

Impact of corona pandemic on educational undertakings and possible breakthrough mechanisms

Endalew Fufa Kufi, Tolera Negassa,
Retta Melaku, Robsan Mergo

Abstract

This impact survey is based on experiential reflections and international sources. The purpose is to forward workable solutions for virtual learning based on review of breakthrough mechanisms so far employed to continue learning during the lockdown due to corona pandemic. Desk-review method was employed for the analysis, and the sources were national and international experiences that focused on the analysis of COVID-19 impacts on teaching and learning. Overall, four issues were addressed in the impact survey which enclosed social, economic, psychological and resource issues. For each case raised as impact on teaching and learning, experience-based recommendations were given.

Keywords:
Coronavirus
Pandemic
Education
Breakthrough

Received:
30 April 2019
Revised:
19 May 2020
Accepted:
11 June 2020

Cite this article: Fufi E. F., Negassa T., Melaku R., & Mergo R. (2020). Impact of corona pandemic on educational undertakings and possible breakthrough mechanisms, *BizEcons Quarterly*, 11, 3–14.

1 Background of the Study

Having emerged in December 2019, the coronavirus/COVID-19 has now spread all over the globe affecting almost all countries and territories around the world (WHO, 2020). Following the global outbreak of the pandemic, countries announced the public to take responsive care. The public care strategies include hand-washing, wearing facemasks, getting distant from someone coughing or sneezing, and avoiding mass assemblies. Various media have also been used to disseminate information about the hazard of Corona attack. Lockdown and staying home strategies have also been unconditional actions taken to reduce and control the spread of corona attack.

Several researches were held to substantiate the public health impacts of corona and related viral pandemics along with their roots. For instance, Anjorin (2020) states virology to have begun in 1892, and the first coronavirus, avian infectious bronchitis virus, to have been isolated in 1937. That was followed by severe acute respiratory syndrome coronavirus (SARSCoV) in 2002 and Middle East respiratory syndrome coronavirus (MERS-CoV) in 2012. Corona virus attacks brought about 21000 deaths out of over 470000 cases with about 82000 observed in China, and a total of over 380 000 confirmed from 194 countries till 25th of March 2020. More recent evidences have shown drastic infection which the most advanced countries have declared to be defying (WHO, 2020) wherein Americas, Europe and Eastern Mediterranean have been more precarious.

Alston (March, 2020) states that, universities in different angles of the globe have seen closure due to the pandemic behind corona, and the ripple effect is going to be both academic and social. The academic impact comes about as a result of delay in lesson coverage whereas the social impact is in the fact that, the society fails to get educated taskforce on job-streams as expected. More to state, Alston (2020:4) underlines the economic impact behind students' failure to pay for their education by tracing the case of Chinese Students attending their university education in Australia.

In the Ethiopian case, while the corona virus pandemic is a recent incident, people in the different parts of Ethiopia have already had significant challenges in getting access to healthcare, especially in the rural areas (Berhanu, Herbst, Wuleta & Soucat, 2012). To prevent the spread of Covid-19, the government has started to implement such basic measures as awareness-raising and lockdown campaigns. For instance, the Ministry of Health provides regular updates, added sign language to its promotional TV channels. Different radio programs also air alarm cautionary info amidst the formal transmissions (WHO, February, 2020). In that, the country is

strengthening surveillance, diagnostics and medical care and public health information in readiness for a potential coronavirus outbreak.

What goes odd in relation to the usual practices is that, almost all programs requiring human social interactions are locked down, to which effect educational and administrative works are under restriction. Arbitrary movement, shaking hands, open sneezing and the likes are highly restricted to control the contagious effect. Hence, access to educational platform in this time of coronavirus crises, especially at primary, secondary, newly established higher educational institutions and some older institutions is creating difficulty on the respective institutions to reach their students as Ethiopia simply does not have the infrastructure to cope with lockdown event due to the pandemic.

Ethiopian Ministry of Education, with limited resources, is trying to reach students in primary and secondary education. The available media and modality breakthrough can possibly serve those with the privilege to access radio and television. Perhaps, the government is trying to shift the modality into virtual approach for only addresses students residing in cities and the outskirts of big cities and towns. Such an opportunity is not yet mature to reach the larger community in the rural areas.

Simply stated, the government couldn't provide network access to schools that could support teachers to give key information in reaching everyone, except a few private schools in some towns and the principal capital overall. By and large, universities across the country are setting up institution-wide task forces to mitigate the impact of the pandemic. Some are striving to participate in research towards finding solutions to reach people how to overcome the impact and others are serving as quarantine centers. Moreover, some universities are attempting to shift face-to-face modality into virtual platform, online teaching and learning through institutional and personal email using Internet connection, personal telegram and text messages.

Obviously, the lockdown has triggered institutions to offer their courses online. However, going from face-to-face into online lesson-delivery mode is not that simple in a country where only 15.4 percent of the population has access to the Internet, in a provision with poor connectivity, high costs and frequent power interruptions as serious challenges.

Therefore, this corona-related article is a reflection which is made on the impact of the pandemic on educational undertakings in Ethiopia overall. Since the pandemic is common to all people and educational, social, economic and religious setups, a generic reflection will be made to the social,

economic, psychological and managerial impacts on learning and teaching processes. Several factors may be related with closure of schools. The writers would like to suggest alternative ways to bring back the attention of children/students, parents, and teachers to their respective school environments being cognizant of the circumstance.

2 Major Educational Impacts of the Corona Pandemic

2.1 Social Impacts of the Pandemic and Its Relative Side Effects on Education

Educational undertakings are social which take shape in terms of individual-social interplays. Rieley (2020) considers the social situation in schools to be scaring to educational institutions for the fact that, most educational organizations are now scrambling to identify the options they have in front of them to deal with two major challenges pertaining with detaining or stopping social contacts and keeping learning going. Under the pressure of corona, COVID-19, society members may hesitate to send their children to schools for fear that, they may contract the infection through as a result of contacts in classrooms or out-of-school. From the very outset, the spread of the pandemic has been noticed to be based on contact-effects.

Consequently, most people have come to relate cases of coughing, sneezing and high body temperature to be symptoms of corona attack. Related to that, it is practically hard to distinguish between the symptoms for normal flu/runny nose and corona. Moreover, school children themselves may not feel free and secure to learn and work with their classmates as usual, especially in the prior large classrooms. In the current situation, the classroom climate may not suffice the students' number, and this may pull children back from going to school. Sudden coughing or sneezing in the classroom or on campus may frustrate children as well. Contrary to that, school boys and girls in the adolescent age group may not feel the hazard of the pandemic as they are in the fire-age. Consequently, the lockdown process can have a progressive effect in terms of safe communication while it can be gate-opener for idleness.

So, it becomes hard for schools to sustain social concomitance in the face of the hard risk of the pandemic. Likewise, it could be very hard for adolescent boys and girls to be locked in for a long time. The usual lesson-oriented group work, discussion and cooperative learning situation cannot be framed and effectively implemented. It is also hard to have teachers support students face-to-face. In the nutshell, social interaction is under control and its subsequent advantage as a direct line of benefit is under the lockdown.

In order to make up the open loop situation created by the pandemic, the succeeding recommendations could be used as breakthrough:

Reaching the school community and the society with proper orientation in terms of relevant and plausible information literacy becomes very essential, more pivotally on health information literacy. Disseminating information alone will not be enough since there are currently so many rumors in the air regarding the causes and expanses of corona attack and backwash effects. Proper media literacy on how people can select sources, info, ways of using and improving their skills remains to be essential as well.

As much as possible, it is important to orient the people, especially parents, to arrange timeframe for their children knowing that, the lockdown time is for safety, and they need to continue reading and exercising at home keeping their distance and taking proper hygiene as suggested by health professionals. Parallel to that, children themselves must be technology literate to use online opportunities to learn through radio, television, Internet and video-conferencing as much as possible. For these virtual learning to be realized, there must be social commitment and change in thought-dimension from the age-old practice of site instruction to web-based and online lesson-delivery mode. In fact, it is also important to create platform to help teachers fill the skill gap they have in using technology through short-orientation using TV and radio.

2.2 Instructional impacts and adjustment to the new paradigm

The time for lesson coverage may be very short and the lesson-delivery system may be very hasty. This may pose a heavy discrepancy on children's learning. Even in the normal lesson-delivery situation, most of the students have been reported to have had average achievement and fluctuating attendance. The lockdown situation may have posed sense of reluctance to wake up early and be punctual to school, arrange sufficient time for reading and prepare self-regulated notes.

It is hard to compensate missing classes and provide tutorials as well. Teachers may not spend a longer time to manage classes or provide feedbacks since such contacts are feared to be gate-openers for contamination. Students may not take their ample time during lockdown or upon return to be a productive time owing to wrong acclimatization. The usual team-based learning and arranged time duration may not be used properly since both teachers and students could feel frustrated to have peer or vertical access to one another.

In order to make use of the instruction time optimally and benefit from, there are programs suggested to be viable as stated below:

Online education programs: International experiences denote that, schools and universities are opting to continue their normal classes on online

platforms. These include the use of online tools such as group video programs, group telegram that allows teachers and students to meet using mobile data and access through Internet. Another way through which students are continuing their studies is distance education, which is based on online programs that replace instructors with educational material. Experiences from different countries denote that, with the help of distance materials, students could be able to study at their own pace.

Free online courses could also be used as viable breakthrough mechanisms to learn where Internet connections are functionally strong. This may not be possible in most nations where online access to resources is rare. So, the best breakthrough mechanism is for teachers to prepare manuscripts which children can read and practice easily. On practical courses, short practice-based videos could be prepared to show demonstrations, and then deliver through CDs. Where necessary, practice questions could be prepared by teachers and provided. These should be focused, manageable and with correct answers/set of answers for questions.

The advantage now is that, students could use their smart mobile devices for telegram-based exchange on their lessons virtually. ICT experts could help teachers to devise computer-generated lessons. However, this breakthrough cannot be attempted keeping schools at the current status in operation. With the pandemic in progress, there must be progress on education.

Where young children stay at home, and normal schedules disrupted, parents are required to make schedules for children. Even with online classes, parents need to help younger children navigate school on the computer, and parents with kindergarten children are unable to work unless other arrangements can be made. Yet, the extent to which parents afford the Internet cost and the very practicality remains to be daunting. Moreover, through school-parent contact, teachers can collect their students' study schedules and make follow up using text message and telegram.

Since no body is certain about when the spread of corona virus will be under control, the education sector both at national and regional level should plan strategically to make preparations on interactive lectures, simulation for laboratory practices for all grades text-books presented through e-learning approach which can be picked by majority of students and shared with those who don't have access to electronic devices.

Twenty-first century education system has given opportunity to optimize quality through interface using electronically synthesized model. In developing countries, like Ethiopia, access to e-learning is quite limited. To this end, the government and educational institutions shall design proper

strategies that encourage families and their children apply Each One Teach One theory and intergenerational learning particularly to facilitate learning at the lower level.

2.3 Impact on Resource Use in Schools

Physical contacts during and after lessons are common in most schools for children to work together in the form of cooperative and other forms of active learning. Due to the current pandemic, it is hard to help children to have free contact to use the scarce resources such as library books, periodicals, and other related supportive supplies. Impact on sharing laboratory resources with peers is also very high, since in science classrooms, children should learn first from teacher's presentation and then from one another on a two-way manner. The restriction on physical contact due to corona virus puts challenges on the use of contact situation as a learning moment.

To reduce impact on sharing playgrounds, classrooms, schools need to use available opportunities and resources at hand. Experiences on the globe show that teachers could use video-conferencing everyday where applicable. Students could also be initiated to use virtual post-note system to share ideas (Jenny Anderson, 2020). Flip-grid, which enables teachers and students create short videos to share something relevant could also be used. Based on the teacher-student, and student-student-exchange, there could be possibility to hold individual work, group work, and confer with teachers. These all could be realized when the human elements are mentally and emotionally ready to undergo reform in operation. So, education offices and specialists along with government bodies need to focus on the use of lesson production, planning special sessions with due attention to the workability of programs and assign resources to the maximum that they could. With resources and task arrangements so far held, there must also be esteemed follow-up on learning since students in such a situation are destined to carry out two grand roles, which include deciding what and how to learn. The maximum effort in virtual learning with due organization and control, is levied upon students.

In sharing library resources, for primary and secondary schools, the government should move to urge schools to make the resources and/or reading materials such as textbooks, reference books, journals, dictionaries, encyclopaedias, magazines, etc., could be installed on server connected to PCs and could be accessed on mobile to that can be used outside of the reading room on campus and possibly at home. This can be managed by introducing e-library and e-granary system. In utilizing laboratory services, it is also important to prepare simulations at national, regional, university,

colleges and schools' level that could be loaded on the server of the schools, and libraries or ICT centers.

2.4 Psychological impacts and its adjustment

The pandemic disease or COVID-19 spread has made many millions of children to stay at home forcefully. As it is known, some of these children are from poor family background who cannot afford taking care of these kids at home. In addition, the majority of the children locked at home are in their play age time in which many of them release their psychological pressure through play and interaction particularly with their peers.

Since children lack proper understanding about the pandemic, they may face depression, stress, anxiety, insecurity, and other problems during staying at homes. As a result, there could be psychological and emotional damage due to the circumstances that lead to experience of high-level hopelessness. Very few children who do have access to relax themselves because of their home environment and family background that express pride and happiness. In spite of their joyful personality at this age, they also may show sensitivity and weaknesses, in responding almost unanimously, that they had a sense of being dependent. Moreover, they may encounter more subsequent emotional and behavioral problems such as poor peer relations, conduct disorder, and delinquency. Furthermore, children growing up with a parent addicted to drugs or alcohol could develop the same patterns of compulsive behaviors during stay home. Older children worry about with whom to share about their emotions and tensions. Besides, boys often exhibit aggression, while girls exhibit depression and passive or withdrawal behavior (Helen et al., 2015).

In general, when stress is not properly dealt with, it could be released in the form of negative emotions, leading to sadness, higher incidence of mental disorders, and anger. Sadness, a symptom of depression, can decrease anyone's ability to make smart and long-term decisions, including seeking good health and education (Van den Brink, 2015).

In light of the above concerns, the following points could serve as solutions. The ministry or regional education bureaus should encourage schools/universities to arrange counselling programs for children exhibiting escapist behaviour. This could be made easier by discussing with parents, and getting support from family, siblings or professionals through different channels. Raising parents' awareness to encourage children to learn along with good advice to take care. Encouraging children to love learning by providing morale-boosting situations through drama and other forms of entertainments. Developing informal literacy programs in schools that can

keep the parents and students on the status of the pandemic and how care-taking could minimize risk.

2.5 Economic Impacts and Its Adjustment Mechanisms

Corona pandemic has created economic disaster on the timely effecting of lessons and school-to-work transition. This is a mega issue to which the pandemic case be understood. Coming to the teaching and learning process, missing classes, school fee discount, paying for unused labour, providing for make-up or remedial classes and arranging special technological breakthrough mechanisms for restarting lessons, all incur spontaneous and additional expenses. Therefore, there should be some mechanisms through which such problems could be minimized. To this end, the succeeding points could be suggested as possible breakthrough:

In order to mitigate the economic impact of the pandemic across schools at all standards, using as much proximate resources as possible such as condensed notes and exercises, and safely sharing them at schools becomes inevitable. For that to be realized, some facilities such as networks and computers as well as photocopiers must be made available.

The nation's public and private media should also have roles in raising the awareness of the society on the educational use of media in collaboration with concerned experts in education bureaus and specialists in the field of pedagogy and psychology. Where makeup classes are believed to be given in the normal effecting, now developing students' study skills and guidance services could be necessary. For this to be realized, colleges of educational science need to work with nearby schools on how to support schools to enable students keep learning while they are in closures.

3 Post-COVID-19 Recovery

In post COVID-19 recovery time, an overall remedial approaches may include adjustments to the academic calendar, prioritizing students in grades preparing for high-stakes examinations, and continuing with distance learning in parallel to schools (Azzi-Huck & Shmis, 2020). Adjustments to the academic calendar could be made through consideration of the time it takes for individual learning and coverage of assignments, time to share ideas with peers online (if any), time to get assignments checked and obtain/give feedbacks and enrichment works.

Where students are preparing for national or other competitive examinations of holistic nature, there must be due consideration of lesson-coverage, students' mastery level, students' skills to work on national tests with due cope-up in speed and accuracy, and ensuring that, the distance learning

materials are goal-oriented, manageable, time-based, clear, comprehensive and user-friendly.

A sustaining work could also be done in relation to Estrada's National Domestic Economic Auto-Sustainability Model (2020, March). Based on the breakthrough suggested above, a domestic education and technical training platform responding to the current situation could be framed. This could embrace, but not limited to, using local timeframe and resources for educational extension, instead of pushing every responsibility to schools.

The other progressive breakthrough is the domestic educational infrastructure and smooth communication platform which will be inviting for the active contribution of all stakeholders for making progresses out of existing provisions and improving educational delivery systems. There should be educational action research and remediating intervention platform which will focus on investigating ongoing achievement quality and related setback in order to seek timely, objective and workable solutions for educational problems that are backed up by the pandemic.

The fourth platform is preventive and protective school environment platform largely focusing on enabling schools to have the potential to oversee the future impact of the pandemic. In relation to the platforms above, there are four principally domestic activities in this program: free education to raise basic education level; domestic coordination and standardization of elementary and high school programs; domestic development of technical training programs; setting up of any national university information network based on joint research and development projects capitalizing on these four activities (Estrada, 2020:4).

4 Conclusion

In this article, the writers have discussed the impacts of COVID-19 on education by addressing about the pandemic with respect to social, academic, psychological wellbeing, economic and adjustment mechanisms. COVID-19 has brought a paradigm shift particularly on education system from group learning to more individualized instruction through online teaching. In this regard, it is mandatory to take note on UNSESCO's (2020) insightful thought on online teaching. This international institution forwards its concerns as online distance learning or blended opportunities to be used to help children cope-up but the question is in creating conditions viable for all students with available and applicable resources, ensuring consistent learning, being sure on the workability of monitoring and evaluation through distance mode, which may require teachers to have special expertise, and strong network with contributive stakeholders on education and schooling, be it internal and external as the situation dictates.

Based on the international scenario, the writers suggest online and distance educational breakthrough mechanisms to keep learning going in the following ways: exploring the possibility of digital learning, high and low technology solutions, and the likes on the basis of power supply, digital skills of teachers and students, and Internet connectivity; inclusion in distance learning programs, especially for students coming from low-income groups and rural or presence of disability, etc., and - providing support for digitalization to teachers as well as students. Yet, since this situation has come as an abrupt and spontaneous issue, arrangements of technological breakthrough mechanisms may not be handy. So, being as much flexible as possible by diversifying resource use becomes inevitable. Such a flexible commitment needs the teachers' readiness to handle programs with due inclination towards innovating how lessons should go on and proper follow-ups be made through collaboration with parents and other relevant educational stakeholders.

References

- Alston, J. M. (2020). What impact has the coronavirus had on higher education? Retrieved from: <https://inomics.com/insight/what-impact-has-the-coronavirus-had-on-higher-education-1447925>.
- Anderson, J. (2020). The coronavirus pandemic is reshaping education. Retrieved from: <https://qz.com/1826369/how-coronavirus-is-changing-education/>.
- Anjorin, A. A. (2020). The coronavirus disease 2019 (COVID-19) pandemic: A review and an update on cases in Africa. *Asian Pacific Journal of Tropical Medicine*. Retrieved from: www.apjtm.org.
- Azzi-Huck, K. & Shmis, T. (2020). Managing the impact of COVID-19 on education systems around the world: How countries are preparing, coping, and planning for recovery? Retrieved from: <https://blogs.worldbank.org/education/managing-impact-covid-19-education-systems-around-world-how-countries-are-preparing>.
- Bader, L. (2020). Millions of Ethiopians can't get COVID-19 news. <https://www.hrw.org/news/2020/03/20/millions-ethiopians-cant-get-covid-19-news>.
- Feysia, B., Herbst, C., & Lemma, W. (Eds.). (2012) *The health workforce in Ethiopia: addressing the remaining challenges*. The World Bank.
- Estrada, M. A. R. (2020). A post-Wuhan-COVID-19 economic recovery proposal: The National Domestic Economic Auto-Sustainability Model (NDEAS-Model). Retrieved from: <https://www.researchgate.net/publication/340091071>.
- Helen, C., et al (2015). *Building resilience in children and young people: Australia*: University of Melbourne.
- Manmita, G. (2020). Impact of coronavirus (COVID-19) on education. Retrieved from: <https://www.indiaeducation.net/resources/articles/impact-of-coronavirus-on-education.html>.

- Rieley, J. B. (2020). Coronavirus and its impact on higher education. Retrieved from: https://www.researchgate.net/post/Corona_Virus_and_its_impact_on_higher_education.
- Van den Brink, A. (2015). How poverty affects street children psychologically https://en.wikipedia.org/wiki/Street_childre.
- _____. (2020). COVID-19 educational disruption and response. Retrieved from: https://en.wikipedia.org/wiki/Impact_of_the_2019%E2%80%9320_coronavirus_pandemic_on_education.
- _____. (2020). WHO Coronavirus Disease (COVID-19) Dashboard, Retrieved from: https://covid19.who.int/?gclid=CjwKCAjw5Ij2BRBdEiwA0Frc9RH0_hHC20JC-



This work is licensed under a Creative Commons Attribution-NonCommercial-ShareAlike 3.0 Unported license. To view a copy of this license, visit <http://creativecommons.org/licenses/by-nc-sa/3.0>