

Effects of Coronavirus Pandemic on Education in Algeria: Challenges of Transition to Online Education

Zakia LAMRAOUI*

University of OumElbouaghi (Algeria)
zakia.lamraoui@univ-oeb.dz

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Abstract. This study investigates the effects of coronavirus outbreak on education and the challenges of transition to online education.

based on information reported in different studies about the effects of coronavirus pandemic on education as well as information and statistics obtained from the Algerian government and Algerian ministry of health, we have applied a theoretical analytical approach.

The coronavirus outbreak poses serious concerns to global education systems. Because school closure was a strategic measure to prevent the outbreak of coronavirus pandemic, Algeria, like many other countries, has temporarily closed all educational institutions (schools and universities). The use of technology, in such situations, to support teaching and learning has become an essential skill. So, all educational institutions, educators, and learners must adopt technology, and improve their digital skills, in order to mitigate the effects of coronavirus on education.

Keywords. coronavirus, education, challenges, online education, Algeria

Résumé. Cette étude examine les effets de la pandémie de coronavirus sur l'éducation et les défis de la transition vers l'éducation en ligne.

sur la base des informations rapportées dans différentes études sur les effets de la pandémie de coronavirus sur l'éducation ainsi que des informations et statistiques obtenues du gouvernement algérien et du ministère algérien de la santé, nous avons appliqué une approche analytique théorique.

La propagation de la pandémie de coronavirus pose de graves problèmes aux systèmes éducatifs mondiaux. Parce que la fermeture des écoles était une mesure stratégique pour prévenir la propagation de pandémie de coronavirus, l'Algérie comme de nombreux autres pays a temporairement fermé tous les établissements d'enseignement (écoles et universités). L'utilisation de la technologie, dans de telles situations, pour soutenir l'enseignement et l'apprentissage est devenue une compétence essentielle. Ainsi, tous les établissements d'enseignement, éducateurs et apprenants doivent adopter la technologie et améliorer leurs compétences numériques afin d'atténuer les effets du coronavirus sur l'éducation.

Mots-clés : Coronavirus, éducation, défis, éducation en ligne, Algérie

*corresponding author

1. Introduction

Coronavirus disease (COVID-19) is a contagious disease caused by a newly discovered coronavirus. It first emerged in Wuhan, China in 2019, and then spread all over the world. This outbreak is the most severe global pandemic since the 1918 influenza pandemic. “The COVID-19 virus spreads primarily through droplets of saliva or discharge from the nose when an infected person coughs or sneezes, so it is important that you also practice respiratory etiquette” (W.H.O., 2020a).

By November 18, 2020, according to the World Health Organization (W.H.O., 2020b), the number of global COVID-19 cases has reached 56,231,894 cases and about 1,349,057 deaths. Onyema et al (2020) state that the coronavirus outbreak affected all aspects of human activities globally ranging from education, research, sports, entertainment, transportation, worship, social gathering/interactions, economy, businesses, and politics.

The education sector remains one of the most affected sectors by Coronavirus outbreak. Thus this study is conducted to examine the impact of coronavirus on education, and also to investigate the various challenges of transition to online education.

2. Overview of Coronavirus Outbreak in Algeria

Coronavirus Disease is an infectious disease that first emerged in Wuhan, China in 2019. The World Health Organization (WHO) has declared that “COVID-19” will now be the official name of this new coronavirus disease; “CO” stands for “corona”, “VI” for “virus” and “D” for “disease”, while “19” was for the year, as the outbreak was first identified on December 31 (W.H.O, 2020c).

Scientists prove that older people and those with underlying medical problems like cardiovascular diseases, diabetes, chronic respiratory disease, and cancer are more likely to develop serious illnesses by coronavirus (W.H.O, 2020a).

As at the time of writing, there were no vaccines for Coronavirus. Thus, prevention is very important issue to control COVID-19. Therefore, behavioral change can help contain the spread of coronavirus and all persons should follow the preventive measures strictly, and collective efforts of both public and government are needed. Thus, the United Nations appealed for 2 billion dollars to support global response efforts towards tackling the coronavirus pandemic because coronavirus is considered as a global problem that requires more action coordination and global cooperation to successfully contain the outbreak and to deal with its aftermath effects (Onyema et al, 2020, p. 110).

An Italian who was reported to be the first case of coronavirus in Algeria in February 2020 was successfully treated and deported to his country via special flight without anyone being infected. But new cases emerged after that and the true starting point of the epidemic in Algeria is reported on “March 1 of two national citizens who

came from France in the province of Blida (northern Algeria) which became the epicenter of the epidemic” (Lounis, 2020a, p. 1).

Blida was a first outbreak and the origin of COVID-19 epidemic in Algeria because since then, a COVID-19 outbreak has started in this province. Other provinces also started to be affected by different imported origins especially in provinces of Algiers, Oran, Setif, Bejaia, Tipaza, Ain Defla, TiziOuzou, Skikda and Soukahras. On April 15, 47 out of 48 provinces has recorded at least one positive case(Lounis, 2020b, p. 2).“Since May 1, all the 48 provinces of Algeria were affected with a number varying from 2 to 865 of positive cases” (Lounis, 2020a, p. 1).At the time of writing, November 18, Algeria confirmed 70,629 cases of COVID-19 and 2,206 COVID-19 related deaths (Algerian Ministry of Health, 2020).

3. Algerian Responses to Coronavirus Pandemic

In case of any pandemic outbreak, proactive response is important to contain it, but the coronavirus took the world by surprise and most countries were not prepared initially for the pandemic. Algeria, like other countries, has underestimated the gravity of this pandemic as not much was done to prevent it. The only action taken was the flight cancellation to china by the national airline company on February 3, 2020 (Lounis, 2020b, p. 2).

Since the number of the positive cases started to become alarming, the World Health Organization (W.H.O.) issued guidelines and updates on how to mitigate the spread of the pandemic. Many countries adopted different measures in addition to the W.H.O. guidelines to contain the spread of the disease. The Algerian government, for instance has implemented various measures to limit the outbreak of the virus. Such as: quarantine, Social distancing, home confinement, ban all public gatherings, close borders and restrict flights, and lockdown and curfew.

The lockdowns include: schools and universities closure, workplace closure, public transportation closure, shops closure (except food shops), restaurants and cafes closure, markets closure, shopping malls closure, airports closure, borders closure and mosques closure.

4. Impact of Coronavirus Pandemic on Education

The coronavirus outbreak affected the education sector around the world. It led to school closures in many countries in an attempt to contain the spread of the pandemic. “COVID-19 outbreak has created educational disruptions, and global health concerns that proved very difficult to manage by global health systems.” (Onyema et al, 2020, p. 108).

According to the United Nations Educational, Scientific and Cultural Organization (UNESCO) monitoring, over 100 countries have implemented nationwide closures, impacting over half of world’s student population (UNESCO,

2020c). As school closure is a strategic measure to prevent the outbreak of coronavirus pandemic Algeria, like many other countries, has temporarily closed all educational institutions (schools and universities) starting from March 13. According to (Onyema et al) “unplanned school closures can cause severe problems for students, educators, parents and the society at large. It could lead students to idleness which might result in youth involvement in crimes, loss of interest in learning, and poor academic performance” (2020, p111).

The United Nations Educational, Scientific and Cultural Organization said school closings to stop the spread of the new coronavirus affected more than 290 million students around the world (UNESCO, 2020a). Prolonged closure of schools may have major implications on teaching, learning, assessments and credentials. The disruption of teaching and examination has delayed student progression and resulted in a broader socio-economic impact (Joshi, Vinay & Bhaskar, 2020).

According to UNESCO (2020d), school closures carry high social and economic costs for people across communities, especially for the most vulnerable and marginalized people. This may lead to education system disruptions in addition to other aspects of lives. For this, UNESCO is supporting countries in their efforts to mitigate the immediate impact of school closures, particularly for more vulnerable and disadvantaged communities, and to facilitate the continuity of education for all through remote learning. (UNESCO, 2020b)

According to Christakis, E. and Christakis, N. A. (2020), school closures can either be reactive or proactive. Reactive school closure occurs upon discovery of coronavirus case among the students, staff, or parents. While proactive school closure occurs before the disease even reaches the doors of the school.

Mathematical models and empirical analyses of reactive closures in past pandemics indicate that school closure reduces the total number of cases in the community by about 25 percent and postpones the peak of the pandemic by a week or two. While proactive school closure is one of the most beneficial interventions that can be employed to reduce the impact of epidemic disease (Christakis, E., & Christakis, N. A. 2020).

Coronavirus school closures affected all actors in the educational process; students, teachers and even parents especially those with limited digital skills, and those living in rural area who cannot transit to online education. This latter plays a key role in mitigating the effects of school closures relying on the use of technological tools and platforms to ensure continued education during the COVID – 19 pandemic.

5. Technology to Cope with Coronavirus School Closures

The outbreak of coronavirus pandemic increased the global demand for online education. “It has made it mandatory for the teachers of developing countries to use online platforms for teaching and assessment to support the education sector” (Joshi, Vinay & Bhaskar, 2020). Technology is integral to student-teacher connection and communication especially in moments of isolations, quarantines, and lockdowns as a result of health crises and other emergencies. (Onyema et al, 2020, p113). The use of technology to support teaching and learning has become an essential skill for teachers and students as well in today's world.

There are lot of educational applications, platforms and resources that aim to help parents, teachers, and school administrators facilitate student learning and provide social care and interaction during periods of school closure. The UNESCO (2020e) listed them as follows:

- **Resources to provide psychosocial support:** Interagency Standing Committee guidelines, WHO mental health and psychosocial guidance during the COVID-19 outbreak, UNICEF guidance on how teachers should talk to children about COVID-19, UNICEF guidance on how parents and caregivers can talk children about COVID-19
- **Digital learning management systems:** CenturyTech, ClassDojo, Edmodo, Edraak, EkStep, Google Classroom, Moodle Nafham, Paper Airplanes, Schoology, Seesaw, Skooler.
- **Systems built for use on basic mobile phones:** Cell-Ed, Eneza Education, Funzi, KaiOS, Ubongo, Ustad Mobile.
- **Systems with strong offline functionality:** Kolibri, Rumie, Ustad Mobile.
- **Massive Open Online Course (MOOC) Platforms:** Alison, Canvas Coursera, European Schoolnet Academy, EdX, iCourse, Future Learn, Icourses, TED-Ed Earth School, Udemy, XuetaangX
- **Self-directed learning content:** ABRA, British Council, Byju's, Code It, Code.org, Code Week, Discovery Education, Duolingo, Edraak, Facebook Get Digital, Feed the Monster, Geekie, Khan Academy, KitKit School, LabXchange, Madrasa, Mindspark, Mosoteach, Music Crab, OneCourse, Profuturo, Polyup, Quizlet, SDG Academy Library, Siyavula, Smart History, YouTube
- **Mobile reading applications:** African Storybook, Biblioteca Digital del Instituto Latinoamericano de la Comunicación Educativa Global Digital Library, Interactive Learning Program, Reads, Room to Read, StoryWeaver, Worldreader

- **Collaboration platforms that support live-video communication:** Dingtalk, Lark, Hangouts Meet, Teams, Skype, WeChat Work, WhatsApp, Zoom.
- **Tools for teachers to create of digital learning content:** Thing link, Buncee, EdPuzzle, EduCaixa, Kaltura, Nearpod, Pear Deck, Squigl, Trello.
- **External repositories of distance learning solutions:** Brookings, Common Sense Education, Commonwealth of Learning, Education Nation, Ed Surge, European Commission Resources, GDL Radio, Global Business Coalition for Education, Keep Learning Going, Koulu.me, Organisation internationale de la Francophonie, Profuturo Resources, UNEVOC Resources, UNHCR.

Digital education tools have been created with the purpose of facilitating online education particularly in times of outbreaks like the Coronavirus pandemic. Chauhan (2018) presents 11 of the most popular; Edmodo, Socrative, Projeqt, Thinglink, TED-Ed, cK-12, ClassDojo, eduClipper, Storybird, Animoto, Kahoot!.

6. Challenges of Transition to Online Education

The transition to online education posed a challenge to learners in developing countries where there were no relevant infrastructures and facilities that support online education. The Coronavirus outbreak has forced millions of students to study and learn from home. This could be very challenging to many educators, learners and parents especially those in developing countries where the accessibility, availability and use of technology in education are not widespread. (Onyema et al, 2020, p114).

The Algerian Ministry of Higher Education recommended the use of distance learning programs and the open educational platforms that universities can use to reach learners remotely and reduce education disruption. Through this technology, universities succeeded in publishing lectures. However, the problem remains with regard to supervised work and practical works that in some disciplines need physical presence in laboratories. Also students living in regions with limited infrastructure and no access to internet are particularly impacted. "Most students do not have the technologies to support online education, which makes it difficult to implement distance learning technology during school closures" (Onyema et al, 2020, p112).

The absence of online learning platform in educational institutions, schools, in addition to the young age of the learner make the online education impossible. This led to the suspension of studies for schools, the cancellation of the remainder of the annual program, in addition to postpone and reschedule of some official exams and the reduction of the success average.

In Algeria, teachers are not technologically well prepared. Most of them are not able to teach and conduct assessments online. Because coronavirus took the world by

surprise, teachers found themselves facing teaching and conducting assessments from their homes. This created many challenges such as:

- Adapting technology for online teaching within a short span of time
- There is no direct technical support that can be offered to teachers in case of any technical difficulty during the online lecture delivery or online assessment.
- Both teachers and students face distractions because of the frequent visit of family members during online lecture delivery and assessments.
- Lack of time for online lecture preparation and some subjects or lectures does not suit online teaching.
- Lack of interaction between teachers and students during the online teaching-learning process
- Both teachers and students are not having sufficient infrastructure such as configured laptops, internet, digital skills.

7. Conclusion

Coronavirus changed the traditional teaching model to the educational technology model where teachers and students were exposed to new innovative educational tools. Teachers need to adapt the technology for the successful execution of online teaching and assessments. Technology can help in mitigating the implications of school closures, but it cannot replace the important effect of students – teachers' face-to-face interactions. The use of technology to support teaching and learning has become essential skill in today's world. So, all educational institutions, educators, and learners must adopt technology, and improve their digital skills, in order to mitigate the effects of coronavirus on education.

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