१ प्रतिशत घरधुरीमा कम्तीमा एक सदस्यसँग नियमित ब्रोडब्यान्ड इन्टरनेट (मोबाइल फोन वा केबल) रहेको थियो । सर्वेक्षणमा समावेश भएका घरपरिवारका १८ वर्षभन्दा माथिका वयस्क पुरुषको सम्पूर्ण जनसंख्याको ५२ प्रतिशत र महिलाको सम्पूर्ण जनसंख्याको ३० प्रतिशतसँग मात्र इन्टरनेटको पहुँच रहेको पाइएको थियो ।

यही ०७८ असोज महिनामा हामीले श्रम र श्रमिकसम्बन्धी सर्वेक्षणको क्रममा प्रदेश २ को बारा, पर्सा, महोत्तरी र धनुषा तथा बागमती प्रदेशको मकवानपुर, चितवन, काठमाडौं, भक्तपुर र ललितपुरमा कृषि तथा निर्माण क्षेत्रमा कार्यरत करिब १२ सय मजदुरहरु भेटेका थियौं । त्यसक्रममा ९५ प्रतिशतभन्दा बढी पुरुष श्रमिक र करिब ५८ प्रतिशत महिला श्रमिकसँग चालू हालतको सिमसहितको मोबाइल

फोन रहेको पाइयो । तीमध्ये करिब ४० प्रतिशत श्रमिकसँग किप्याडयुक्त मोबाइल फोन सेट रहेको पाइयो । सर्वेक्षणमा समावेश श्रमिकहरुमा स्मार्ट फोन बोक्ने श्रमिकमा महिला श्रमिकको तुलनामा पुरुष श्रमिकको संख्या उच्च रहेको, धेरैजसो महिला श्रमिकको मोबाइल फोन नै नरहेको, भएको मोबाइल सेटमा पनि इन्टरनेट चलाउन सकिने खालको स्मार्ट फोन ज्यादै कमसँग मात्र रहेको र कतिपय महिला श्रमिकले आफनो व्यक्तिगत नभएर आफनो श्रीमान्कै मोबाइल फोन प्रयोग गर्ने गरेको बताएका थिए ।
यी सबै तथ्यांकको समग्रतामा मूल्यांकन गर्ने हो भने डिजिटलीकरणको असमानता र विभेद झल्किन हुन्छ ।

जनसंख्याभन्दा बढी मोबाइल सिम बिक्री भएको आधारमा नै सबै जनसंख्या टेलिफोनको पहुँचमा छन् भन्न सकिने अवस्था छैन । समाजको सीमान्तकृत तप्का अझै टेलिफोन पहुँचबाट बाहिर रहेको देखिन्छ । मोबाइल फोन भएकाम( ध्ये पनि इन्टरनेट चलाउन सकिने मोबाइल सेट भएको जनसंख्या दुईतिहाइ जति मात्रै देखिन्छ । यसमा महिला र पुरुषको पहुँच तुलना गरेर हेर्ने हो भने विशेषगरी सीमान्तकृत समुदायका महिलासँग निकै कमसँग मात्रै मोबाइल फोन रहेको, त्यसमा पनि इन्टरनेट चल्ने स्मार्ट फोन सेट ज्यादै कमसँग मात्रै रहेको अनुमान सहजै गर्न सकिन्छ ।

आधाभन्दा बढी जनसंख्यासँग स्मार्ट फोन र इन्टरनेटको पहुँच रहेको अनुमान गर्न सकिन्छ । तर, स्मार्ट फोन र इन्टरनेट हुँदैमा सबैले त्यसको डिजिटल सेवा लिने गरी प्रयोग गर्न सक्छन् भन्ने छैन । दुई वर्षअगाडि हामीले सरकारी, सामुदायिक र निजी सबैखाले विद्यालयमा १० कक्षामा पढिरहेका बालबालिकाहरुमा गरेको असर नामक शैक्षिक सर्वेक्षण गर्दा १०० विद्यार्थीमध्ये ४८ ले मात्र कक्षा दुई तहका नेपाली र अंग्रेजीका पुस्तकहरु सहज रुपले पढ्न सकेका थिए । अहिले नेपालमा इन्टरनेट चलाउने ठूलो संख्या लेख्ने वा पढ्नेभन्दा पनि सामाजिक सञ्जालहरु फेसबुक, युट्युब, टिकटक आदिमा फोटो, अडियो, भिडियोजन्य सामग्री चलाउनेहरुको छ । सार्वजनिक सेवा प्रवाह तथा सरकारी सेवाहरुलाई प्रविधिको प्रयोग गरी सहज रुपमा नागरिकको पहुँचमा पुऱ्याउन नागरिकमा डिजिटल प्रविधिको साक्षरता बढाउनुका साथै सेवालाई अडियो-भिडियोमा आधारित सहज र सरल बनाई प्रवाह गर्नुपर्छ । अर्को तरिका, अधिकतम नागरिक एवं सरोकारवालाहरुलाई प्रविधि चलाउने सीप प्रशिक्षण प्राथमिकतामा राख्नुपर्छ । यद्यपि, यसका लागि उपयुक्त नियामकीय संरचना र सरकारी वा निजी सेवा प्रदायकले अटोमेसन (स्वचालित पद्धति)को अन्तरआबद्धता पनि विस्तार गर्दै लैजानुपर्छ ।





# Back to classroom days

Pramila Bisunke

https://galligalli.org.np/blog/back-to-classroom-days/

Janaki's mother uses a keypad phone. Now Janaki has online classes while they barely have radio and television at home. Her mother ran to neighbouring houses to ask for help for Janki's online classes. One of her neighbours agreed to help by allowing Janaki to have an online class in a day. After a couple of days the lady in the neighbourhood found it difficult to accompany Janaki throughout four different classes in the day. Besides, she has her own household chores to do. Janaki's mother is not literate enough to accompany her for online classes so after two-three days of online class Janaki's mother decides to stop sending her for online classes. After that Janaki stays at home without attending classes waiting for schools to reopen. This led Janki out of learning for the entire year.

In a family of four both parents own second hand smartphones. Most of the time father remains outside, only mother's phone is available for the mandatory online classes for two siblings. Someday they attend two classes each out of four in a day. Sometimes they keep on fighting to decide who attends class first. Buying a new smartphone is beyond reach due to economic issues. However, after nearly four months of online classes, the mother borrows money from a cooperative in her village to buy a smartphone for online classes of two kids. After that the kids were able to have classes on separate phones and with peace.  But time and again power goes off and the loading balance time and again is another story. Now with the reopening of schools mother is looking for some to buy that smart phone she bought during lockdown for online classes.

These were only some examples of digital device access and education during the peak of pandemic. These stories are not from the rural part of Nepal but from the municipalities that are only 13 KM away from central Kathmandu. The few months of pandemic made us think of online education and the mandatory online classes

started during the COVID-19 pandemic has paused already with the reopening of schools. The children are back to classrooms once again. The news and projects related to digital classrooms are often in the news but reflecting back to Janki's story, will the students like her be able to get her right to education, a basic human right?

The smart classroom is bringing children back to the classroom once again again but what are the ways to connect children to learning platforms when they are at home? The two case stories mentioned above challenges stakeholders working on education and digitization to rethink about the discussions of smart classrooms, online learning platforms as envisioned by "Digital Framework Nepal 2019". As it also aims to "prepare human capital to capture new economic opportunities through the creation of an enhanced teaching and learning environment. This entails the use of digital technologies to support teaching, enrich the learning experience, and improve educational outcomes." Does being back to the classroom really fulfills the aim of Digital Framework ?





# Digitalisation Of Financial Sector

Juhi Adhikari

https://risingnepaldaily.com/detour/digitalisation-of-financial-sector#

With the shift of the demographics from offline to online methods and with the increased use of technologies, there has been a significant push for digitalisation of everyday life such as ordering groceries, shopping, education, etc.
When people use more online platforms for things they need, they also need digital payment systems to make it easier. This push affects all industries equally and demands significant measures to comply with infrastructure and regulatory requirements to ensure no loose ends that could end up harming the system.

Keeping up with the change in trends, the Nepali financial sector was adopting digital technologies before the pandemic too, but the crisis has brought digital banking into focus. The transition from SMS to the internet and now to Mobile and Online Banking clearly shows how the financial sector has transformed.
Let us focus our attention on understanding how the digitisation process is taking place in the finance sector of the country and how the process has changed during the COVID-19 pandemic period.
Digitalisation Evolution

Finance is the major sector influenced by digitalisation and digital technologies by leading the fundamental changes in society. The emergence of online banking, digital media, ATM cards, digital payments, and wallets has reconstructed the general way of performing business and supplemented the traditional businesses. The American Scientific Research Journal for Engineering, Technology and Sciences defines "Digitalisation is the phenomenon of transforming analogue data into the digital language (i.e. digitisation), which, in turn, can improve business relationships between customers and companies, bringing added value to the whole economy and society".

The oversight report of Nepal Rastra Bank shows the success of digitisation in Nepal. Debit card users increased by 9.25 per cent in 2020 as compared to 2019. Credit card users increased by 30.17 per cent in 2020 as compared to 2019. Prepaid card users decreased by 5.36 per cent in 2020 as compared to 2019. The total number of ATMs increased by 23.82 per cent in 2020 compared to 2019. In the Year 2019/20, the number of mobile banking users increased by 35.46 per cent and reached 11,306,797.

Similarly, the number of internet banking users increased by 12.41 per cent and reached a staggering 1,031,227. All these figures represent the readiness of the population to shift to new online methods and adapt to the digitalisation process. Such a drastic shift from traditional means of business and transactions brings along a range of positive and negative outcomes.
The adoption of technology in the banking industry began after the introduction of telecommunications into the banking market in 1846 globally. Nabil Bank in the 1990s introduced the first credit cards, which took more than fifty years since the establishment of the first commercial bank, Nepal Bank Limited, in 1937 in Nepal. Then, it took another 15 years to start E-banking which was started by Kumari Bank in 2002. The Himalayan Bank is leading in terms of Automated Teller Machine (ATM).

All these new digital services including ATMs, Debit/Credit cards, and online banking almost replaced most of the manual and hand-writing-based financial transactions. The 'Digital Nepal Framework' is a vital document to digitally transform the economy and make an exceptional effort to adopt the new means of business and operations from 2018 as per the Ministry of communication and Information Technology.

This framework has divided Nepal's economy into eight major domains: Agriculture, Health, Education, Tourism, Energy, Financial Services, Connectivity, and Urban Infrastructure. Digitalisation in the finance sector is core for implementing the framework. With strong backing from the continuous penetration of mobile and internet in the country as seen by the year-on-year rise in the numbers of users, the country realized the need of the hour i.e. to develop digital payment and banking services.

All major banks are competing to provide online as well as mobile wallets services. Some private mobile wallet companies like the 'E-Sewa' by fintech startup 'F1 Soft' have proved a milestone in the country's journey towards digitalisation since 2009. Following





the trend, other applications like 'Khalti' and 'FonePay' have further helped strengthen this initiative. The 'Connect IPS' system implemented by the Nepal Clearing House is fully functional to clear the government-related payments and transfers.

Other than banks, digitalisation in other domains such as investment banking, investments, real estate, mortgage lending have all reaped the benefit of this shift in the form of increased customer base, better operations handling, future predictions, and advanced analytics for better business services. Recently, there has been an introduction of 'Automated Wealth managers capable of investing your money on your behalf in the best of schemes based on rigorous calculations, all thanks to their AI (artificial intelligence) software.

## Merits And Demerits

With the onset of the pandemic in 2020, there has been a realisation of the importance of a digital system that can be used by the public in general as stepping out of homes involves a lot of risks. This came as a blessing in disguise for a country that saw better digital banking adoption rates in both rural and urban areas than ever before. The report published in the Journal of Science, technology, and management states that during the COVID-19 pandemic, people preferred digital payments compared to cash as 57% of people believed that cash could spread the virus.
People have accepted the new normal and have entrusted the mobile wallet applications as a new method of payment. This acceptance can be seen by the increase in the number of users of the available applications. E-Sewa saw a staggering 35% rise in its number of users bringing its user base to a massive 3.5 million users. IME pay, another mobile wallet app, added nearly 25% of their users as new registrations with more than 60% of the users from semi-urban and rural parts of the country. With more and more people getting on board and adopting the digital shift of the economy, it's only a matter of time for the achievement of the goals set by the 'Digital Nepal Framework'.

SBI Bank has taken a huge step towards digitalisation by opening the Nepal SBI InTouch outlet at Durbar Marg, Kathmandu which is AI-based. The InTouch outlet not only provides alternate channels to customers for banking but also helps in making paperless banking a reality. They provide various auxiliary services such as Indian railway ticket booking, and utility payments. Out of the many advantages of the digitisation process, some are important and noteworthy.

First, with businesses being conducted online, there has been a significant improvement in the ease of doing business as there is now no time restriction to undertake transactions. Even in the morning and evening time, business enterprises, as well as individuals, can do financial transactions through banking channels. The second advantage is more related to the management of currencies. The shift towards the digital economy is for good as it reduces the pressure on the paper currency being circulated in the economy hence, saving the expenses of Nepal Rastra Bank. The third advantage, the digitalisation of the finance sector is contributing to better customer satisfaction.

We used to hear a lot of customers' complaints regarding delays, human errors, long waiting hours, and paperwork. After the increasing digitalisation, the complaints about those issues have been minimised. We can note the fourth advantage as the time and cost savings in many ways. People do not have to travel out and spend hours on safe and banking transactions. It also saves costs of travel expenses, paper documentation, time of human resources, and many more.

This time-saving merit can contribute to making people more productive in other works. Another huge benefit is making the financial transaction contactless. During this time of pandemic and also in the time of strict restriction to mitigate the effects of COVID-19, the digital transactions have contributed a lot for social distancing and helping to mitigate COVID-19 spread. Finally, the digitalisation of the finance sector has also contributed to mental safety. We don't need to keep large sums of money in our homes. That also reduces the risk of theft and burglary of cash currencies.

Alongside advantages, there are some disadvantages as well. With a rise in online payment systems and online business, the important demerit is a lack of equal infrastructure development, errors such as server downtime are common sightings on the portals. Second, security risks like hacking and personal information leaks/theft have significantly increased, leading to erosion of trust for the customers pursuing online banking. Similarly, transforming the whole industry that has been operating offline for the majority of the time requires massive outlays and investments that may not be feasible for many business houses.

We should note that we don't have reliable broadband internet in all parts of the country, which can make many people not have access to





digital services. Similarly, we should not forget that many people are less literate, it's difficult to use online services for them. Even though in the case of more literate people, the majority of people are good at Nepali but most of the digital banking services are in English.
So language is a greater barrier and challenge. For many such less literate and less English users, access to digital services makes higher risks of misuse of their digital accounts by someone else's mistakes. The important point is not only about having access or having the services, the important point would be whether we have strong data safety and user-friendly features or not.

## Relevance

Digitalisation brings with itself a myriad of benefits for its customers ranging from ease of transactions and better control. The digital transformation and integration of the digital world affected an array of ways the economy operates and undertakes processes. The first and foremost is the ease of undertaking transactions from the comfort of your home or any place for that matter with a stable internet connection. Gone are the days when one used to head to the bank and physically make transactions. With all the information now available at the click of a button, it has been significantly easier to have better control over the finances.

The digital Nepal framework initiative taken by the government and the efforts by the banks in terms of launching apps, digital wallets, and comfort during pandemic times are reasons to attract customers. The rapid growth of card users and online transactions depicts the readiness of the people to adopt these methods and be in line with the digital wave the country is experiencing.

With proper government action plans and policies, there can be drastic changes brought to the economy and the public as a whole in terms of efficiency, global recognition, and steps towards a cashless economy. With the push that the economy currently has towards digitalisation and its adoption supplemented by the changing demographics and the rise in mobile and internet penetration in the country, fueled by the government's 'Digital Nepal Framework', the country will surely achieve its defined goals and objectives. With the respective framework in place, combined with the payment gateway and mobile applications, true integration of the economy with Fintech has taken the economy up in excitement and enthusiasm.
(Juhi is a freelance writer and digitisation research assistant)

# The impact of COVID-19 on financial digitization in Nepal: A Human Rights Perspective

Position Paper on "The impact of COVID-19 on financial digitization in Nepal:A Human Rights Perspective"

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## Human Rights in Nepal: A Financial Perspective

Basic human rights in Nepal are guaranteed by the constitution. The 32 different types of rights (Article 16-46) that it provides - right to freedom, equality, ownership of property, rights against all forms of exploitation, among others - largely follow the contours of Universal Declaration of Human Rights (UDHR)-1948.

The Right to social security and other social protections have an obvious financial element e.g. through allowances to vulnerable groups such as senior citizens, single women and the differently-abled persons. The Right to employment ensures support (including financial support) to the unemployed person in accordance with the prevailing laws. The Right to social justice and dignity also has financial implications in that it often demands special support to the disadvantaged group from the government in order to provide them a level playing field. In a given situation where every citizen has the right of free education up to secondary education, creates liabilities on the government exchequer and finance. The enforcement of economic, social and cultural rights enshrined in the constitution also requires an appropriate level of financial support and policies of the government to enable the public and private sector, supporting the cause of human rights.

The economic objectives of the constitution - achieving free, prosperous and socialism-oriented economy through participation and development of public, private and cooperative sectors, requires prudent financial and investment policies in place. Increasing government spending in development of physical and social infrastructures and easing the flow of finance through the Banks and financial institutions helps in promoting businesses thereby enhancing general welfare of citizens. Government has allotted NRs. 352.9 billion (24 % of total) under capital budget during current fiscal year while 5,870 offices of Banks over 77 districts of Nepal are providing deposit and credit services to the people[1]. Thus, the quality of financial services available in the country makes an important element in promoting and protecting the basic human rights of the people.

## Financial Digitization pre-COVID 19

The proliferation of internet and ICT infrastructures in Nepal - with mobile penetration now over 100% and internet coverage standing over 63% - is driving the digitization process in the financial sector. The Digital Nepal Framework (2019), the government's program to harness the growth potential by leveraging disruptive technologies and driving socioeconomic growth covers eight sectors including finance and includes 80 digital initiatives. The finance portion of the framework largely aims at broadening the access to financial services to a substantial number of the population that are out of the reach of banks/financial institutions through a number of initiatives as following:

- National payment gateway
- Digital payment.
- Mobile wallet services.
- Digital payment campaign.
- Credit ratings (individual/corporate accounts).
- Information management system for Nepali migrants.
- Development of a single window for business and industry promotion.
- Development and promotion of e-commerce and IT enabled services ecosystem.

Among the above, the first five are directly related to banking services. The sixth initiative focuses on integration of the information on migrant workers and flow of remittances, a critical source of foreign exchange for the economy as well as income for households. The



[1] Monthly Statistics of Nepal Rastra Bank (NRB), December 2020: www.nrb.org.np

seventh initiative aims at providing a digital platform for meeting the regulatory requirement of industry and businesses while the eighth initiative provides for extending financial inclusion through a robust and functional IT enabled services.

The Department of Foreign Employment, GON, has developed an integrated information management system of foreign employment that links the stakeholders like immigration, consular services division (MOFA), Nepalese diplomatic mission abroad and the recruiting agencies under a single platform. Meanwhile the information on receipt of remittances is integrated and controlled by the central bank (NRB).

The development of electronic single window is ongoing and led by the Department of Customs. This is supposed to link various stakeholders responsible for clearances of export and import under a single electronic platform.

Government of Nepal has committed to make wider use of e-services by the end of 2020 as stipulated in ICT Policy-bringing the country in top second quartile on network readiness and e-government indicators; making 75 percent of the people digitally literate; ensuring access to broadband services to 90 percent of the people and internet services to all people, among others. Besides, 80 percent of the services will be provided to the people online. Thus, promotion of e-commerce and IT enabled services is supposed to help in bringing a new wave of digitization around all sectors of the economy.

## Key digitization initiatives before and during COVID19 include:

**IT Bill in the process of legislation:** This Bill supposed to replace the Electronic Transaction Act (ETA)-2007, is more comprehensive and covers a wide range of areas like authentication of digital signature and digital documents in government system and legal proceeding, authorization of digital payments, cyber security, data protection, retention and regulation of social media, among others. This Bill is under consideration of the national Parliament.

**Digitization of banking transaction:** Commercial and development banks in Nepal are making faster inroads to digital services and internet banking. Use of ATM cards, SMS, internet and mobile banking are in wider applications, particularly in urban areas and gradually rolling out to the rural areas. Commercial banks and the development banks are now connected through the Real Time Gross Settlement (RTGS) network that facilitates the inter-bank transfer of money.

**Development of e-payment gateway:** Domestic e-payment services are being enabled through various e-applications like e-sewa, khalti, e-pay, IME pay and so on. Use of these applications made it possible to pay the bill of utilities, retail purchase and settle other small payments. NRB has recently launched a Quick Response (QR) code in order to make payments of retail commodities like fruits and vegetables.

**Single window for facilitation of export and import:** Government of Nepal has started implementation of National Single Window, led by the Department of Customs. The system is supposed to link various 43 institutions (both government and private) under a single platform for clearances of export and import of goods. Single window also includes features of e-payment that enables the exporters and importers to pay government duties, fee and charges directly from their account to the government accounts. The project is likely to be completed by 2022.

**Development of national payment gateway for international transaction:** This is being developed by Nepal Rastra Bank and supposed to come to operation in 2021. This payment gateway is supposed to enable the payment of export and import up to the specified amount and benefit particularly the export of MSME products.

**Increasing access to finance:** With the growing number of banks and financial institutions, people's access to finance is increasing at an unprecedented rate in Nepal. The number of fixed accounts in the banks and finance companies is 60.9 percent of total population; 22 percent population are tied up in cooperatives, 14 percent in microfinance and 19 percent in insurance services.[2] However, challenges lie in providing reliable and fast services based on digital platforms to a large number of people that are connected to local financial institutions, particularly located in the rural and remote areas.

## Impact of COVID19 on Financial Digitization

While Covid-19 has impacted negatively almost all sectors of the economy, the use of digital technology and online services have provided some level relief as the use of digital platforms increased



[2] Status of Financial Access in Nepal: Research Division, Nepal Rastra Bank (NRB): February 2020. www.nrb.org

over this period. The rise in use of ICT and IT enabled services is apparent during the pandemic as evidenced by the number of internet users and the sales of mobile devices. The collective users of the internet services (wired, wireless fixed broadband and mobile broadband combined together) reached 23.9 million in November from 21.8 million in February 2020; with an increase of ten percent over a period of 9 month of outbreak of the pandemic.[3] Mobile phones worth NRs. 17.6 billion were imported during 5 months of this fiscal year, when mobile phones were worth NRs. 18.2 billion were imported over the entire 12-month period of the previous fiscal year (2019-20).

This increase in the use of digital services positively impacted the financial sector. Digital banking and the use of e-wallet service, both envisioned as a positive by the Digital Nepal Framework, is on the rise. Many medium and small enterprises have switched over to mobile banking from the traditional cash transaction, for receiving and making payments. Consumer's willingness to adapt to digital banking services has been catalyzed by the pandemic. For example, the transaction of Prabhu Pay has gone up by 30-40 percent. IME Pay by 30 percent which includes the transactions of mobile top ups, utility payments and remittance transfer, among others[4].

All industries suffered more or less due to the effect of pandemic and lockdowns imposed therein. The cottage, micro and small industries were highly affected as 62 percent of those industries were closed, 32 percent were in partial operation and only 5 percent of them were in full operation. In average all categories of industries cut down the number of employees/workers by 22.5 percent. Of these 71 percent were the temporary and contract workers. This has resulted in loss of employment and income to this section of peoples lurching their life and living in hardship.[5]

The FDI inflow in Nepal remains low in comparison to other countries of South Asia with comparable levels of economic development. The net FDI received in 2017-18 was the highest tipping to NRs. 17.51 billion which declined to 13.07 billion in 2018-19. Total FDI stock by mid-July 2018 was NRs. 22.5 billion of which services occupies 63 percent followed by manufacturing 36.5 percent and agriculture 0.5 percent. In the service sector, communication and financial intermediation accounted for 32.44 percent and 22.48 percent of the FDI stock. There is a big gap between approved FDI and its realization; only 52 percent of the approved FDI was realized in 2018-19.[6]

The Foreign Employment Information Management System (FEIMS) operated by the Department of Foreign Employment of the Government of Nepal provides a common platform for various stakeholders related with the selection, recruitment, certification, and tracking records of the individual migrant workers from the dispatch to their return after the end of their assignments. However, this information system still needs to be linked with the bank for an integrated data on remittance.

There are also challenges in linking the local farmers, micro and small entrepreneurs, small traders and informal workers with e-commerce, making them e-literate and aware about the potential benefits of digitization. The imperative lies in making them well informed on provisions of government's financial support, credit facilities, and insurance of farm produce, investment opportunities and digital payments[7]. It is also equally important to build capacity and generate awareness supported by concessional financing in order to bring more women and disadvantaged groups into the realm of industry and businesses.

## What does the future hold re: digitization?

One of the everlasting impacts of Covid-19 would be the adoption of digital technology in provision of banking services and wider use of digital services in daily transactions like retail shopping, payment of fees and charges, and paperless services. Last year (2020) was an inflection point for wider use of digital payment in all transactions. Digital trail created by smart phones has made it possible to carry out e-transactions even by the farmer and transporters due to safety reasons and inherent benefits of saving time and cost of transactions. The use of digital technology in provision of financial services is supposed to enhance the capacity of the general public to enjoy the privilege and rights guaranteed by the constitution. But, a word of caution lies in potential deprivation of a large swath of people who are still digitally illiterate and cannot afford the smart mobile phones to their use. Hence, expanding digital literacy and affordability of the services should get priority in the development agenda of the government.

Right to information of the common citizen could be effectively protected with the use of digital technology. Dissemination of information related to fundamental rights should get priority in educating all citizens and stakeholders. However, this requires a proper regulatory framework and increased level of automation encompassing all sectors of government services, businesses and

[3] Refer MIS Report of Nepal Telecom Authority (NTA): www.nta.gov.np
[4] Covid-19: A Boon for Digital Transformation in the Financial Industry: by Tanushree Agrawal: www.nepaleconomicforum.org: November 23, 2020.
[5] A Survey on Impact of Covid-19 in the Economy: Nepal Rastra Bank (NRB) Research Department-July 2020: www.nrb.org.np

[6] A Survey Report on Foreign Direct Investment in Nepal: Nepal Rastra Bank, Research Department, December 2019: www.nrb.org.np
[7] Statement by Maha Prasad Adhikari, Governor, NRB, in the Singapore FinTech-2020.

private service providers. The banking sector is already ahead in this initiative but needs further work in the direction of maintaining integrity of the digital system and means for data protection from intrusion, breaches and hacking. The insurance and cooperatives sectors are yet to modernize and automate their system of operation. According to the Principles on Business and Human Rights[8], it has been recognized that business activities should take care of three principles of Protect, Respect and Remedy. Discrimination in lending practices based on gender, and customers should not hold anymore; bribery, corruption and slavery should be eliminated in all forms and there should be equal pay for equal works. Banks and financial institutions may use the consumer lending (digital) platform to carry out customers due diligence and assess the creditworthiness of the firms or the individual borrowers.

Government as well as private sector entities should enhance accountability and access to remedy in case of violation of basic tenets of human rights. Ensuring financial services reach everyone in Nepal will require empowering microfinance institutions and cooperatives. Microfinance institutions and cooperatives need to be linked with fin-tech services that enables them to lend money to the micro, cottage and small industries in a prompt and predictable manner without incurring hassles to the borrowers.

The digitization of regulatory services, which is taking root in more digitized societies, give us some cause to be concerned if these Principles will be fully adhered to. Algorithm-based governance of has been show to discriminated against various excluded members of society and reproduce existing discrimination. In digitizing processes such as due diligence and creditworthiness checks great care should be taken to ensure that human rights are not violated.

Regulatory framework should be in place in order to facilitate the use of digital services like: Pathao, Tootle, Easy taxi, Eddy cabs etc. and control of cybercrime, hacking and maintain data security. Maintaining transparency and increasing competition among service providers are the bedrocks of ensuring food and basic health security of the people. Hence, the effective implementation of the Competition Act and Regulations should be the priority agenda of the government. These acts will ensure rapid digitization of services while creating a level playing field between both online and offline businesses.
Migrant workers are considered an important stakeholder of financial transactions as they are sources of remittances as well as potential

[8] Report of the Human Rights Council: Forty-fourth session (30 June–17 July 2020): UN Human Right Council: www.ohchr.org





investors in business and economy once they return home. Their rights to participate in the gainful economic activities in the country could be protected if they could be equipped with training, retraining on relevant vocations including nitty gritty of financial management. Special programs should be devised and implemented helping them to become successful entrepreneurs with digital knowledge.
Nepal is facing challenges in increasing foreign direct investment as the complex process of obtaining approval, registration and repatriation of profit dividend etc. remains one of major hurdles reported by the investors. Government could improve the investment ecosystem by allowing automatic route[9] in approval of foreign investment through the use of an algorithm based digital platform that will simplify the process from complex bureaucratic hassles.
There is a need for creating awareness and capacity building of various entities and individuals in a way of improving performance with the use and application of digital technology in making financial decisions. Government may consider instituting an appropriate institutional mechanism (probably in PPP modality) in order to promote awareness campaigns, development of communication plans and implementing capacity building programs. This will be an important departure from the perspectives of all stakeholders in raising awareness about the benefits of digitization and its impact on transparency and accountability of the government and protecting and promoting human rights.

Last but not the least, in an effort to create synergy between businesses and human rights, the government may come up with policy frameworks, regulations, and the plans and programs in coordination with its stakeholders. A wider range of issues including anti-corruption agenda and gender dimensions could be accommodated under this program. UN High Commissioner Mr. Michelle Bachelet says, governments do not need to start from scratch, since there are excellent examples of guidance in specific sectors like EU's ICT sector guidance and other similar initiatives. The best solutions can be found by working in partnership, sharing best practices, and studying detailed outcomes of national regulatory systems, including unintended consequences[10]. In any case, the impact of digitization on finance and protection of human rights goes beyond the national boundary and thus demands coherent actions by all members of international community.

[9] Article 42 of the Foreign Investment and Technology Transfer Act-2019 has made the provision of allowing automatic approval to the foreign investment through a process notification in Nepal Gazette. But this notification has not yet been issued.
[10] Human rights in the digital age - Can they make a difference? Keynote speech by Michelle Bachelet, UN High Commissioner for Human Rights, New York, 17 October 2019; www.ohchr.org

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# Human Rights and Digital Citizenship Initiative with Reference to Education

Position Paper on "Human Rights and Digital Citizenship Initiative with Reference to Education

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## Context

The United Nations urges that "Education is both a human right in itself and an indispensable means of realizing other human rights" (Lee, 2013). Realizing this, nations around the world have included education as the human rights agenda in their policy documents. Several campaigns have started to translate this vision into practice. Education for All (EFA) is one of the campaigns initiated in 2000 with the aim of achieving universal primary education for all children by 2015. In order to ensure the access to quality education as a fundamental human rights, government of Nepal has also implemented several reforms through different projects that include Primary Education Project - PEP, Basic and Primary Education Project (1997 - 2002), Education for All – EFA (2000 - 2015), Secondary Education Development Project – BPEP (2000 - 2004), School Sector Reform Program - SSRP (2009 - 2015) and School Sector Development Program - SSDP (2016 - 2023) at school level and Higher Education Project - HEP, and Higher Education Reform Project – HERP (2016 – 2020) in higher education.

Efforts have also been made to integrate information and communication technology (ICT) and digital tools in education with a view to foster quality in education delivery. Several policies including Information Technology Policy of Nepal (2000), IT Policy (2010), ICT Master Plan (2011-2013), Nepal's National ICT Policy (2015) and 2019 Digital Nepal Framework have been formed to create conducive environment to create digital Nepal and embrace digital innovations in quality education. In this connection, in order to provide access to quality higher education to those people who cannot attend face-to-face mode of education, Open and Distance Education Center (ODEC) of Tribhuvan University (TU) and Nepal Open University (NOU) have been established. In these initiatives, digital connectivity, online tools and resources along with the access to the ICT equipment are absolutely crucial. This shows that Nepal is gradually progressing both in technology and education keeping in mind the role of digital resources at the core of her development agenda. Endorsing these commitments, The Constitution of Nepal (2015) mentions "Provided that nothing contained in this clause shall be deemed to prevent the making of an Act to regulate radio, television, online or any other form of digital or electronic equipment, press or other means of communication" (Part II, Article 19 (1-3), p. 13). However, there is a long way to go to ensure ICT infrastructure and digital connectivity across the country and there is still a big digital divide in Nepal and people particularly living in the rural areas have access only to the mobile device and its limited services. This position paper briefly outlines the evolving context of digital Nepal initiative, pertinent issues observed in technology and education and future course of actions that we need to take towards embracing digital citizenship in a more systematic manner.

## Education, Human Rights and Digital Citizenship

The rapid development of digital technology has brought a tectonic shift in human behavior. Access to information via online platforms, importance of the data stored in the virtual world and connectivity through digital tools have become indispensable for everyone in the contemporary society. Our life has been almost digitized most of the education is going online. Technology has dominated all aspects of human life creating a technoculture (Pinar, 2013) and citizens, whether by choice or by compulsion, are now expected to be better stewards of digital technology. Digital navigation skill is a must for all, and we are heading to a technology future that we do not know. Adaptation of the ever-growing dimensions of digital literacy is the new challenge and digital turbulence is norm of our life. The education we impart through our formal education system

Green, L. (2020). Confident, Capable and World Changing: Teenagers and Digital Citizenship, Communication Research and Practice, 6:1, 6-19, DOI:10.1080/22041451.2020.1732589 Hirsh-Pasek, K., & Blinkoff, E., Golinkoff, R. M. & Hadani, H.. (2020). A New Path to Education Reform: Playful learning promotes 21st-century skills in schools and beyond. Policy Big Ideas. Washington D. C. The Brookings Institution.



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needs to recognize this fact and students need to develop skills to navigate in the complex digital world. All children deserve the right to information literacy in a safe and secure online environment. They need to learn how they could be digitally responsible and accountable. Digital citizenship is, thus, an emerging discourse across the board and many countries have officially introduced this as a part of formal education in schools and colleges. It is important that today's "educators must consider children's virtual home in order to positively impact their well-being" (Bennett, Aguayo & Sherry, 2016 p. 191). In Nepal too, the conversation on digital citizenship has started and some efforts have been made to touch upon some elements of digital citizenship. In this connection, digital Nepal framework outlines 8 domains that need to be addressed to make Nepal a digital-friendly state.

## Dimensions of Digital Nepal Framework - 2019

Despite the policy framework in place, there is still a lot to do to realize the true spirit of digital citizenship in every aspect of the society including education in Nepal. Focus has so far been laid to the access of the digital tools and resources rather than on their judicious use. It is the time now to consolidate the past efforts and create a new chapter ahead for the digital future.

## COVID-19 Pandemic, Education and Digital Initiatives

Education sector has suffered a lot by the COVID-19 pandemic since March 2020. Classes were disrupted, exams were on hold, teaching learning process became stand still and a lot of confusion arose in the education space. As the situation became worse unpredictable government, universities and schools started responding to COVID-19 by switching the educational programs using the online tools and resources as the crisis management strategy. Discussions were held to find out the alternative means and government of Nepal issued a guideline entitled "Facilitating Student Learning System through Alternative System – 2077" (in Nepali language) which paved the ways for schools to run classes using alternative tools such as radio, television, internet, email and so on. The curriculum, textbooks, teachers guides, and other learning resources are uploaded on the webpage of the Curriculum Development Center (https://moecdc.gov.np/) and teachers can access them online to prepare their lessons for the learning facilitation. Efforts were now being made to teach school children through national and



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Ministry of Information and Communication. (2015). Nepal's National Information and Communication Technology Policy, 2015. Kathmandu: Government of Nepal: Ministry of Information and Communication



local TV channels, local FM radio, online tools and so on. In higher education too, University Grants Commission (UGC) and universities were engaged in reaching the students and teachers to establish communication through various means and spontaneous initiations were observed to resume the class using the available digital and online platforms.

This guideline encompasses the details of the minimum standards that higher institutions in Nepal need to ensure for e-learning platforms. The parameters for the standards included the establishment of the information technology department in each teaching units; required infrastructure such as servers, connectivity, security and equipment; dedicated IT staff; allocation and registration of online education domain; official email IDs for all faculty, staff and students; appropriate policies and descriptions; credit transfer system within and beyond the university departments; integration of online pedagogy in the teaching and learning process through a proper learning management system (LMS); and codes of conduct for the users. The guidelines also indicated the possibility of conducting examinations using the alternative modes as per the circumstances.

## Key Lessons Learned

The year 2020 has been "a year of turmoil but also hope in education" (Vegas & Winthrop, 2020) as it brought a shift in the image of education and provided the pathways for the alternative modes of education delivery. The educational context created by COVID-19 pandemic contributed to question the earlier assumptions that quality education was possible only on face-to-face classes. Vegas and Winthrop (2020) succinctly summarize that improved students' agency, game changing role of parents in education, new education allies, the potential of education technology, school emergency preparedness and public support for schools and teachers are the highlights observed as the result of the current pandemic in education space. The pandemic has also created a conducive atmosphere to foster alliance among the stakeholders that include government, tech companies, academic institutions, and education practitioners. Realization among teachers to upgrade their digital literacy and follow the undercurrents in their subjects made them proactive learners to try new technology. Many local governments encouraged their schools to use their ICT facilities and increased investment in the ICT/digital infrastructure. Teachers who were ICT proficient helped others in using ICT tools and motivated them to



MOIC (2000). Information Technology Policy of Nepal – 2057 (2000). Kathmandu. Ministry of Information and Communication.
MOIC (2019). 2019 Digital Nepal Framework. Kathmandu. Ministry of Communication and Information Technology.

learn more in the future. Teachers have shared that the online class experience has been an eye-opening moment and a productive professional learning experience as far as ICT/digital literacy is concerned. Students also developed independent learning habits and learner autonomy was promoted.

## Issues and Challenges That Still Persist

Despite the fact that Nepal, like other developing countries, is gradually experiencing technological transformation, very little progress has been made in the implementation of ICT related policies in general, and ICT education in particular. The existing policies still lack education focus and schools and universities are yet to develop ICT/digital education policies, strategies and action plans for educational purposes. There are also privacy and security issues in the existing digital resources and technological tools for their sustained implementation.

There is a wide variation of ICT/digital literacy competence among the teachers i) some of them are proficient users of ICT in education, ii) some of them are learners and they are very interested to learn iii) some of them did not have their email addresses and they lack even basic ICT skills, and iv) some of them are reluctant to learn new things with the excuses of being in the retirement age. Connectivity is still a big challenge in many parts of Nepal and access to the digital devices is a huge bottleneck to ensure the access to the digital world for all. There are issues with the netiquettes among the users of the digital tools and cases of inappropriate use of the digital tools have been reported. Safety, security, privacy, cyberbullying, and copyrights are some of the issues that have made the headlines in the media. The education system in Nepal has not been able to address these issues in a methodical manner. Additionally, the issue of self-motivation among the teachers and lack of institutional commitment have further exacerbated the problem. Most of the educational institutions lack technical staff to help teachers and students in the digital issues and there is a lack of organized structure in the institutions to provide backstopping support.

## Way forward

Digital citizenship is a buzz word in the global education discourse and the Nepal government is also committed to it. In order to implement this agenda from a social justice and human rights perspective, digital citizenship must be treated as a part of the



Tribhuvan University (2019). TU Vision 2030. Kathmandu: Tribhuvan University.
University Grants Commission, (2020). Guidelines for the Management of E-learning in the Universities of Nepal. Kathmandu. UGC



overall eco-system of the country's development as outlined in the 2019 Digital Nepal Framework and that needs to be implemented in its true spirit. To minimize digital divide, the government needs to make investment in setting up the infrastructure for digital facilities and virtual learning platforms should be developed. Data center, internet connectivity, intranet connection, Wi-Fi zone development, cloud services virtual lab development is the common ground for online learning. Existing ICT facilities in the local government offices need to be strengthened (structurally, functionally, and operationally) with the required hardware and software in coordination with the internet providers, tech education experts and practitioners.

Capacity building of the technical and academic human resources is another area that needs to be addressed immediately. Thus, a realistic HR empowerment plan to address the diverse needs of the people working in the education space is the need of the day. For this, the government needs to collaborate with the higher education institutions to design and implement customized modular training and academic programs. Teachers at school and universities should be connected with the wider network and their access to the online resources need to be ensured through digital tools such as RemoteXs so that teachers could utilize the global online resources both for their own professional development and enhancing their digital pedagogical competence. The best practices in the non-state sector should be documented and scaled up with the required level of adaptation. Digital awareness and sensitization campaigns to the parents, heads of the academic institutions and community leaders to create an appetite for embracing ICT and creating a supportive environment for digital citizenship need to be organized massively.

In addition to the investment in the infrastructure for effective digital citizenship, the urgent need of the hour is also the provision of the appropriate legal framework to govern the evolving digital landscape and their timely enforcement. Globally, some efforts have been made in this regard "in mapping the rights of the child in ways that help illuminate their relevance to digital agency" (Green, 2020) and there are cases of the success stories in different parts of the world. Nepal needs to learn from them and adopt a two-pronged approach that include a) develop strategies to provide access to the digital resources in order to address the equality deficit created by the digital divide, and b) provide safe and secure environment in the utilization of the digital tools and resources through the legal framework. Thus, it is now time to act to embrace the ideas of Digital Democracy in education and take A new path to educational reforms (Hirsh-Pasek, K. et al 2020).

Vegas, E. & Winthrop, R. (2020). 2020. A Year of Turmoil but also Hope in Education. Washington D.C. The Brookings Institution.

# Impact of COVID-19 in Health Sector and Digitization in Health Services- a Human Rights Perspective"

Position Paper on "Impact of COVID-19 in Health Sector and Digitization in Health Services- a Human Rights Perspective"

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## Context

Nepal's constitution defines basic health care services as a fundamental right. Part 3 of the Constitution, under the fundamental right related to health states, " As per the law of the country, every citizen has the right to free basic health care services."

The constitution also says no one should be deprived from emergency health care services in the country. Apart from the constitution it also guarantees the rights of every citizen to information as well as equal access to health care services. Also, every citizen has the right to access to the clean water supply and sanitation, and the food. The right to safety from the life-threatening situation due to the lack of food as well the right to food sovereignty is also guaranteed by the constitution.

## Human Rights is Equal to Free health care services

On 16th August 2020, National human rights commission submitted a written request to local level authorities and the Government of Nepal to be sensitive to control the spread of COVID-19 at the community level. Also, to protect the right of citizens regarding health care and the right to live in a fearless environment. The commission even urged to protect the right of common citizens to health care services. During the first wave of Covid -19, dead bodies management was seen as a major problem in the country.

On 26 June 2020, the National Human Rights Commission (NHRC) said that the right to conduct death rites according to one's religion, culture, and traditional ritual after the death of a person has been guaranteed by the national law as well as the international law of Nepal. Similarly, the commission has urged the government to ensure the health rights of all citizens on 20 October 2020.

On 18th October 2021, some government hospitals in Nepal had published notice that the patients undergoing COVID-19 infection treatment have to bear the entire cost of treatment by themselves saying it was the government's decision.

The Human Rights Commission focused on the right of all citizens to have free access to basic health care guaranteed by Article 35 of the Constitution, which says to ensure equal access to health care to every citizen shall not be deprived of emergency health care. The commission also stressed that the state should not get away from the responsibility of ensuring the health rights of the citizens by avoiding the treatment of the citizens in such a pandemic of COVID-19 which is against the constitutional provision of free treatment. The Commission also urged the Government of Nepal to provide free treatment to the patients infected with Covid and to ensure the constitutional right of the citizens to health care by managing the corpses of the deceased.

After continuous public protest including commission and human rights organizations, the government was forced to continue free treatment.

## Digitization and Telemedicine

In the Fiscal Year 2021/22, the Ministry of Health and Population's budget was increased to Rs. 90.69 billion (6). The budget increased was mainly implement the operation of the satellite and follow-up clinics services of specialists' doctors in local health institutions and to provide reliable telemedicine service system for patients in remote areas from the central hospitals such as Gangalal Heart Center, Paropakar maternity and Women's hospital, Human Organ Transplant Centre, kanti Children's Hospital, Bir Hospital as well as other hospital.

[6] Budget for the Fiscal Year 2077-78 presented by the finance minister Yuvraj Khatiwada in the Parliament on 15th June, 2020 BS.

The National Planning Commission has already introduced 'Integrated Health Information Management and Digital Health Program' under its programs and the project was supposed to be implemented in the 15th Plan (2019 / 2021-2022 (1). The total estimated cost of the project is Rs. 29.2 Million. Under the expected achievement of the project, the integrated health information management system will be implemented in coordination. It has also been stated that the effectiveness of health services will be increased, if the digitally stored data and information are used to check the medical history of the citizen.

In the health and nutrition strategy under 15th plan, the National Planning Commission has the policy of increasing the use of monitoring, evaluation, review policy formulation and to process data by addressing the demand of health information at all levels. This is possible by making the health information system more systematic and technology friendly. Under the strategy, the health-related data management will be made qualitative and technology friendly. Also, the use of data will be promoted in study, research, survey, projection analysis and policy making at all levels including decision-making level process.Similarly, it is mentioned that data management at the health institution level will be made technology friendly and the reporting will be done through electronic medium. Then gradually the system of keeping electronic health records will be extended to all health institutions in the nation. It has been stated that the system of updating the information on a regular basis will be arranged by linking the health data produced at the local level with the national major network as per the need. However, the strategies for conducting studies, research, surveys, and results will be based on national needs and priorities of policy and program formulation.

The government's efforts to digitize the health sector will help to know the status of available health services in real time in the future. This will further ease information regarding the availability of beds, capacity, ICU, ventilator, availability of medicines in the hospitals immediately. When there was a high incidence of covid infection in Nepal, the patients had to move from one hospital to another because of lack of information on available services, bed availability, ICUs and Ventilators.

Under the Digital Nepal Framework (2019), the potential for digitization has been identified in 8 regions and 80 sub-regions. Under the health sector of this framework, the state has the objectives



[1] Programs and projects to be implemented in the National Planning Commission, 15th Plan (2076-77-2080-81), page 446
[2] National Planning Commission, 15th Plan, page 192
[3]Digital Nepal Framework 2076, page 5



of providing computer-based basic health care supported by health sector initiatives (3). To address the health-related issues, the program aims to benefit citizens through digital technologies such as video conferencing, e-learning and mobile health. Under the Digital Nepal Framework, initiatives like the National Digital Health Care Platform, Digital Health Centers based on new technology, Electronic Health Records 2.0, Mobile Health Care, E-Maternal Health Care, Drones for Emergency Health Materials Distribution, Centralized Telemedicine Center are being initiated.

The Fiscal Year 2020-21's budget mentioned that the implementation of the Digital Nepal Framework will create opportunities by joining the global economic system through digital technology (7). Under this, standard and reliable broadband internet service from fiber to home technology will be extended to all places within 2 years by revising the information and technology related policies. The 4G service will also be expanded nationwide next year.

In Nepal, 83% of the population have access to the internet (8). IThe use of the Internet has increased by 10 percent within the span of a year. According to the latest statistics of the Nepal Telecommunication Authority, the population of internet users in the country has exceeded 24.7 million. As of December 2019, the population with Internet access was about 21 million. In the last two years, the percentage of citizens with internet access has increased significantly.

Telemedicine was used widely during pandemic. The service was initially introduced by the government in 25 districts in 2010 and in 2012 5 more districts were added in remote districts. The service was postponed for two-three years but is now running smoothly due to the efforts of some organizations. The telemedicine services are provided by Patan Hospital, Bir Hospital, Kathmandu Model Hospital, Dhulikhel Hospital, and other health agencies in one form or another. Telemedicine services are operated in various forms, for example, the medical personnel give advice on treatment through various applications, groups on social media.

## Home health care

Before COVID-10 pandemic, the process of modernization with the latest technology was not much in use. There was a situation where the internet and artificial intelligence could not be used extensively to spread public awareness about the utility of the health sector, services and others. But during COVID-19 pandemic the

[7] Budget for the Fiscal Year 2077-78 presented by the finance minister Yuvraj Khatiwada in the Parliament on June 3, 2020BS.
[8] Internet access increased by 10 percent in one year, Ikantipur.com, February 18, 2077

use of information technology in other areas, including the health sector was increased (4). Not only in the developed country but also in developing countries like Nepal, the use of apps based on information and communication technology even at different stages of the disease from home has now started to be practiced.

There was and still is a situation in the country where patients have to be physically present in the health service center for consultations and other services, whether they need to be physically present or not. Although the managerial level in the health service center uses virtual processes for different activities, the service delivery to the public seems to be not yet fully functional in all centers. In order to reduce the spread of infection due to the COVID-19, an attempt has been made to put into practice where patients were able to get services without being present at the health center. During the peak of the Corona pandemic in the country, the doctors in different parts of the country, including the capital, started providing health services through mobile phones, zoom, Skype, etc. (5).

Later, some electronic devices came from different parts of the world that were used for inspection and monitoring COVID-19. E-health was also used for mapping covid-19 in remote areas and for information related to COVID-19 infections.

The need and uses of e-health schemes there were widely discussed in previous years but during COVID-19 pandemic, e-health services came into use. The technologies providing health care and other services have increased during COVID-19 pandemic in the country. This has reduced physical movements and contacts as possible. Easy health services are being provided through electronic medium. There has been a decrease in the number of people attending training and discussions in the health sector unless it is an emergency. Rather, virtual teaching, research, training, discussion, etc are in use as much as possible. Even time-consuming meetings in the health sector have undergone extensive positive changes since COVID-19. Virtual methods have been adopted even in general meetings at hospitals. Moreover, not only in the capital city but also in the districts, patients are able to get services registering from home through the internet. Patients are also able to get information about the health service facilities through the internet. Therefore, the compulsion to queue up in health facilities is gradually coming to an end. Some government hospitals in the capital have been relieved of the hassle of queue and mass management to spread the infection by arranging online OPD tickets systems.

The Civil Hospital in Kathmandu had made an arrangement to buy tickets online through the app on the mobile phone at the end of



[4] The use of ICT by the epidemic, Anandaraj Khanal (Senior Director, Telecommunications Authority), Naya Patrika, 1 April 2020
[5] Due to corona panic, doctors also started providing services from mobile, Janak Timilsina, Weekly, March 13, 2020



July 2019, while the maternity hospital had also made arrangements to make online ticketing in the initial week of 2019. Apart from this, Martyr Ganga Lal National Heart Center, Manmohan Cardio Thoracic Vascular and Transplant Center, Kanti Children' Hospital, Tribhuvan University Teaching Hospital and others have also started online ticketing systems. After COVID-19, most of the hospitals started to provide online ticketing that can be processed from home.

## Patient-friendly digitization

Becasue of digitized healthcare service facilities,patients now can have enough consultation time with medical staff. Such digitization in the healthcare system is advancing to prepare for a better future. However, the process of digitization in the country is progressing very slowly, it gained momentum when there was a sudden COVID-19 pandemic. There is no doubt that the health care system will eventually go digital in the future.

The government has been working on digitization for a long time, but quick results and speed is still required. Moreover, the digitization in health care facilities in the country should also be patient friendly. Where the patient should be able to view their health-related details including his check-ups, treatments via online from computer or mobile at any time.

The digitization initiative during COVID outbreak seemed to work very well. Arrangements have been made by the laboratories. The laboratories made the systems to view health-related test reports online. The availability of online test reports also helped to reduce the likelihood of further infection chains. However, there are some challenges if the government continues to provide such reports in a very flexible manner.

There has been an unexpected increase in the number of online consultations with doctors / health workers, placing orders of medical materials and equipment via telemedicine and online. Although the COVID-19 infection has decreased at present, the digitization process is still ongoing, and its expansion cannot be ruled out.

## Use of technology in digitization

With the introduction of 'Five-G' in the field of telecommunications in the country, this process can bring a massive change in the health sector including telemedicine, tele-surgery, and various therapies. Doctors have been able to perform surgery on patients remotely by using Five G technology. The technologies have been highly used in the world and are improving day by day. The use of mobile phones

and internet has been massive and as a result, the telephone booths are nowhere to be seen in the remote villages and towns.

In the past, patients used to approach one doctor for any kind of health problems but because of the availability of technology such a situation has almost come to an end in the urban areas of the country. Because at present, citizens from any economic background do some research on the internet and look for medical specialists depending upon their health problems and situation. Even among physicians, the practice of referring patients for consultation with other specialists is seen not only in urban areas but also in rural areas. The increasing number of specialists, medical colleges in different places have also helped in referral.

In this age of globalization, the health sector is not far from the information on the new and essential form of technologies. In the future, with the Five G technology in the country, the medical specialists living in Kathmandu will be able to help in the emergency surgeries in remote area. The Five G technology has been able to provide comprehensive health care in remote areas with the help of general infrastructure.

Five G Mobile Internet is being rolled out in Nepal by mid-July (2021) (10). It is in the race to become the first country in South Asia to provide super-fast connectivity. By the end of the Fiscal Year 2020-21, a fifth generation wireless mobile network will be established in Kathmandu and three other major cities under the project.
Integrated health system

It is necessary to link health care services with an integrated system. There should be an integrated storage of health data. Even if the health-related data is with a different service provider, it must be linked to a specific health ID. Nowadays, to link all IDs together, it can be linked with citizenship, driver's license, PAN and other identity cards. An integrated system of shared health data allows individuals to receive appropriate treatment anywhere, anytime. All the information about the health condition / complication of the person, the latest condition of the patient can be accessed immediately from any health body.

Integrated health related data storage helps people in rural or remote areas to get suitable health treatment from the district, city, state capital, central capital for any additional required health treatment. Through telemedicine, various health information including pre-disease history of the residents living in rural areas can easily be



[10] Nepal Plans Five G Mobile Internet Roll Out By Mid July, Krishna Prasai, The Kathmandu Post, March 6, 2021



accessed by medical staff even when they are receiving health care services from different health centers.
The integrated health statistics system further strengthens the treatment process and makes it easier for any patient from rural areas to get treatment with facilities similar to urban health care services.

## Data management and cyber security

The field of data management in health is extremely complex. Health related data includes information such as sensitive private data, health care services, medical history, related research, insurance and more.

In the future not only services provided by human beings, but the electronic devices or electronic materials will be produced, and all will be connected to the Internet (9). Information will be exchanged not only between people but also between people and devices and devices and devices and all the devices will be automated. There will be many sensors in the human body. In such a situation, the most complicated issue will be cyber security. Information and confidentiality of personal data will be a big issue. Therefore, the government needs to set up a separate body to prevent possible misuse of public health data. The government body should focus primarily on the security of health data by coordinating with various aspects of the government's cyber security. In order to bring the misuse of health data under the scope of severe legal punishment, there is a need for separate laws and maximum compensation in case of misuse of data. In the long run, the introduction of special laws and regulations for the privacy and security of personal digital data related to health is beneficial. This reduces the potential misuse of health data. Currently, there are various latest procedures available for the protection of health data in the world. In recent times, many statistics related to health have been digitized in the health sector. In such a situation, better legal protection of data is necessary.

## E-health service

To ensure complete digitization, transparency and speed of health services, e-health services should be started. Information about e-components, e-health center, e-blood cell, e-medicine, telemedicine and other facilities should be available under e-health service dashboard.

There is a wide existing gap between developed countries and Nepal in terms of e-health service. Looking from the perspective of

[9] The use of ICT by the epidemic, Anandaraj Khanal (Senior Director, Telecommunications Authority), Naya Patrika, 1 April 2020.

geographic challenges and the health service to people in Nepal, e-health services are essential, but the country still has a long way to go. If e-health services are not expanded in time, the gap between developed countries and Nepal will be widened even more in the future. Due to the recent increase in the average life expectancy of Nepalis, e-health services seem more necessary.

With e-components, patients can register online at any place. The e-blood cell will provide information about the availability of blood in the health system and the e-medicine will provide the information about the availability and supply of medicine in the hospital.

Through e-Health Service Dashboard, information regarding availability of medical personnel in different hospitals, condition and availability of ICU / ventilator, number of patients, status of patient's treatment in the hospital, number of patients reaching hospital through online registration etc. can be easily accessed. Similarly, it will be easier to get detailed information about the availability of doctors, health workers, service charges, facilities, etc. from home.
Government health bodies need to be more comfortable and empowered

Most Nepali citizens still do not have an easy access to private hospitals due to financial reasons. There are very few people who can easily get health treatment in private hospitals. General Nepal citizens are forced to sell their belongings or take out loans and seek private treatment in government hospitals to save their lives. We have been reading the news that a private hospital charges up to Rs. 1 lakh per covid patient in a day. At the same time, the middle-class poor and the marginalized are forced to undergo treatment in private facilities because of lack of proper treatment from the government hospital. The fact that the government health system has facilitated the treatment of the infection cannot be denied, despite the inconvenience, lack of service facilities, etc during pandemic. Government health agencies should be well equipped for the treatment of all types of disease with high priority and easy access to citizens should be ensured.

https://galligalli.org.np