

Issues and Challenges in Online Education and Evaluation Process in Pakistan Driven by Covid-19

Muhammad Sajid Khan¹ & Mehak²

Abstract

Covid-19 came as a bad dream to all the structures of society whether economic, political or social. It threw doubts on the current condition of the systems of society. Education is one of the afflicted sector because the pandemic caused almost a year long closure of the education system. Many advanced countries had already been incorporating online education in their system in some way but developing nations like Pakistan suffered the most since they were not prepared for this new system of education and evaluation at any phase in the pandemic. From students to teachers, everyone has come across many challenges in acquiring this new system of education. This paper aims at analysing those challenges of online education and changed evaluation system in Pakistan during the Covid-19 period and put forwarded some structured solutions on how to manage these changes for the future in the case that a new calamity arises.

Keywords: *Challenges, Online Education, Evaluation, Covid-19, Pakistan*

¹ Lecturer at Allama Iqbal open University Islamabad. sajidkhan@aiou.edu.pk

² Lecturer at Comsats University. samamehak051@gmail.com

Introduction

Covid-19 is a general health issue around the world but it has also drastically affected economic, cultural, social and educational systems of society. It has brought up all the cracks on the surface that were lying in each social system. Out of all these major flaws, one is the breaches in the educational system worldwide. A report by UNESCO suggests that “nearly 1.6 billion learners in more than 190 countries, 94% of the world’s student population, were affected by the closure of educational institutions at the peak of the crisis”(UNESCO,2020) that shows how much disturbance covid-19 has caused to the education system worldwide. This Closure of educational institutions have hit nearly 94 % of the students and up to 99% of the third world countries. “Due to the economic repercussions of the pandemic alone, some 23.8 million additional children and young people will drop out of school or not next year”(Aziz, 2020) According to UNESCO “the pandemic will increase the gap in funding needed to reach the internationally agreed 2030 Sustainable Development Goal on Education (SDG4) in low and lower-middle income countries by one third, from the already staggering shortfall of USD 148 billion”(UNESCO, 2020). The crisis of Covid-19 and the prodigious damage it caused to education system has not ended yet. More than hundred countries are yet to confirm a fix schedule for educational institutions to reopen. All around the world policy makers, parents and students are struggling to know how and when would they address the next phase. The damage this pandemic has caused to the poverty stricken people is even more distressing. Nearly 4.65 million students do not have any reach to internet facility which make them unable to get online classes. “Families are in such dire straits in several spaces of South Asia and Africa many parents are pursuing their kids to give away their educations and help their families in work or get married”(Aziz, 2020). The situation is likely to get worsen as institutions are still closed and uncertainty is still hovering up. A study by UNESCO shows that learning does not get compromised even if institutions get closed for just a few weeks and it does have a regressive effect on the students results. For young ones, these effects are even more because of their developing cognitive, motor skills are involved. A study publicized by the World Bank demonstrated that the learning losses in Pakistan after the 2005 earthquake were correspond to nearly 2 years of education. A Gallup survey shows that “74% of parents already agree that education curfew should be lifted” (Sattar, 2020). So, due to all this chaos the way in-class and On-campus learning and assessment used to work has changed and policy makers reacted efficiently to address the problem and safe the future of education. The scientific and technical development, and educational targets have somehow lessened the prospects of failure. Teachers and students are left with no option than to rely on online education and assessment in all this chaos, a technique that is quite new for students and teachers in Pakistan. “They are playing with numerous e-learning sites such as Zoom, Google

classroom, Hangout, Edmodo, Facebook live and WhatsApp messenger to ensure that education is not bargained during lockdown”(Jahangir, 2020). The HEC sent notifications to university administrations to start taking online classes and exams that have been a success in many other countries but in Pakistan it faced many hurdles since only one third of the population have access to internet. During the crucial times, the Higher Education Commission (HEC) abode practical to its attributes, providing technical services to institutions and formulating programmes to ensure efficient online education teaching. “These recommendations constitute 7 documents and are accessible on the website of HEC” (Banuri, 2020). All the schools, colleges and universities around the world moved to interactive learning and called off physical learning altogether and shifted to e-education. Many teachers and academics are joining training programmes, competitive evaluations like PMS learning courses in addition to ICEP, CSPs Academy and Education Inn. Educationists thought of creative and radical schooling to score in their profession, taking support from Internet and modern technology. It emphasized on educational services to remodel the education system to manage the needs of a present economy since “Online learning is here for us (you) to stay”. (Li, & Lalan, 2020).

Significance of the Study:

This study will help to highlight the key issues and challenges that teachers and students faced in online education and evaluation process owing to Covid-19 in Pakistan. It will also look into how and why Pakistan is trailing behind compared to the rest of the world where this system was doing well.

The Occurrence of Covid-19:

Coronavirus was named COVID-19 by WHO. It was first reported on Dec 31, 2019 in China. It is a highly contagious disease that causes conditions from normal cold to SARS. “Coronaviruses usually cause moderate but often lethal respiratory infections in humans” (THUBURN, 2020). China reacted efficiently and closed the Wuhan's market from where it firstly broke out. Initially China didn't take it seriously and chide away all the threats of the virus but had to raise its precautionary measures after the first death on Jan 11, 2020. On Jan 23, 2020 all air and rail traffic was restricted. WHO declared the disease as a pandemic on 11 March that brought the world to halt.

Shift in Education and Evaluation System:

The pandemic resulted in educational institutions been shut all around the world which means over 1.5 billion students out of the classroom. Education has changed since then dramatically, with the remarkable rise of e-education, for-which teaching is

being done remotely on automated, electronic and digital platforms. Research suggests that “online learning has been shown to increase retention of information, and take less time, meaning the changes coronavirus have caused might be here to stay”(Li, 2020)

Online education and evaluation is not something new. All developed countries are already using digital platforms in some way besides physical learning, to conduct classes and evaluate their students. All renowned universities around the globe conduct online exams to attune their students with the modern technology. Recorded lectures and online conferencing are not new for them but in Pakistan it is in its primitive stage. Though most of the institutions have took on the process of online admission and result announcement, but this new system of teaching online and conducting online exams is relatively new and slow. According to the statistics of Human Development Report of 2019, out of 189 countries Pakistan stands on 152 in the Human Development Index (HDI). Compare to its neighbouring countries, Pakistan is already far behind in education sector. Literacy rate and total enrolment ratio in Pakistan is quite low as compared to its regional nations. Pakistan has 60% literacy rate compare to India’s 77%, Nepal’s 67% and Bangladesh’s 74%. Similarly, Pakistan has third highest dropout rate in primary stage which is quite distressing as it is the most influential learning stage.

“Even before Covid-19, there was already high growth and adoption in education technology, with global etch investments reaching US\$18.66 billion in 2019 and the overall market for online education projected to reach \$350 billion by 2025. Whether it is language apps, virtual tutoring, video conferencing tools, or online learning software, there has been a significant surge in usage since Covid-19”(Li, 2020) Pakistan has a great education framework in the world but online training does surpass formal education as it includes competitive test, some polished technical skills and some non-pedagogical areas. Online education is in its initial stages in Pakistan and the process will take some trials and errors before it adheres to the system. A report suggests that an increase of 11 million users that makes 17 % increase in Internet usage in Pakistan since last year (Pakistan's Digital Report, 2020).

With Universities and schools having no choice but to adapt to the threat of Covid-19, it also influenced the examination and evaluation process. Gathering students into one room for a longer period was not a safe option. Nonetheless, exams are essential part of any education process and a requisite step in giving students with deserving scores. Completely calling off exams was not possible as “Academic evaluation of students is a very important milestone in any education system. The performance in examinations gives confidence and satisfaction to the students and reflects competence, performance, and credibility that is necessary for global acceptability” (James, 2020) Institutions had to take exams online to keep track of their academic schedule which was a new experiment for most of the teachers and students in Pakistan since they were not fully prepared for this change. Teachers were not fully trained to execute online

presentations, assignments and exams which made it quite tough for them to bring off the results fairly. Since the time demanded the use of structured exam tools like computerized exams as a substitute of regular exams, the introduction of e-exam had some potential challenges to overcome.

Significance of Electronic Education and Evaluation:

Despite the pandemic coming as a threat to almost everything, by adopting technology as a new education structure, we can reshape our education framework altogether. Introducing online education is a convenient way to tackle the education crisis all around the world. A great option has been provided by this pandemic and we should turn this crisis into an opportunity for a fair system. Electronic education and evaluation has many benefits.

⑩ Electronic education and evaluation process is quite time and cost-effective. There are unlimited volumes of prepared material available on internet which make it easy for teachers to prepare lectures. Similarly, online exams system reduces the workload of teachers by using computerize test papers and marking system. Marking exams in-person is costly and abortive, bearing in mind the evaluator's cost and the substantial data they have to enter manually which is liable to foul up.

⑩ With the change in the education system students may not move to other countries for higher education because of their inability to reach for demographic or state motives in their respective country. Students can enrol in online degree programs and get degrees and certifications from any university in the world.

⑩ Online education and evaluation helps cut social and physical barriers. E-education is a perfect method to solve the problems of students who have high-demanding schooling in terms of place and schedule (Lau, 2020).

⑩ Students can learn from world's best professors and teachers through online teaching. There are many good lecturers who have started their own pages and channels on internet and upload thorough lectures regularly. Students all around the world can be benefited from these lectures.

⑩ This mode of education and evaluation helps practitioners to add and to enhance their expertise while also working side by side as it lessens their workload.

⑩ It keeps us informed about new information and trends. The field of education remained stagnant and traditional all around history. This pandemic can modify the

education system completely. Students are only tap away from the sea of huge knowledge and information which is better in some ways than teachers.

⑩ It is a miracle of technology that it can turn a computer screen into a whole classroom where students and teachers can interact with each other in an immersive environment.

⑩ Online education and evaluation eliminated long field rides; where some students or teachers had to drive two hours a day. “In the future, virtual classrooms could allow students to attend school in person for, say, four days, with fifth-day online lessons” (Baker, 2020). Online evaluation also reduces overhead costs of procuring an exam hall and giving students supplementary stuffs.

⑩ From students to teachers, everyone knows how difficult it is to design, execute, and evaluate exams and assessments. The main benefit of online exams is that it lessens the time used up in supervising the whole exam activity. The specially designed software for exams have the choice of sourcing and adding questions that enable students to take exam and aiding collective exams.

⑩ The fact that online exams ensure an increased privacy for students, proves the practicality of the whole process. There is no margin for directing fraud or hostile deeds to distort the system and generate erroneous evaluations, wallow in cheating or other illicit things. Students too except the results without challenging them in such a guarded system, which motivates positive rise. Such reliability and privacy stimulate positive outlook to the institute and make a good required trust between teachers and students, confirming general translucency and unbiased results.

⑩ The benefits of computerized exams mean putting up a self-closing marking system, more appropriate than a regular marking system. The rapid growth of technology in electronic learning and the rising figure of members direct a sound grading system that relieves teachers’ workload, saves time and secure impartiality. MCQs are mainly used in online quizzes and exams as they make computerized grading easy where automated grading compares the student’s answer with the model answer.

In the present day environment of education, the notion of 'paying attention' is practically behind the times. We forget important information of the previous day if we do not attend it closely. So in time like these online content is mostly reachable and can be searched at any moment or time because it can be reassessed.

Drawbacks of Electronic Education and Evaluation:

Covid-19 has affected millions of students around the world. It's probable effect on student's regular progress and protracted development is quite alarming as it has an overwhelming effect on everyone. The shutting down of educational institutions have greatly impacted poor students. Given the excessive drive, Internet opportunities as a protracted substitute to classrooms is still not viable. The technology sector has yet to make an affluent additional educational structure. There are some apparent benefits of online education and evaluation that we discussed but it also has many issues and challenges which are:

⑩ Though online education makes it easy to get whatever knowledge one needs with only one click, regular education motivates us to take part in the process industriously because physical interactions help develop and polish one's cognitive abilities.

⑩ The shortage of requisite IT infrastructure is also a curb in smaller educational institutions. One of the major drawbacks of an online examination system comes up in far off places where access to a secure internet connection and other important required conditions are arduous to have access to. Hitches like these hamper online exams. For this reason, educational institutions must observe whether all students can take papers while switching to electronic mode, and make sure that the arrangements are the same for everyone.

⑩ As for now it looks like online education is for the privileged ones and can only be practiced well in developed countries. Consequently, this sudden change to online education will rise the gap between the privileged and the deprived.

⑩ There is this concern that educational administrations will cut down the number of teachers as they rely on online learning systems more. It suggests that this system will give rise to unemployment in the near future.

⑩ Online education minimizes physical and personal interaction between people which will affect the field games and extracurricular events that are as consequential as education.

⑩ The major drawback of online exams is cheating. In hard-line exams, students many a times have recourse to impersonation, that makes institutions doubtful about the examinee's identity. It is easier for students to get external help through smartphones. The exam systems examinees use, also provide them with cheating opportunities, like screen sharing and affixing external storage devices, etc.

⑩ The specific nature of tests in online system averts certain ways of evaluation being applied. The most evident one is that it is not suitable for collaborative or synergetic evaluations or any kind of group projects. The reason being the nature of this forum is objective based that averts subjective evaluations where scores are given for subjective attempts and not on an already established framework.

In Pakistan education has never been the utmost concern to the government. This constant problem does not concern who is the ruling party in the country. Government has moderated the lock down by introducing smart lock down where only the most affected areas get closed and the whole country. Education remained closed for the most part of year 2020 though other spheres of the nation remained open till the month of Sep. The sole good initiative by the government for the education sector was airing the first-ever television school transmission on national television in April to assist school students and keep down their educational loss (Abbasi, 2020). It was a good step particularly, for those students who live in remote areas of the country and lack internet facility. Contrarily, “U.K. launched the Oak National Academy, a new online school where about 2 million students could learn” (LSEC, 2020).

Higher Education Commission of Pakistan is a consultative body for universities and tertiary schools and each institution implements the suggestive policy consistent with their own rules. Covid-19 created a mayhem for Universities because each one had its own peculiar subjective policy which created commotion in the students. It observed that there are many universities which are not ready to shift their education due to the lack of resources but it was the need of the hour as it was badly affecting the education sector. University students had some serious issues regarding the standard of education they were getting online as it was all over the place. Not only students but the lecturers and other faculty staff was also facing problems regarding computing the content as they lacked required skills. Some universities did initiate online training programmes for their teaching staff however, they did not keep up with the track and called it off. For example, right after the lock down, the GCU put off all the academic activities until June, but yet to bring about an extensive training programme for their faculty. An Assistant professor in the said university says that “It was just one session of training, and I wouldn't call it adequate”. HEC has notified in its policy guidelines that the effects could be the rescission of a term session. (Riaz, 2020).

Challenges to New Evaluation System

Online education and evaluation faces many operational issues in Pakistan that includes power outage, a good and secure internet access, dearth of cyber tools and lack of thorough experience or knowledge, and insufficient knowledge regarding It security. A majority of students do not have access to any electronic medium and if they do, the

recurrent power outages in the country make it impossible for them to be benefited from these modes.

During the initial stages of the shift the major concern was to make the access of e-education possible to everyone. Since a well regulated and effective learning would not be possible if it is not convenient to everyone. O/A-Level students experienced online education quite diligently but many institutions can not provide e-experience due to weak resources. They lack the indispensable mediums that are needed to create digital content and students need mobiles and internet to get an access to it. "We realised that whatever we put in the world of digital education, it must be of the highest quality, something that communicates, connects and can communicate with stake holders" (Jahangir, 2020). One of the main problem is that the staff does not have required command over technology and they are unable to use it efficiently. Teachers and parents are not advanced enough to grasp this new substitute to textbook quickly. "It takes a lot of time. In the digital world, a two-hour lesson takes up to six hours of documenting and preparation. The aim is not only to provide content but to keep students involved" (Mehmood, 2020).

The other problem that institutions around the world are facing is that parents are forcing them to refund the fees but they also have a staff to pay. It is doubtless to say that universities act as a separate body, conjointly with their nexus. Universities are one of the operators of local economies which are providing people with hundreds and thousands of practical jobs. This chaos is too much for educational institutions and they have struggled for an undividable future. For now, "schools are deeply concerned about the level of recruitment and the net tuition income with admission right around the corner. When contributions and grants dry up, college applications are worried about financial assistance. A decline in academic production and new roles would see increasingly stretched university budgets" (Aziz, 2020).

Unexpected challenges like costly licencing of internet devices, privacy related problems, and especially the shift of teaching methods of regular classroom to a virtual one are some of the problems that are rising. But uncertainty is still hovering around the future; social gatherings, and regular classes at this time would be quite dangerous.

Private colleges and universities who seemed to have all the means to get through this time easily are struggling. Some students of a Lahore business school accounted that their college is arranging online quizzes through LM software which is subject to crashing. Teachers are concerned about students using mobiles and laptops because of continuously popping applications. In Pakistan people mostly live in joint family system which make it difficult for students and teachers both to create a healthy learning environment because of family members busy in retorts and arguments. One simply can not pay attention to whatever he/she is doing as it affects one emotionally and influence learning (Riaz, 2020).

The main motive behind examinations is to assess student's learning as fairly as possible. If exams are not fair, results would be erroneous in displaying student's true potential. Not only this but an erroneous assessment of student's learning progress also directs to some other issues that one look into and be conscious of the institution where it is happening. Cheating remained the core issue in evaluation process during Covid time, in Pakistan. It takes minutes to share screen during online paper. As exams are being controlled remotely, students can ask their mate to log in from somewhere to get an access to the exam paper and give him/her help in answering the questions. Team Viewer is a software used by some students, where a mediator remotely holds the fort of the student's computer and do the exam representing him. Smartphones have been used by the students to keep the quiz related material near them so they could easily peek into whenever they get a chance. There are also some apps available where one simply put a question in the bar and it suggests the correct computerized answer. All these cheating modes were the main reasons that students protested outside their universities when HEC suggested on-campus exams for the fall semesters. Even below the average students were getting great scores while some good students were agitated on the fact that they are being robbed off of their rights. It highlights the fact that Pakistan's education system needs direction for it must try to make a proactive ethos and an ethical body of people.

Teachers and other faculty staff struggled in conducting and proctoring the exams session as well as grading the students fairly because this whole system was new to them. Automated Mcqs can easily be graded but marking a subjective paper is quite time taking and take a toll on examinees. The management of the universities faced backlash as soon as they announced to conduct on-campus exams. Students protested outside their universities to record the complaints. Management and teachers were of opinion that students are trying to create a situation to get away with the exams completely or may be to avail scoring without taking exams and get promoted like previous semester. Students objected that teachers didn't conduct e-classes properly so they are left with incomplete syllabus. On the contrary, teachers complained about less attendance in online classes. Some Students said that they had hard time joining online classes due to failed connections but the question is then how would they be able to take online exam if for the poor connection. Some Universities like Air University, Islamabad came up with the idea of taking online exams on-campus but students did not accept. This shows that the students want an opportunity of cheating to get good grades but there are ways to prevent online cheating.

⑩ By using a secure browser, we can minimize the chances of cheating as it is a mechanism that sends notification to the examiner, as soon as one tries to open any other window.

⑩ Remote proctoring is a feature that authenticates the identity of the examinee. It includes image capturing and audit logging.

⑩ Employing exam timer for each question also minimizes the chances of cheating as it restricts the candidate to write the answer in a specified time.

By using these methods cheating can be prevented because this is the future of our education and we should strive to improve it from the beginning to make it more reliable evaluative system.

Lessons Drawn:

This global shift of school system from regular to virtual gives a great opportunity to re-establish and renew teaching, curriculum and pedagogy altogether as we remained stick to old modes for far too long and now is the time for a change. We can pull out a standard overarching education to add to learning outcomes. Technology must be reachable to everyone whether rich or poor, near or far because it is going to be an ultimate reality in the near future. So it should not be an entitlement for only the privileged. As teachers are getting to learn the virtual ways to remain connected with the students, we should carefully observe what we educate. This crisis points out why we need a curriculum that must be prepared on worldly experiences and must encourage basic yet creative, resourceful and flexible notions. This sudden shift to a distance learning has generated opportunities to think out of the box and employ creative methods to teaching to contribute to self-learning, to lay out opportunities to study from diverse forums and to make individual learning affluent for different needs via advanced and elementary services.

Many e-learning platforms like Goprep are actively running programmes to make education involving and interesting. These Platforms promote learning importance and reasoning with the aid of animated and artificial intelligence based videos with the chief goal to make the process of learning enjoyable and motivated. The most substantial gain of online system is that there will be no boundary for education as it would be reachable to everyone, anywhere. Universities like NUML, IIUI, NUST and Quaid-e-Azam were only teaching locally but now they will initiate online degree programmes for students to study from abroad. Pakistan's higher education system calls for remoulding with acute, creative, standard but locally based and all-inclusive system. Some new and ingenious models should be applied. A country like Pakistan, where majority of the population is under 30's, a creative and robust policy would map a future which is sound in infrastructure, finance and administration. Higher education system in Pakistan has a great opportunity to turn to account a great number of workers following training and coaching programmes that matches the demands of this new transpiring global market. Policy-makers of the country should plan weight age and issue resources in a way that new and small businesses can hire the lot from larger universities. Audio video aids should be used for lectures and hypermedia intercommunication must trade.

This is the best time for education institutions to further endorse electronic education with the help of current system via teacher coaching and training programmes and cost free cyber services. This is the best time for students and teachers to outsmart as the pace with which the cyber world is evolving is relatively slow or else they will have to face up the demands of working online in the near future, but on tough grounds.

To prevent cheating in online exams the best solution is to employ exam proctoring software which is specially created to permit students to take online exams unwaveringly. It comes with some special features of programmed surveillance, ID verification, and computer lock. Nonetheless, it is quite costly and comes with some technical convolutions which make it not as handy or accessible.

This crisis has showed us that we need to respond to new expansions and evolution in modern and novel ways but not to leave behind the old and substandard things as it will not make the whole process complete. The odds for computerized and elementary strategies in electronic learning requires discussion contingent on electricity supply, the digital knowledge of teachers and students, and internet reach. Not only these but students and teachers should be provided with requisite resources by making the content accessible to them free of cost and give them the basic facilities needed for the process like smartphones, tablets and laptops.

9. Conclusion

As Pakistan experienced a huge shift in all spheres of life in previous times due to the novel coronavirus pandemic, schooling has an exceptional chance to change for the better and take this chance to move forward for a brighter tomorrow. This means to jump out of the old boxes and taking in innovatory, bold and constructive strategies covering the whole discipline. In the whole, education has been a key feature of the pandemic because it hit almost every person of the world directly or indirectly. Along with many challenges there are certain courses of action that can make education more convenient and economical. The challenges Pakistan had faced in the evaluation system of education would be reduced by building confidence between students and teachers for each other. Cheating in online exams was the main issue right now that can be prevented by identifying the problem and address it with the required option available. At this point in time, online education is all processed to revolutionize the educational outlook in Pakistan. It will definitely bring a major reform in pedagogy and evaluation system to make use of this growth in the field. Technology should be used to amplify dialogue and discourse among teachers and students and not to destroy them. Technology and advancement must be used as an additional aid in education and not its alternative.

Bibliography

UNESCO. (2020, August 2). Covid-19. <https://en.unesco.org/news/secretary-general-warns-education-catastrophe-pointing-unesco-estimate-24-million-learners-0>

Aziz Ur Rehman. "Challenges to Online Education in Pakistan During COVID-19 & the Way Forward". AIJR Preprints, 241, Version 1, 2020. <file:///C:/Users/Rabia/Downloads/241-Article-422-1-10-202010221.pdf>

Li, Cathy. (2020, April 29). "The Covid-19 pandemic has changed education forever. This is how". World Economic Forum. <https://www.weforum.org/agenda/2020/04/coronavirus-education-global-covid19-online-digital-learning/>

James, Frances. (2020, October 13). "The Challenges and Advantages of Conducting Exams During the COVID-19 Crisis". <https://www.qs.com/the-challenges-and-advantages-of-conducting-exams-during-the-covid-19-crisis/>

Banuri, Tariq (CHAIRMAN, HEC) WHY ONLINE EDUCATION? (14-04-2020) <https://www.hec.gov.pk/english/HECAnnouncements/Pages/Why-Online-Education.aspx>

Jahangir, Ramsha (09 Mar 2020) Virus closures make classes go digital in Pakistan <https://www.dawn.com/news/1539441>

Sattar, Hassan (July 10, 2020) Education hostage crisis <https://www.thenews.com.pk/print/684512-education-hostage-crisis>

THUBURN, DARIO (12 FEBRUARY 2020 WHO Has Finally Named the New Coronavirus.) <https://www.sciencealert.com/who-hasfinally-named-the-deadly-coronavirus>

Lau, Joyce, Yang, Bin, Dasgupta, Rudrani (March 12, 2020) Will the coronavirus make online education go viral? <https://www.timeshighereducation.com/features/will-coronavirus-make-online-education-go-viral>

Abbasi, Kashif (14 Apr 2020) Teleschool goes on air today to compensate for academic loss <https://www.dawn.com/news/1548995>

Mehmood, A. (May 19, 2020) COVID-19: Education in Pakistan gets mundane attention. <https://www.thenews.com.pk/print/660617-covid19-education-in-pakistan-gets-mundane-attention>

Riaz, Hamid (May 31, 2020) The online class. <https://www.thenews.com.pk/tns/detail/664917-the-online-class>

Farooq, Anwar. (February 6, 2021). Student protest and demand for online examination.<https://pakobserver.net/student-protest-and-demand-for-online-examination/>. *Pakistan Observer*.